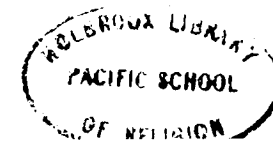


PSYCHEDELIC REVIEW

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CONTENTS

OUR SECOND YEAR		2
THE RELATION OF EXPECTATION AND MOOD TO PSILOCYBIN REACTIONS: A Questionnaire Study.		
	Ralph Metzner, George Litwin & Gunther M. Weil	3
TWO PSYCHEDELIC EXPERIENCES:		
A FUNDAMENTAL EXPERIMENT	René Daumal	40
A SUGGESTION ABOUT MYSTICISM	William James	48
PSYCHEDELIC METAPHYSICS	David Drake	56
ZEN BUDDHISM: A Psychological Review	Edward W. Maupin	59
REVIEW ESSAYS:		
ALL AND EVERYTHING (G. I. Gurdjieff)		
	Terry Winter Owens & Suzanne D. Smith	98
REBIRTH WITHOUT FEAR: The Psychedelic Experience (Timothy Leary, Ralph Metzner, & Richard Alpert)	Gerald Heard	110
BOOKS RECEIVED		118
BOOK REVIEWS		119
NOTES ON CONTRIBUTORS		128



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Our Second Year

THIS ISSUE of *The Psychedelic Review* marks the beginning of the second year of publication. The expanding horizons of the national and international interest in psychedelics makes the continued publication of this review a virtual certainty. As an indication of international interest, *Hermes**, published in France under the direction of Jacques Masui, has joined the adventure and glimmerings of activity in England are discernable under the leadership of Alexander Trocchi.** Reader-response to our financial plight of some months past has been gratifying and circulation of the *Review* is increasing greatly. Within the last six months, five major books on the psychedelics have been published. These books are reviewed in the present issue. There seems to be little question that the psychedelic movement is initiating and continuing an on-going social dialogue.

As this publication year begins, we acknowledge the importance of extending the meaning of the term *psychedelic* ("mind-manifesting") in order to emphasize both chemical and non-chemical methods in the exploration and evolution of consciousness. In this issue, an example of such an extension is the discussion of the ideas and methods of Gurdjieff; we will continue to make it our policy to introduce similar material. One of our editors, Dr. Ralph Metzner, has been traveling in India and reports that he is in the process of collating previously untranslated esoteric material of great interest to students of practical Buddhism and experimental mysticism. Future issues of the *Review* will continue to draw on such international sources.

*See *Books Received* section for further information.

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The Relation of Expectation and Mood to Psilocybin Reactions: A Questionnaire Study

RALPH METZNER, GEORGE LITWIN & GUNTHER M. WEIL

IN THE RAPIDLY GROWING literature on the effects of the "hallucinogenic" or "consciousness-altering" drugs increasing attention is being paid to the role of non-pharmacological variables. Several authors have pointed to the importance of personality variables in determining drug reactions, and recently these have become the object of systematic study (e.g., Kornetsky and Humphries, 1957; von Feltsinger, Lasagna and Beecher, 1955; DiMascio, Rinkel and Leiberman, 1961). Others have emphasized the importance of the physical and social environment (e.g., Hyde, 1960) and the attitude and expectations of the researcher (e.g., Malitz *et al.*, 1960). The role of these non-drug factors in drug-reaction patterns has recently been reviewed through extracts from the literature by DiMascio and Klerman (1960) and Unger (1963).

In a previous study (Leary *et al.*, 1963) it was found that by deliberately arranging the setting to be warm, supportive and free from distractions, experiences with psilocybin were produced that 70% of the subjects (N = 98) described as "very pleasant" or "ecstatic," and 62% claimed changed their lives for the better. These results are consistent with findings by Ditman *et al.* (1962) on claims following LSD. The degree of pleasantness and change was directly correlated with the perceived supportiveness and warmth of the situation. There was also evidence that the pre-drug expectations and mood of the subject were highly correlated with his post-drug reactions. This evidence was not definitive (a) because all information about pre-drug states was obtained after the experience and therefore presumably subject to a "halo" effect; and (b) because the questionnaire used covered only dimensions such as pleasantness and amount of learning and was non-specific as to content.

The present study was therefore designed to measure the subjects' expectations before the experiment and to correlate these with post-drug responses. Measures of some situational and constitutional

THE PSYCHEDELIC REVIEW

variables were also included in the study in order to assess to what extent they affect the pre-drug expectations and the post-drug responses. The hypotheses to be tested were:

- (1) The "set" of the subject affects the content of the experience: a positive, relaxed "set" will tend to lead to pleasant experiences and closeness to the other participants; and conversely, an anxious and negative "set" will tend to lead to fearful experiences and distrust or suspicion of the other participants.
- (2) Factors such as age, body-type, previous experience with drugs, and size of the group in which the drug is taken affect the content of the drug-experience.
- (3) Preoccupation with extraneous thoughts or problems will tend to lead to a confused, unpleasant experience.
- (4) Pre-drug mood will affect the content of the experience and the mood during the drug state.
- (5) Specific expectations as to the content of the experience will to some extent determine the nature of the drug-experience.

Not only the expectations of subjects but also the expectations of the researcher may exert a considerable influence on the nature of the drug reactions. The expectations of the researcher may influence the outcome of any experiment (and particularly of a drug experiment) in several ways: through the kind of setting he arranges for the experiment, through the information and attitude he conveys to the subject about his experiment and through his own behavior during the experiment. It is likely that the divergence of results reported by different investigators of the hallucinogenic drugs can in part be explained by experimenter bias. Some have reported that these drugs are "psychotomimetic" (e.g., Rinkel *et al.*, 1952; Malitz *et al.*, 1960); their experiments have typically taken place in a psychiatric hospital where the subject is surrounded by all the precautions appropriate to "psychosis." Others have used the same drugs in psychotherapy (e.g., Abramson, 1960; Cohen, 1959); here the "placebo" effect is operating — experimenter and subject want and expect change. A third group of investigators (Wasson, 1961; Savage *et al.*, 1962) talk of these substances as inducing "religious" or "transcendent" experiences. It is clear that the effects of the "sacred mushroom" taken in the context of a religious ceremony in Mexico will be very different from the effects of the same chemical substance taken in a modern laboratory setting.

Expectation, Mood and Psilocybin Reactions

Experimenter bias in human experiments is virtually impossible to eliminate (cf. Rosenthal, 1961). One way of controlling it is to vary it for different subjects and measure the effects. This was not attempted in the present study. We adopted the alternative of making our attitudes explicit and constant for all subjects. The setting provided was warm, supportive and non-task-oriented. Pleasant experiences and insight were anticipated. It should be clear that the present study is *not* an experimental comparison of the effects of psilocybin and a "placebo" under "double blind" conditions, and thus cannot answer the kinds of questions such an experiment could answer. Rather, this is a study of some antecedent-consequent relationships within a single fairly well-planned set of conditions. In this sense it is not an experiment at all, but a study of a certain experience in a particular setting.

METHOD

Subjects

The questionnaire was administered to a total of 82 subjects who were given psilocybin. Some of the experimental sessions were part of a rehabilitation program conducted at a state prison. Others were experimental sessions, specifically prepared with this study in mind, in which graduate students or faculty members participated as subjects. All subjects were unpaid volunteers. Where more than one questionnaire was available on those subjects who were given the drug more than once, the one included in the analysis was selected at random. Occupationally, the sample consisted of 26 prisoners, 25 graduate students, 4 university teachers, and 27 others such as housewives, secretaries, and semi-professional people (research subjects, etc.). All subjects took the drug in groups: 47 subjects in all male groups (all the prisoners), and 35 in mixed groups. In the present study 59% were first experiences (with psilocybin, mescaline, or LSD), 15% were second experiences, and only 5% had five or more previous experiences. The distribution of age in years was approximately normal, with a mean of 26.9 and a standard deviation of 7.1.

Selection and Preparation

Subjects who volunteered for the study were given medical screening by the University Health Services or the prison psychiatrist. Psychological screening was done by a group of clinical psychologists. All were interviewed individually before the experi-

THE PSYCHEDELIC REVIEW

ment, the purpose of the particular project in which they were participating was discussed, and subjects themselves participated in determining the composition of the group. Whenever possible it was arranged so that every participant had at least one close friend present, was not with people who disliked each other, or with total strangers. It was thought that this would maximize the chances of having a warm, supportive setting. Before the experiment, the whole group met at least once (in the case of the prisoners up to three or four times) for two to three hours for open discussion and for the purpose of acquainting the group members with one another. Subjects were told what drug they were getting and what was known about it; they were encouraged to do background reading. They were told to make 5-6 hours of time available, free from distractions or interruptions. No manipulation was performed by the experimenters without knowledge of the subject. All groups contained at least one subject who had previous experience with psilocybin and who was able to guide initial subjects through their experiences, if this became necessary. The pre-drug section of the questionnaire was filled out by the subjects before ingestion; the main part after the session had ended.

SETTING

All non-prison sessions were conducted in comfortable home surroundings in an attempt to create a relaxed and comfortable atmosphere. Living rooms of a moderate-to-large size were used. Easy chairs, rugs and cushions formed the basic furnishings. Recorded music, books and paintings or prints were made available. Food and drink were also offered.

Prison sessions were conducted in a large separate room in the prison hospital. The room was furnished with beds, mattresses, tables and chairs. Recorded music, prints and books were also made available.

DOSAGE

Subjects were told the standard and maximum dosages and were then permitted to regulate their own dosage. The mean dosage for the whole sample was 0.39 mg per kg, with a standard deviation of 0.35. For an adult of average size and weight this represents an average dosage of between 25 and 30 mg.

Expectation, Mood and Psilocybin Reactions

THE QUESTIONNAIRE

I Pre-drug section

(a) Background variables: subjects were asked to state how many people were present, how many actually took the drug, what their occupation, sex, age, height and weight were, what previous experiences they had had with similar drugs, and what dosage they were taking in this session.

(b) Subjective "set": subjects were asked to state:

- (1) How apprehensive are you about taking the drug today?
Very apprehensive _____ slightly apprehensive _____ not anxious at all _____
- (2) To what extent are you preoccupied with thoughts or problems not connected with this session? (0 not at all; to 4 very much)
- (3) How good do you feel about taking the drug today?
(positive expectation)
Not good _____ neutral _____ good _____ great _____

(c) A set of 12 phrases describing *specific reactions*. The subject is asked to check those he expects to experience.

(d) Pre-drug Mood Adjective Check-List. This is a 48-item check-list derived from the factor-analytic studies on mood of Nowlis *et al.* (1957). For each of the 8 factors extracted, the adjectives with the six highest loadings were used, and each mood score is the sum of these six items (items with negative loadings were subtracted). Each item could be answered from 0 = "does not apply" to 3 = "applies very strongly to my present mood". The composition of the mood scales is shown in Appendix A.

II Post-drug section

At the end of the session the subject filled out the same mood adjective check-list again, to describe how he felt at the height of the drug experience. Then followed a list of 108 specific content items (see Appendix B), each of which can be answered by 0 = did not occur, 1 = occurred once or only a little, 2 = occurred quite a lot, 3 = among the most important aspects of my experience. The items were derived (a) from reports written by other subjects and in the literature, (b) from personal experiences, (c) from theoretical suppositions and (d) from observations of subjects. They were intended to cover the widest possible range of experiences, and

THE PSYCHEDELIC REVIEW

were grouped according to a set of 12 *a priori* categories: somatic symptoms (16 items), perceptual transformations (14 items), perceptual hallucinations (7 items), hallucinations involving the whole person (18 items), unusual cognitive phenomena (15 items), religious or mystical phenomena (8 items), interpersonal-positive (7 items), interpersonal-negative (7 items), drug concerns (3 items), primary processes (9 items plus all hallucinations and perceptual transformations), paranoia and ideas of reference (8 items), empathy or insight (7 items). The composition of the categories is shown in Appendix C.

METHOD OF ANALYSIS

Means, standard deviations and intercorrelations of all variables were obtained. The basic results will be presented and discussed in five separate sections. First, most and least frequent categories are presented to give a general picture of the range of experiences in the group sessions. Second, the correlations of background variables to specific experience items are presented. Third, the correlations with subjective "set," and fourth, the correlations with specific expectations will be described. Finally, the mood data are described in terms of the relation of pre-session mood to mood in the session, and to specific response items.

RESULTS

I. MOST AND LEAST FREQUENT RESPONSES

The twenty items most frequently accepted and rejected as descriptions of psilocybin experiences are shown in Tables (1) and (2) respectively. In terms of the *a priori* grouping of items it may be noted:

- (1) that somatic items are neither accepted nor rejected very often, but are reported as occurring mildly in most subjects;
- (2) that five of the most frequently checked items indicate perceptual transformations; only one perceptual transformation item (#78) is in the least frequent category;
- (3) none of the most frequent items are "hallucinations" whereas 14 of the least frequent items are;
- (4) four of the most frequent items are in the category of "increased interpersonal sensitivity" (#125, 137, 128, 138), whereas no negative interpersonal items are reported;
- (5) two of the items in the most frequent group (#66 and 96) are indications of primary process functioning; others (#112, 97, 119, 123) are representative of unusual cognitive phenomena.

Expectation, Mood and Psilocybin Reactions

TABLE (1): Means and Percentage Response Breakdowns for the 20 Items Most Strongly Accepted as Descriptions of Psilocybin Experiences (N = 82)

Questionnaire Item	Mean	Percentage*
loss of time sense (#66)	1.89	73
colors more intense (#67)	1.88	67
objects more significant & beautiful (#73)	1.88	66
thoughts and ideas flashing by very rapidly (#112)	1.88	66
feelings of bond with & closeness to a particular individual (#125)	1.83	64
feeling of being at several different levels (#97)	1.82	67
seeing great significance in apparently ordinary statements or remarks (#114)	1.80	60
easy understanding of others' feelings (137)	1.77	70
seeing the fine detailed structure of things (#74)	1.65	61
insight into self that is describable and lasting (#124)	1.62	54
feeling of insight into self, without being able to state what it was (#123)	1.60	58
music more beautiful & significant (#81)	1.54	55
seeing significance of people's actions and movements without verbalization (#128)	1.54	55
feeling that nothing need be said (#149)	1.54	56
sharing & communicating thoughts without words (#138)	1.50	53
feeling that objects or events in the environment have some direct peculiar relation to your life or problems (#96)	1.49	47
being able to operate at several levels at once (#119)	1.48	54
extreme pleasure, ecstasy, cosmic joy, paradise (#150)	1.44	43
contours more intense (#68)	1.40	48
feeling of being very wise, knowing everything (#113)	1.40	48

* Percentage responding "occurred quite a lot" and "among the most important aspects of my experience."

TABLE (2): Means and Percentages Responding Negatively to the 21 Items Most Strongly Rejected as Descriptive of Psilocybin Experience (N = 82)

Questionnaire Item	Mean Percentage ^a	
being chased (#104)	.13	95
fantasy of going back into the womb (#110)	.13	90
chasing (#103)	.15	94
witnessing historical events (#93)	.16	90
visions of utopias, cities of the future (#92)	.21	90
being beaten, tortured, or devoured (#106)	.21	91
visions of fabulous animals, monsters (#86)	.22	87
visions of heroic figures, angels, God, devils (#87)	.22	85
finding God (#145)	.23	85
suspicious & resentful of people not taking the drug (#129)	.29	78
eyes staring at you (#107)	.30	83
fantasy of being born again (#111)	.30	87
explosive anger or fury (#153)	.30	82
unusual odors or scents (#78)	.32	82
vision of exploring, following a guide (#105)	.33	82
visions of people known to you (#88)	.35	82
throat-chest constriction (#60)	.36	78
falling (#101)	.35	74
close bond or contact with God (#122)	.38	77
feeling that you were going to die (#109)	.40	82
feeling "I know that it would happen" (#142)	.40	73

^a Percentage responding "did not occur."

DISCUSSION

The finding that somatic symptoms, while they do occur, are not a primary component accompaniment of reported psilocybin experiences suggests that the peripheral autonomic effects of psilocybin are relatively minor compared to the central effects. Per-

ceptual transformations and interpersonal sensitivity were more prominent aspects of the experience. The relative paucity of reported hallucinations was surprising, and suggests that the term "hallucinogenic" for these substances is somewhat misleading. The positive interpersonal effects are probably attributable largely to the group setting and preparation the subjects underwent before the sessions.

The common theme linking the most frequent items seems to be increased awareness or perception of deeper meaning (#73, 74, 81, 96, 97, 113, 114, 119, 124, 137). Four other items (#123, 128, 138, 149), which refer specifically to an increase in intuitive non-verbal thinking, may also be included in this category. People, events, objects, one's self seem to be more clearly understood, although this understanding is difficult to convey verbally to others.

II. AGE, BODY-TYPE, PREVIOUS EXPERIENCE, GROUP SIZE, AND DOSAGE

(A) Age differences

Older subjects tended slightly to have had more previous drug experiences ($r = .20$), to be more endomorphic ($r = .32$), to be more preoccupied with other things before the session ($r = .29$) and to expect depression less ($r = -.20$).

The correlations with post-drug reactions are shown in Table (3). The only mood difference is that older subjects tended to report less "egotism". There are significantly more historical and mythical visions in older Ss and less of the typical time confusion.

Older Ss tend to report fewer negative interpersonal experiences ($r = -.22$); this cluster includes items such as "feeling left out and isolated" and "fear of being thought silly or stupid or crazy."

(B) Body-type differences

The crude index of endomorphy used here, weight divided by height, has a mean of 2.26 pounds per inch for the whole sample, with a standard deviation of 0.29; it is approximately normally distributed. Endomorphy in this sample is related positively to age ($r = .32$) and to sex ($r = .71$), men being more endomorphic. The prisoners also are more endomorphic than the non-prisoners ($r = .23$). Endomorphs tend not to expect ecstasy, love or depression, are less likely to be "affectionate" in their pre-drug mood ($r = -.30$).

From Table (3) it can be seen that endomorphs report more "bodily pleasure"; this item is not correlated with age or sex. There

THE PSYCHEDELIC REVIEW

is also an almost significant negative correlation between endomorphy and the cluster of unusual cognitive items as a whole.

(C) The effect of previous experience

Since this variable was so markedly skewed in its distribution, all significant relationships were also tested by chi-square. A three-way breakdown was made into three groups: (a) 48 Ss with no prior experience with drugs, (b) 19 Ss with one or two prior experiences, and (c) 15 Ss with three or more previous experiences. Only relationships which were significant by both methods of analysis will be discussed.

The more experienced subjects tend to expect "ecstasy" and "love" more often than the inexperienced ($r = .25$ and $.27$, respectively). When the distribution is broken down into thirds it can be seen that this correlation is primarily due to the responses of the group with three or more previous experiences.

As Table (3) shows, number of previous experiences is significantly negatively related to egotism on the mood scale, and also negatively to the cluster of somatic symptoms. Perceptual transformations such as "colors more intense" or "objects more significant and beautiful" are reported less frequently by the more experienced subjects; analysis using chi-square shows this to be a trend occurring primarily in the upper third of the distribution. The other relationships shown in Table (3) are nonsignificant when analyzed by chi-square.

(D) The effects of group size

The size of the groups ranged from two to thirteen with a mean of six. Almost 50% of the subjects participated in groups of either five or six members. In view of this restricted range these data are not a very sensitive measure of the effects of group size, and the data should be regarded as suggestive only.

Group size is significantly related to number of stated expectancies ($r = .24$); i.e. the larger the group, the more things subjects expect to happen. Specifically, to participate in larger groups is to expect more visual changes ($r = .38$), more ecstasy ($r = .21$) and more depression ($r = .21$). On the pre-drug mood scales, subjects in larger groups are higher in concentration, and lower in pleasantness, activation and egotism.

Table (3) shows that large group experiences involve more concentration and less activation. Feelings of group unity tend to be greater in the larger groups, but the more personal subjective phenomena appear to be less frequent.

Expectation, Mood and Psilocybin Reactions

(E) The effects of dosage

There was no correlation between dosage taken and previous drug-experience. Taking a high dose is negatively related with expecting "loss of reality" ($r = -.20$). Taking a higher dosage is correlated positively with pre-drug moods of social affection ($r = .22$), depression ($r = .20$) and anxiety ($r = .30$).

Table (3) shows the correlations with post-drug effects. The higher dosage tends to produce experiences that are more pleasant and more mystical or religious. Experiences of being reborn or finding God (which are rare in general) are more likely after higher dosages.

TABLE (3): *Relationship of Various Background Variables and Dosage to Subsequent Psilocybin Reactions (N = 82)**

(A) AGE	
witnessing historic events (#93)	.33
visions of buildings or parts of buildings (#83)	.31
visions of fabulous animals, monsters, etc. (#86)	.25
loss of time sense (#66)	-.33
feeling of being at several different levels (#97)	-.24
numbness (#55)	-.22
interpersonal negative cluster (7 items)	-.22
self or other people changing size (#76)	-.21
feeling of insight into self, without being able to state what it was (#123)	-.21
egotist mood	-.21
(B) ENDOMORPHY	
eyes staring at you (#107)	.24
bodily pleasure (#62)	.21
feeling of being at several different levels (#97)	-.28
feeling of insight into self, without being able to state what it was (#123)	-.26
self or other people changing size (#76)	-.21
fighting the oncoming effects of the drug (#140)	-.22
feeling beyond good and evil (#146)	-.22
unusual cognitive phenomena (15 items)	-.20

* All correlations in this and subsequent tables which are equal to .21 or greater are significant at the .05 level or better. Correlations greater than .28 are significant at the .01 level.

THE PSYCHEDELIC REVIEW

(C) NUMBER OF PREVIOUS EXPERIENCES

feeling of "I knew that it was going to happen" (#142)	.26
finding God (#145)	.24
seeing significance of people's actions and movements without verbalization (#128)	.20
somatic cluster (16 items)	-.24
objects more significant and beautiful (#73)	-.24
egotist mood	-.24
inexplicable laughter (#64)	-.24
colors more intense (#67)	-.22
thoughts & ideas flashing by very rapidly (#112)	-.21

(D) GROUP SIZE

mood of concentration	.30
feelings of unity of the whole group (#126)	.25
confronting the mystery of life (#147)	-.34
active mood	-.29
feeling no separation between self & the visions (#94)	-.29
floors, walls, objects, etc., moving (#71)	-.22
feeling beyond good and evil (#146)	-.22
hallucinations involving the whole person (20 items)	-.22

(E) DOSAGE

fantasy of being born again (#111)	.34
finding God (#145)	.34
being passively at the mercy of the visions & hallucinations (#98)	.30
extreme pleasure, ecstasy, cosmic joy, paradise (#150)	.29
confronting the mystery of life (#147)	.25
feeling of insight into self, without being able to state what it was (#123)	.22
religious, mystical cluster (8 items)	.21
pleasant mood	.21

Expectation, Mood and Psilocybin Reactions

DISCUSSION

The results show that a number of background and constitutional variables have significant effects on the contents of the psilocybin reactions. The major conclusions may be summarized as follows:

(1) Older subjects report more historical and mythical visions and less time confusion than younger subjects.

(2) Endomorphic subjects report "bodily pleasure" more often and unusual cognitive phenomena less often than ectomorphs. This finding is consistent with the report of DiMascio *et al.* (1961) that "athletic," mesomorphic subjects have more physiological effects and euphoria, and less intellectual impairment than "aesthetic" subjects.

(3) Subjects who have had previous experience with hallucinogenic drugs differ from inexperienced subjects (a) in having fewer somatic symptoms, (b) in being less "egotistic" in mood, and (c) in reporting fewer perceptual transformations.

(4) Subjects in larger groups report feelings of group unity more often and subjective hallucinatory phenomena less often than subjects in smaller groups. It is possible to interpret this as indicating that in the larger groups more energy is taken up with interpersonal interaction and therefore fewer of the purely subjective phenomena are reported.

(5) The effect of having taken higher dosages was to increase the frequency of religious, ecstatic and mystical experiences.

These background variables also affect the pre-drug set, expectations and moods of the subjects significantly. For example, (a) the more experienced subjects expect ecstasy and love more often, and (b) subjects who take higher dosages expect "loss of reality" less often.

III. THE EFFECTS OF SUBJECTIVE SET

(1) Pre-drug anxiety

Answers to the question, "How apprehensive are you about taking the drug today?" were scored from 1 ("not anxious at all") to 3 ("very apprehensive"). This score, the "anxiety" index, correlated .22 with the stated expectation of "depression" and .21 with the "anxiety" score derived from the pre-session mood check-list.

As Table (4) shows there is a positive correlation of pre-drug

THE PSYCHEDELIC REVIEW

anxiety with "anxious" mood during the session ($r = .23$). There is a highly significant correlation with the cluster of somatic symptoms ($r = .33$), of which the two most important items are headache and nausea. Experiences of "falling" which are reported in only 26% of the total sample, are highly correlated with pre-drug anxiety. Concerns about the drug (#139, 141) figure largely in these experiences, as do distrustful ideas about the other subjects (#107, 133), and self-punitive reactions such as "being beaten" and "being chased". The negative correlation with the item "being able to manage and control the visions" ($r = -.25$) suggests that anxiety about loss of control is a source of this kind of experience.

TABLE (4): *Relationship of Pre-Drug Anxiety to Psilocybin Reactions*

headache (#61)	.39
falling (#101)	.35
nausea (#49)	.33
somatic cluster (16 items)	.33
weightlessness (#51)	.31
being chased (#104)	.31
lack of balance (#58)	.30
drug concerns (3 items)	.30
throat-chest constriction (#60)	.28
wondering about the effects of the drug (#139)	.28
anxious about having to come "out of it" (#141)	.28
rising (#100)	.28
dizziness (#50)	.27
chasing (#103)	.25
anxious mood	.23
being beaten, tortured, or devoured (#106)	.22
feeling left out or isolated (#133)	.21
paranoia cluster (8 items)	.21
feeling of flying or gliding (#99)	.21
distances changing (#72)	.21
being able to manage & control the visions (#95)	-.25
visions of abstract geometric patterns (#82)	-.24

Expectation, Mood and Psilocybin Reactions

(2) Preoccupation

The extent of preoccupation with thoughts and problems not related to the session was scored from 0 ("none") to 4 ("a great deal"). This index is positively correlated with age ($r = .29$), i.e. older subjects tend to be more preoccupied; with the expectation of "loss of inhibition" ($r = .24$) and with "depression" ($r = .25$) on the pre-drug mood check-list.

From Table (5) it can be seen that the extent of preoccupation correlates with experiences of distrust, confusion, drug concerns, anxiety, and depression. It differs from the syndrome following pre-drug anxiety primarily in the absence of somatic complaints.

TABLE (5): *Relationship of Pre-Drug Preoccupation to Psilocybin Reactions*

suspicious and resentful of people not taking the drug (#129)	.35
paranoia cluster (8 items)	.28
anxious about having to come "out of it" (#141)	.27
feeling of disintegration, falling apart (#108)	.27
chasing (#103)	.26
drug concerns cluster (3 items)	.25
interpersonal-negative cluster (7 items)	.25
sense of absurdity of one's thought & speech (#118)	.24
egotist mood	.23
depressed mood	.23
anxious mood	.22
being chased (#104)	.22
fear of being thought silly or stupid or crazy (#132)	.22
being passively at the mercy of the visions & hallucinations (#98)	.22
feeling that objects or events in the environment have some direct peculiar relation to your life or your problems (#96)	.22
bodily pleasure (#62)	-.22
absence of feeling or emotion (abstract thought only) (#156)	-.21

THE PSYCHEDELIC REVIEW

(3) Positive expectation

Answers to the question, "How good do you feel about taking the drug today?" were scored on a four-point scale as follows: 0 = not good, 1 = neutral, 2 = good, 3 = great. This score correlated negatively with the mood scales "concentration" ($r = -.24$), "depression" ($r = -.40$) and "anxiety" ($r = -.24$); it correlated positively with moods of "pleasantness" ($r = .49$), "activation" ($r = .30$) and "affection" ($r = .30$). Positive expectation is not correlated with the other "set" items, anxiety or preoccupation; nor are these two correlated with each other.

Table (6) shows that activation, pleasantness and affection are the main dimensions of the post-drug mood correlated with positive expectation. Empathy and positive interpersonal experiences are the main focus of these items. Feelings of expansiveness ("wanting to tell the whole truth," "unusually talkative"), "feeling beyond good and evil," bodily pleasure, laughter — and others, characterize a powerful euphoric experience. The *déjà-vue* experience is also related both to positive expectation and to preoccupation.

TABLE (6): *Relationship of Positive Expectation to Psilocybin Reactions*

active mood	.38
seeing symbolic meaning of things (#143)	.34
wanting to tell the whole world about this experience (#131)	.32
pleasant mood	.32
feeling beyond good and evil (#146)	.31
bodily pleasure (#62)	.30
visions of utopias, cities of the future (#92)	.29
socially affectionate mood	.25
people's faces more significant & beautiful (#75)	.24
inexplicable laughter (#64)	.23
unusually talkative (#136)	.23
interpersonal-positive cluster (7 items)	.23

Expectation, Mood and Psilocybin Reactions

seeing unusual uses & connections between ideas and things (#144)	.23
empathy (insight) cluster (7 items)	.22
visions of buildings or parts of buildings (#83)	.21
being able to operate on several levels at once (#119)	.21
feeling of "I know that it was going to happen" (#142)	.21
terror, panic, wild fear (#154)	-.22
fear of losing control, of going insane (#134)	-.21

DISCUSSION OF SUBJECTIVE SET

Our findings indicate that positive expectations produce pleasant and educational experiences in the drug sessions. The evidence also indicates that negative and anxious experiences are produced by psilocybin if the subject is either anxious about the drug, or preoccupied with other things. Thus hypotheses (1) and (3) are confirmed. Anxiety about the drug tends to produce somatic manifestations. This suggests that the bodily symptoms, beyond those which almost everyone experiences initially, may be, in fact, defensive maneuvers. Blewett and Chwelos (1959) report the observation that the "flight into symptoms" is one of the first lines of defense taken by subjects taking LSD-25 who are anxious about the oncoming effects. Difficulty in controlling the visions is the characteristic trigger of anxiety experiences in subjects who are concerned about maintaining ego-control over their experiences.

IV. THE EFFECTS OF SPECIFIC EXPECTATIONS

The frequency with which each of the 12 categories of expectation was checked is shown in Table (7). This set of expectancies, which is strongly biased towards the positive side, reflects the preparation and setting provided for the subjects. The category "nothing" is not included in further data analyses since there is no meaningful split of the sample on this dimension. "Drunkenness," "psychotic states" and "visual changes" also have strongly skewed distributions in which less than 25% of the subjects fall in one category. However, the correlation coefficients still contain some worthwhile information.

THE PSYCHEDELIC REVIEW

"Visual changes" are expected by 80% of the subjects; hence this item is related to a large number of specific items, especially the ones which occur more frequently. Table (8A) shows only the correlations of .28 and higher (significant at the 1% level): perceptual transformations and interpersonally-oriented items are most strongly correlated with this category. The expectation of "good time with people" tends to produce primarily negative experiences (Table 8B). The expectation of "hallucinations" is correlated with the perceptual transformations cluster and the primary process cluster, which includes hallucinations.

The expectation of "love" is most strongly related to aggressiveness, insight and déjà-vue experiences; expecting love is significantly negatively related to various somatic symptoms, such as nausea, throat-chest constriction and body-melting. In part this may be accounted for by the relationships of these two variables to previous experience. Subjects with more previous experience tend to expect love more and also to experience fewer somatic symptoms. But there is also an independent correlation, as shown by the partial correlation of $-.30$ between expecting love and nausea, with previous experience held constant. Expectation of "ecstasy," which is correlated $.43$ with expecting "love," is also highly negatively related to nausea.

Expecting "loss of inhibition" is primarily related to "unusual odors and scents," which is one of the rare items. Expectations of "loss of reality" and "psychotic states" tend to be checked by the same subjects ($r = .50$) but seem to have minimal effect: "absence of feeling or emotion" and "unusual odors and scents" are the only very significant items. There is a tendency for these subjects *not* to experience the mystical aspects.

Subjects who expect mystical or religious experiences tend to report a large variety of perceptual and visionary effects but not necessarily of religious content; they tend *not* to have the interpersonal empathy experiences.

The expectation of "depression," which is correlated with pre-session anxiety ($r = .22$) is predictive of confused, depressed experiences marked by attempts to maintain ego-control over the drug effects.

The expectation of "drunkenness" seems to lead primarily to a set of somatic complaints, typical "drunk" effects (headache, dizziness).

Expectation, Mood and Psilocybin Reactions

TABLE (7): *Frequencies of Specific Expectations* * ($N = 82$)

EXPECTATION OF	% EXPECTING
visual changes	80
good time with people	66
hallucinations	55
love	45
loss of inhibitions	43
loss of reality	41
mystical/religious experiences	37
ecstasy	34
depression	28
psychotic states	24
drunkenness	15
nothing	2

* Ss were asked to check any or all of the phrases descriptive of what they expected to experience.

TABLE (8): *Relationship of Various Expectations to Subsequent Psilocybin Reactions* ($N = 82$)

(A) VISUAL CHANGES *	
feeling that nothing need be said (#149)	.35
loss of time sense (#66)	.32
concern & preoccupation with people coming into & leaving room (#127)	.30
colors more intense (#67)	.29
feelings of bond & closeness to a particular individual (#125)	.29
perceptual transformation cluster (15 items)	.29
interpersonal-positive cluster (8 items)	.28

THE PSYCHEDELIC REVIEW

(B) GOOD TIME WITH PEOPLE	
sadness, grief, sorrow (#151)	.27
depressed mood	.25
anxious mood	.25
feeling no separation between self & visions (#94)	-.32
(C) HALLUCINATIONS	
visions of buildings or parts of buildings (#83)	.25
sense of confusion, incoherence, irrationality, chaos (#116)	.23
seeing unusual uses & connections between ideas & things (#144)	.23
looseness of limbs (#52)	.23
body melting (#63)	.22
being passively at the mercy of the visions & hallucinations (#98)	.22
primary processes cluster (42 items)	.21
perceptual transformation cluster (15 items)	.21
somatic symptoms cluster (17 items)	.21
(D) LOVE	
aggressive mood	.30
feeling of insight into self, without being able to state what it was (#123)	.24
nausea (#49)	-.33
visions of abstract geometric patterns (#82)	-.28
throat-chest constriction (#60)	-.27
feeling no separation between self & visions (#94)	-.25
(E) LOSS OF INHIBITION	
unusual odors or scents (#78)	.34
insight into self that is describable & lasting (#124)	.22
colors more intense (#67)	-.27
cold (#57)	-.23
witnessing historic events (#93)	-.21
chasing (#103)	-.21
being beaten, tortured, or devoured (#106)	-.21

* Only correlations significant at the .01 level or greater are reported in this section of the table.

Expectation, Mood and Psilocybin Reactions

(F) LOSS OF REALITY	
absence of feeling or emotion (abstract thought only) (#156)	.27
confronting the mystery of life (#147)	-.21
being beaten, tortured, or devoured (#106)	-.21
(G) PSYCHOTIC STATES	
unusual odors or scents (#78)	.30
egotistic mood	.21
(H) MYSTICAL AND RELIGIOUS EXPERIENCES	
visions of abstract geometric patterns (#82)	.33
hallucinations cluster (8 items)	.29
fear of being thought silly or stupid or crazy (#132)	.27
seeing symbolic meaning of things (#143)	.24
floors, walls, objects, etc., moving (#71)	.22
primary processes cluster (42 items)	.22
visions of waves, water, fire, stars, planets, rockets, meteors (#89)	.21
feelings of bond & closeness to a particular individual (#125)	-.32
(I) ECSTASY	
seeing great significance in apparently ordinary statements & events (#114)	.24
unusual odors or scents (#78)	.22
nausea (#49)	-.29
feeling that objects or events in the environment have some direct peculiar relation to your life or your problems (#96)	-.25
colors more intense (#67)	-.23
(J) DEPRESSION	
unusually talkative (#136)	.34
feeling of being at several different levels (#97)	.33
fighting the oncoming effects of the drug (#140)	.30
depressed mood	.26

THE PSYCHEDELIC REVIEW

sense of confusion, incoherence, irrationality, chaos (#116)	.23
drug-concerns cluster (3 items)	.22
egotist mood	.21
being able to manage & control the visions (#95)	-.32
connection between visual images & music (#79)	-.22
confronting the mystery of life (#147)	-.21
(K) DRUNKENNESS	
headache (#61)	.33
fighting the oncoming effects of the drug (#140)	.29
visions of heroic figures, such as angels, God, devils, superman (#87)	.26
dizziness (#50)	.26
falling (#101)	.25
feeling left out or isolated (#133)	.22
sharing & communicating thoughts without words (#138)	-.24
being able to operate on several levels at once (#119)	-.21

DISCUSSION OF SPECIFIC EXPECTATIONS

Some of the results from this analysis are paradoxical: subjects who expect a "good time with people" tend to have negative experiences. Expectations of mystical experiences, of ecstasy and love, are not followed by corresponding experiences. Subjects who expect psychosis or loss of reality are not more likely to report such events.

On the other hand, expectations of visual changes, hallucination, depression and drunkenness tend on the whole to lead to corresponding experiences. Bodily symptoms are more likely to be experienced by those who expect "drunkenness," and less likely by those who expect "ecstasy" or "love." Thus hypothesis (5) is only partially confirmed. The correlation between expecting "loss of inhibition" and the reported experience of "unusual odors and scents" may be related to Couch and Keniston's (1960) finding that the personality dimension — impulsivity versus control — is strongly correlated with an anal syndrome.

Expectation, Mood and Psilocybin Reactions

V. MOOD AND MOOD CHANGES

Scores on the eight mood scales (see Appendix A) were analyzed (a) for mean pre-post changes in the whole sample, (b) for correlation of pre-session mood to mood during the session, and (c) for the relationship between base-rate mood expectancy, pre-session mood, and mood during the session.

Ss indicated their mood during the session by filling out the adjective check-list at the end of the session. The instructions were to describe their mood "at the height of the drug experience."

Table (9) shows the means and standard deviations of the mood scales before and during the session. There are significant mean increases in the "concentration," "depression," "anxiety," and "egotism" scales; and decreased mean "activation." In other words it appears at first that there is a significant increase in specifically depressive, anxious and egotistic adjectives which are lowest at the start. The only scale which declines is "activation," i.e., subjects become less energetic and vigorous during the session.

In order to understand more clearly the nature of these mood changes it is necessary to ask the question: how does the mood at the beginning of the session compare with mood during an average day? In order to obtain such base-rates a sample of 27 Ss (15 males, 12 females) similar to the experimental sample in age and socio-economic status was given the adjective check-list and asked to describe their mood "at this moment." The check-list was collected in the course of a variety of daily activities and the means (shown in the first column of Table 9) may be regarded as base-rate expectancies for these moods independent of experimental set or atmosphere.

From these comparisons it can be seen that the "egotism" and "depression" scales, which increase during the session, are significantly below normal at the start of the session, and the increase does not ever approach the base-rate level. Conversely, "pleasantness" and "social affection" are, significantly, highly above normal before the session, and do not increase any further during the session.

Of the four remaining scales, "concentration" and "aggression" before the session are not different from normal; "activation" is below normal and "anxiety" is slightly above normal.

In other words, the effect of the present preparation and setting was to increase pleasant and affectionate moods, to decrease depression and egotism, to lower the energy level and to raise the anxiety level. Then, at the height of the drug reaction, pleasantness

THE PSYCHEDELIC REVIEW

and affection stay high, depression and egotism increase but stay below base-rate levels, concentration increases, energy decreases still further and anxiety increases.

Another way of viewing these data is to compare the mood at the height of the session with the normal everyday mood of the base-rate sample. The drug subjects report more concentration, more pleasantness and affection and also more anxiety; they feel less egotistic and less active.

TABLE (9): Means of Mood Scales Before and During Psilocybin ($N = 82$) and Base-Rate Moods ($N = 27$)

Scale	Base-Rate (A)	Before (B)	During (C)	CR ^a B vs C	CR ^b A vs B	CR ^b A vs C
Concentration	20.3	21.2	22.7	3.22**	1.13	3.07
Aggression	14.0	13.9	14.5	1.39	0.11	0.52
Pleasantness	12.0	17.9	17.9	—	5.36***	4.54***
Activation	16.8	12.4	11.2	2.02*	5.18***	6.22***
Egotism	15.1	5.9	7.9	3.92**	11.79***	7.42***
Social Affection	14.1	17.3	17.7	0.87	3.72***	3.67***
Depression	14.9	11.6	13.5	3.28**	3.58**	1.27
Anxiety	8.7	10.5	13.2	5.31**	2.19*	3.98***

^a Using McNemar's (1955, p. 85) formula for the standard error of the difference between correlated means.

^b Using McNemar's (1955, p. 87) formula for the standard error of the difference between independent means.

*significant at the .05 level. **significant at the .01 level.

***significant at the .001 level.

VARIABILITY

An index of total variability of mood on the post-drug check-list was derived by simply summing the number of adjectives checked. This measure is related significantly to pre-session moods of "aggression" ($r = .40$), "social affection" ($r = .33$), and "pleasantness" ($r = .24$).

CORRELATIONS WITH SUBSEQUENT RESPONSES

Tables (10) and (11) show the correlation of the pre-drug mood scales to subsequent responses. Only correlations of .25 or higher are shown. In each case, with one exception, the pre-drug mood correlates highly and significantly with the corresponding scale on the session mood-list. The exception is egotism, which only

Expectation, Mood and Psilocybin Reactions

correlates .14 with post-drug egotism. But in general, the mood of the subject during the session is predominantly determined by his mood before the session.

Initial "concentration" (Table 10) leads to calm, non-emotional experiences. Initial "aggression" leads to feelings of power and omniscience. A "pleasant" mood before the session leads to "talkativeness"; in addition, the following items are correlated (at the .05 level) with pre-drug "pleasantness": pleasure (#150; $r = .24$), visions (#92, 105; $r = .23$), mystical experiences (#145, 147; $r = .22$ and $.21$ respectively). "Pleasantness" on the pre-drug mood scale and positive expectation are highly intercorrelated ($r = .49$).

Pre-drug "anxiety" and "depression" are intercorrelated ($r = .52$). "Anxiety" leads to blocking, disintegration and perceptual distortions of size (Table 10). Other items correlated (at the .05 level) with "anxiety" are: drug concerns ($r = .24$), anxious mood during the session ($r = .23$), objects distorted (#70, $r = .22$), feeling of disintegration, falling apart (#108, $r = .22$), sense of omnipotence (#117, $r = .21$), "depressed" mood ($r = .21$).

Pre-drug "depression" leads to "egotism" and fear of losing control. The initial expectation of loss of inhibition is also related to pre-drug "depression" ($r = .28$). Other items correlated (at the .05 level) with "depression" are: visions of waves, water, fire, stars, planets, rockets, meteors (#90, $r = .24$), anxiety about having to come "out of it" (#141, $r = .23$), "anxious" mood ($r = .22$), unusual odors or scents (#78, $r = .22$), large swings of mood, happiness and sadness (#155, $r = .21$).

TABLE (10): Relationship of Pre-Drug Mood Scales to Subsequent Psilocybin Reactions ($N = 82$)

A. CONCENTRATION		B. AGGRESSION	
mood: concentration	.35	sense of omnipotence	
complete mental calm,		(#117)	.37
peace (#157)	.33	mood: aggression	.36
feeling of being very wise,		feeling of being very wise,	
knowing everything (#113)	.29	knowing everything (#113)	.36
absence of feeling or emotion		complete mental calm,	
(abstract thought only)		peace (#157)	.28
(#156)	.25		

THE PSYCHEDELIC REVIEW

C. PLEASANTNESS		F. DEPRESSION	
unusually talkative (#136)	.32	mood: egotism	.30
mood: pleasantness	.26	self or other people	
lack of balance (#58)	-.25	changing size (#76)	.30
D. ACTIVATION		mood: depression	.28
connection between visual		fear of losing control, of	
images & music (#79)	.33	going insane (#134)	.27
visions of people known to you		G. ANXIETY	
personally or publicly (#88)	.30	visions of whole land-	
mood: activation	.29	scapes, oceans, mountains,	
confronting the mystery of		deserts (#85)	.40
life (#147)	.28	blocking of speech (#65)	.35
E. EGOTISM		wanting to communicate	
unusual odors or scents' (#78)	.37	but not being able (#130)	.32
fantasy of being born		self or other people	
again (#111)	.31	changing size (#76)	.30
seeing great significance in		dizziness (#50)	.26
apparently ordinary statements		visions of flowers, trees,	
& remarks (#114)	.30	plants, animals (#84)	.26
being able to operate on sev-		inexplicable laughter	
eral levels at once (#119)	.25	(#64)	.25
wondering about effects of		feeling that you were	
the drug (#139)	-.25	going to die (#109)	.25

TABLE (11): *Relationship of Pre-Drug Mood of "Social Affection" to Subsequent Psilocybin Reactions*

mood: social affection	.42
religious, mystical cluster (1 item)	.39
unusual cognitive phenomena cluster (16 items)	.36
empathy cluster (7 items)	.35
variability of mood	.33
sense of omnipotence (#117)	.32

Expectation, Mood and Psilocybin Reactions

finding God (#145)	.32
seeing symbolic meaning of things (#143)	.32
fighting the oncoming effects of the drug (#140)	.32
confronting the mystery of life (#147)	.31
love & brotherhood for all mankind (#148)	.31
mood: pleasantness	.31
interpersonal-positive cluster (7 items)	.29
being part of a larger unity (#121)	.28
feeling beyond good and evil (#146)	.27
seeing unusual connections between ideas & things (#144)	.26
feeling that nothing need be said (#149)	.26
visions of people known to you (#88)	.26
insight into self that is describable & lasting (#124)	.25
extreme pleasure, ecstasy, cosmic joy, paradise (#150)	.25
blocking of speech (#65)	.25

DISCUSSION OF MOOD

The finding for the mood scales in general parallels those obtained from the positive and negative set variables and tends to confirm our hypotheses. The best predictor of mood during the session is mood before the session. The base-rate data are interesting in this respect since they are significantly different from the pre-session moods across most of the scales. These data support our assumption as to the overall effect of the positive set induced in the preparation of our subjects. For example, "egotism" in the pre-drug assessment is significantly lower than the base-rate, and its slight increase during the session is still significantly below the base-rate. The "egotism" scale is made up of such items as "self-centered," "egotistic," and "boastful." We tentatively suggest that the slight increase in these items during the session forms part of a general syndrome of self-devaluation centered around the inability to maintain control over the experience. The increase in "anxiety" during the session and the relatively small degree of anxiety in the base-rate would seem to support this interpretation.

There seem to be several kinds of mood changes represented

THE PSYCHEDELIC REVIEW

in these data. "Concentration" and "anxiety" start at low base-rate, increase significantly in the pre-drug assessment (presumably as a result of the preparation and setting), and increase still further during the drug experience. Conversely, activation is decreased in the pre-drug assessment and decreased still further during the drug experience. On the other hand "pleasantness" and "social affection" are greatly increased in the pre-drug assessment, but increase no further during the drug experience, and may be thought of as specific effects of the preparation and setting. "Egotism" and "depression" are greatly decreased in the pre-drug condition, but increase somewhat during the drug experience.

A negative mood cluster (depressed, anxious) prior to the session tends to lead to negative experiences marked by fear of losing control, size-distortion, feelings of disintegration, inability to communicate and depression. A positive mood cluster leads to a predominately pleasant experience including a number of religious and positive interpersonal aspects. It also leads to a more varied experience (in terms of number of mood adjectives checked). The relation of pleasantness to variability of experience may be seen in light of theories (e.g., Easterbrook, 1959) which propose that one of the effects of emotional tension is to reduce the number of cues utilized in a given situation. Thus anxiety limits the range of awareness and a pleasant, confident mood increases it. The preparation for these experiences in this study included attempts to emphasize and create pleasantness and confidence, and the data demonstrate that these attempts were quite successful.

GENERAL DISCUSSION

Three groups of data have been presented in this paper: (a) the most and least frequent categories of response in psilocybin experiences; (b) the effects of various background variables and dosage on responses to psilocybin; and (c) the effects of expectations and mood on responses to psilocybin, which was the main focus of the study.

The results of the comparison between most and least frequent categories indicate that the principal element in these experiences is the increased awareness or perception of deeper meaning. These findings cannot be solely attributed to the desire of the subjects to confirm the expectations of the experimenters. Other investi-

Expectation, Mood and Psilocybin Reactions

gators (e.g., Linton and Langs, 1962) also report this effect though not as the most frequent. Furthermore we found that certain responses (e.g., hallucination) which we did expect to occur frequently in fact did not. The greater meaning perceived by the subject was often explicitly stated to be non-verbalizable.

Although no one psychological theory is adequate in accounting for such phenomena, they are consistent with views (such as those of Freud, Piaget, the transactionalists and others) which hold that perceptual and cognitive structures are acquired response patterns, with which the organism filters and organizes the enormous and varied input from his environment. Assuming for the sake of argument that it is possible temporarily to disrupt these response-structures, so that the subject "sees" without them, the experience would clearly have the two features found here: (1) it would give the feeling of "insight," as perceptual barriers are suddenly broken; and (2) it would be non-verbalizable precisely because the categories and structures are chiefly verbal response-patterns.

Several specific relationships of background variables to psilocybin responses were reported. Thus older subjects report more historical and mythical visions than younger subjects, and endomorphs report bodily pleasure more often than ectomorphs. These findings should be regarded as suggestive and require further confirmation. The interpretation of these differences would probably involve differences in personality and expectations between these groups.

Subjects with previous experience with hallucinogenic drugs report fewer somatic symptoms and fewer perceptual changes than inexperienced subjects. It may be that with increasing familiarity with the psychedelic experience a subject concentrates more on the interpersonal and intrapersonal changes and the somatic and perceptual manifestation becomes less important.

Three main groups of set variables were analyzed: (a) direct questions or ratings of anxiety, preoccupation and positive anticipation; (b) statements of the kind of experience the subject expected to have; and (c) affective states inferred from mood adjectives. Each of these measures was obtained immediately prior to the drug session and correlated with post-drug responses. The overall results may be summarized as follows: (1) Positive expectations lead to positive experiences; anxiety or preoccupation lead to unpleasant experiences; anxiety specifically increases the number of somatic symptoms experienced. (2) Statements of specific expectations on

THE PSYCHEDELIC REVIEW

the whole are not good predictors of subsequent experience. (3) Mood before the session is the best predictor of mood during the session: unpleasant (depressed, anxious) moods are intensified on the whole, pleasant moods lead to pleasant and varied experiences. (4) Mood before the session is generally significantly different from base-expectancy and confirms the efficacy of the set-inducing procedure.

It is not clear from the present data why the statements of specific expectations should not be good predictors. It may be that the expectation statements, which were mostly simple, one-word phrases, are concealing more complex sets of cognitive expectancies; thus, perhaps more subtle measures of expectancy would lead to successful prediction.

On the basis of these results a working hypothesis on the nature of set effects could be formulated as follows: the chemical psilocybin initiates a chain of biochemical and physiological events in the central nervous system, the end result of which is the suspension or deactivation of perceptual and cognitive structures involved in categorizing the perceived environment. The two main sources of stimuli to conscious awareness, the internal state and the external environment, are therefore capable of exerting a much more direct effect since they are not subject to the usual categorizations. In other words, there is greatly increased openness and suggestibility to both "set" (internal cues) and "setting" (external cues). A person may regard the possibility of losing his usual perceptual categories with anxiety, depending on the degree to which these categories are defensive. On the other hand, a person who is relatively free from anxiety will be able to accept a wider range of internal and external stimuli.

This formulation may now be applied to some of the results presented above. The perception of new meaning, non-verbal insights, which are most frequently reported can be seen as a consequence of the temporary suspension of perceptual and cognitive screening structures. The subject "sees" connections hitherto unnoticed. The reduction of defensive barriers, in a situation of trust and confidence, will tend to eliminate the sense of interpersonal distance: this accounts for the correlation of pleasant expectations with experiences of empathy and interpersonal closeness. The increased variability of mood and the specific increase in unpleasant affect can be seen as a consequence of the greater availability of internal cues.

The preparation given to our subjects explicitly included the

Expectation, Mood and Psilocybin Reactions

concept of increased awareness and insight, so that the process of volunteering probably screened out most subjects who are potentially anxious about such an experience. The majority of studies in this field have tended to use paid subjects, and not to make any preliminary statements about the kinds of experience one might expect. Linton and Langs (1962), for example, gave LSD to subjects who volunteered "for a psychological study in which they might earn money." No further explanations were given. The most "typical" effects reported by them are feelings of losing control over thoughts and annoyance at this "impaired functioning." These are the effects reported by our subjects with negative, anxious anticipation or set.

How can one explain these effects of pre-drug anxiety? As the drug-induced perceptual changes begin to take place, the subject will attempt to deal with them in the usual way, depending on his defensive strategies. He may focus his attention on one limited aspect, e.g., bodily function; he may attribute the effects to outside causes, e.g., he may become suspicious about other participants; or he may resort to self-accusation for failure to control his thoughts and become depressed. All of the responses are correlated with pre-drug anxiety (Table 4).

Two implications for research in this area emerge clearly: first, the expectations of the subjects should be carefully measured before drug administration; and second, the expectations of the experimenters should be stated explicitly in research reports, if results are to be at all comparable and replicable.

Finally we may examine the correlates of mystical or religious experience in the light of this theory. These experiences (e.g., "close contact with God") are reported by about 20% of the subjects (Table 2). Experiences of "unity" or "communality" with other people, with the world as a whole, or with God, may be seen as the end-point on a continuum of perceptions without the intervening controlling or modifying structures. As the discriminating and differentiating processes are suspended, more and more phenomena are "unified." The cluster of religious items is correlated positively with dosage — the higher the dosage, the more likely this effect becomes.

SUMMARY

The results of a questionnaire study of the effects of psilocybin on small groups of volunteers, (N = 82) are reported. The experimental setting was warm and supportive, and the subjects were

THE PSYCHEDELIC REVIEW

prepared to expect insight and expanded awareness. The most frequently reported experience within this setting was a perception of "new meaning"; significant differences in the content of the experience as a function of age, body-type, previous experience, group size and dosage were found. Pre-drug anxiety and positive expectation led to negative and positive experiences respectively. Stated expectancies did not have a marked effect on the experience. Pre-drug mood had very pronounced effects on mood during the session: depression or anxiety, if present before, was increased; pleasant moods led to pleasant and varied experiences.

A working hypothesis was proposed according to which the effect of psilocybin is to suspend or deactivate temporarily the cognitive-perceptual screening structures. This hypothesis was applied to account for the effects of expectation and mood on drug experience.

NOTES

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APPENDIX A: Composition of Mood Scales*

- a. *Concentration*: serious (.60); contemplative (.52); concentrating (.47); earnest (.46); introspective (.45); quiet (.42).
- b. *Aggression*: defiant (.52); rebellious (.48); suspicious (.47); skeptical (.40); strong (.35); bold (.34).
- c. *Pleasantness*: elated (.49); lighthearted (.48); refreshed (.44); pleased (.43); overjoyed (.43); lively (.42).
- d. *Activation-Deactivation*: energetic (.37); vigorous (.34); active (.30); drowsy (-.56); sluggish (-.52); bored (-.36).
- e. *Egotism*: self-centered (.47); egotistic (.39); boastful (.31); calm (-.32); sociable (-.31); genial (-.24).
- f. *Social Affection*: affectionate (.49); forgiving (.48); kindly (.44); warmhearted (.45); sexy (.39); lustful (.34).
- g. *Depression*: lonely (.46); insecure (.45); frustrated (.43); blue (.39); uncertain (.39); leisurely (-.33).
- h. *Anxiety*: startled (.41); shocked (.46); ashamed (.40); clutched-up (.37); fearful (.34); nonchalant (-.31).

*Factor loadings in parentheses are from study by Nowlis and Green (1957). Adjectives with a negative loading were subtracted from the positive total. A constant of 10 was added to eliminate negative numbers.

Expectation, Mood and Psilocybin Reactions

APPENDIX B: Description of the Main Effects

Below are listed some sensations and experiences that people have had under this drug. We are interested in your reactions to the drug. Please mark *each one* according to the following scheme:

- 0 - did not occur
1 - occurred once, or only a little
2 - occurred quite a lot
3 - among the most important aspects of my experience

49. nausea_____ 50. dizziness_____ 51. weightlessness_____
52. looseness of limbs_____ 53. eyes and nose oozing_____
54. heaviness_____ 55. numbness_____ 56. hot_____
57. cold_____ 58. lack of balance_____
59. trembling_____ 60. throat-chest constriction_____
61. headache_____ 62. bodily pleasure_____
63. body melting_____ 64. inexplicable laughter_____
65. blocking of speech_____ 66. loss of time sense_____
67. colors more intense_____ 68. contours more intense_____
69. visual after-images_____ 70. objects distorted_____
71. floors, walls, objects, etc. moving_____ 72. distances changing_____
73. objects more significant and beautiful_____
74. seeing the fine, detailed structure of things_____
75. people's faces more significant and beautiful_____
76. self or other people changing size_____
77. sounds, music moving around the room_____
78. unusual odors or scents_____
79. connection between visual images and music_____
80. connection between music and thought_____
81. music more beautiful and significant_____
82. visions of abstract geometric patterns_____
83. visions of buildings or parts of buildings_____
84. visions of flowers, trees, plants, animals_____
85. visions of whole landscapes, oceans, mountains, deserts_____
86. visions of fabulous animals, monsters, unique creatures_____
87. visions of heroic figures, such as angels, God, devils, superman_____
88. visions of people known to you personally or publicly_____
89. visions of waves, water, fire, stars, planets, rockets, meteors_____
90. passing through stages of evolution_____
91. travelling in exotic places_____

THE PSYCHEDELIC REVIEW

92. visions of utopias, cities of the future_____
93. witnessing historic events_____
94. feeling no separation between self and the visions_____
95. being able to manage and control the visions_____
96. feeling that objects or events in the environment have some direct peculiar relation to your life or your problems_____
97. feeling of being at several different levels_____
98. being passively at the mercy of the visions and hallucinations_____
99. feeling of flying or gliding_____ 100. rising_____
101. falling_____ 102. swimming, floating_____
103. chasing_____ 104. being chased_____
105. vision of exploring, following a guide_____
106. being beaten, tortured, or devoured_____
107. eyes staring at you_____ 108. feeling of disintegration, falling apart_____ 109. feeling that you were going to die_____
110. fantasy of going back into the womb_____
111. fantasy of being born again_____
112. thoughts and ideas flashing by very rapidly_____
113. feeling of being very wise, knowing everything_____
114. seeing great significance in apparently ordinary statements or remarks_____
115. being able to solve problems with ridiculous ease_____
116. sense of confusion, incoherence, irrationality, chaos_____
117. sense of omnipotence_____
118. sense of absurdity of one's thought and speech_____
119. being able to operate on several levels at once_____
120. feelings of unity of all things_____
121. being part of a larger unity_____
122. close bond or contact with God_____
123. feeling of insight into self, without being able to state what it was_____
124. insight into self that is describable and lasting_____
125. feeling of bond and closeness to a particular individual_____
126. feelings of unity of the whole group_____
127. concern and preoccupation with people coming and leaving the room_____
128. seeing significance of people's actions and movements without verbalization_____
129. suspicious and resentful of people not taking the drug_____
130. wanting to communicate but not being able_____
131. wanting to tell the whole world about this experience_____

Expectation, Mood and Psilocybin Reactions

132. fear of being thought silly or stupid or crazy_____
133. feeling left out or isolated_____
134. fear of losing control, of going insane_____
135. vague feeling that some outrage might happen_____
136. unusually talkative_____
137. easy understanding of others' feelings_____
138. sharing and communicating thoughts without words_____
139. wondering about the effects of the drug_____
140. fighting the oncoming effects of the drug_____
141. anxious about having to come "out of it"_____
142. feeling of "I knew that it was going to happen"_____
143. seeing symbolic meaning of things_____
144. seeing unusual uses and connections between ideas and things_____
145. finding God_____ 146. feeling beyond good and evil_____
147. confronting the mystery of life_____
148. love and brotherhood for all mankind_____
149. feeling that nothing need be said_____
150. extreme pleasure, ecstasy, cosmic joy, paradise_____
151. sadness, grief, sorrow_____
152. depression (i.e. blankness, stupor)_____
153. explosive anger or fury_____
154. terror, panic, wild fear_____
155. large swings of mood, happiness and sadness_____
156. absence of feeling or emotion (abstract thought only)_____
157. complete mental calm, peace_____

APPENDIX C: Main Effects Clusters

- I. Somatic Symptoms: #49-65
- II. Perceptual Transformation: #67-81
- III. Hallucinations (perpetual): #82-89
- IV. Hallucinations (involving whole person): #90-95, 98-111
- V. Unusual Cognitive Phenomena: #66, 96, 97, 112-120, 130, 142-144
- VI. Religious, Mystical: #120-122, 145-149
- VII. Interpersonal-positive: #125, 126, 128, 131, 136-138
- VIII. Interpersonal-negative: #127, 129, 130, 132-135
- IX. Drug Concerns: #139-141
- X. Primary Processes: #63, 66, 95, 96, 98, 116, 117, 143, 144; all II, III, IV
- XI. Paranoia, Ideas of Reference: #96, 106, 107, 129, 132-135
- XII. Empathy (insight): #123-126, 136-138

TWO PSYCHEDELIC EXPERIENCES:

A FUNDAMENTAL EXPERIMENT

René Daumal

THE SIMPLE FACT of the matter is beyond telling. In the eighteen years since it happened, I have often tried to put it into words. Now, once and for all, I should like to employ every resource of language I know in giving an account of at least the outward and inward circumstances. This 'fact' consists in a certainty I acquired by accident at the age of sixteen or seventeen; ever since then the memory of it has directed the best part of me toward seeking a means of finding it again, and for good.

My memories of childhood and adolescence are deeply marked by a series of attempts to experience the beyond and those random attempts brought me to the ultimate experiment — the fundamental experience of which I speak. At about the age of six, having been taught no kind of religious belief whatsoever, I struck up against the stark problem of death. I passed some atrocious nights, feeling my stomach clawed to shreds and my breathing half throttled by the anguish of nothingness, the 'no more of anything'. One night when it was about eleven, relaxing my entire body, I calmed the terror and revulsion of my organism before the unknown, and a new feeling came alive in me of hope, and a foretaste of the imperishable. But I wanted more, I wanted a certainty. At fifteen or sixteen I began my experiments, a search without direction or system. Finding no way to experiment directly on death — on my death — I tried to study my sleep, assuming an analogy between the two. By various devices I attempted to enter sleep in a waking state. The undertaking is not so utterly absurd as it sounds, but in certain respects it is perilous. I could not go very far with it; my own organism gave me some serious warnings of the risks I was running. One day, however, I decided to tackle the problem of death itself. I would put my body

Two Psychedelic Experiences

into a state approaching as close as possible that of physiological death, and still concentrate all my attention on remaining conscious and registering everything that might take place. I had in my possession some carbon tetrachloride, which I used to kill beetles for my collection. Knowing this substance belongs to the same chemical family as chloroform (it is even more toxic), I thought I could regulate its action very simply and easily: the moment I began to lose consciousness, my hand would fall from my nostrils carrying with it the handkerchief moistened with the volatile fluid. Later on I repeated the experiment in the presence of friends, who could have given me help had I needed it. The result was always exactly the same; that is, it exceeded and even overwhelmed my expectations by bursting the limits of the possible and by projecting me brutally into another world.

First came the ordinary phenomena of asphyxiation: arterial palpitation, buzzings, sounds of heavy pumping in the temples, painful repercussions from the tiniest exterior noises, flickering lights. Then, the distinct feeling: 'This is getting serious. The game is up,' followed by a swift recapitulation of my life up to that moment. If I felt any slight anxiety, it remained indistinguishable from a bodily discomfort that did not affect my mind. And my mind kept repeating to itself: 'Careful, don't doze off. This is just the time to keep your eyes open.' The luminous spots that danced in front of my eyes soon filled the whole of space, which echoed with the beat of my blood — sound and light overflowing space and fusing in a single rhythm. By this time I was no longer capable of speech, even of interior speech; my mind travelled too rapidly to carry any words along with it. I realized, in a sudden illumination, that I still had control of the hand which held the handkerchief, that I still accurately perceived the position of my body, and that I could hear and understand words uttered nearby — but that objects, words, and meanings of words had lost any significance whatsoever. It was a little like having repeated a word over and over until it shrivels and dies in your mouth: you still know what the word 'table' means, for instance, you could use it correctly, but it no longer truly evokes its object. In the same way everything that made up 'the world' for me in my ordinary state was still there, but I felt as if it had been drained of its substance. It was nothing more than a phantasmagoria — empty, absurd, clearly outlined, and necessary all at once. This 'world' lost all reality because I had abruptly entered another world, infinitely more real, an instantaneous and intense world of eternity, a concentrated flame of reality and evidence into which I had cast

myself like a butterfly drawn to a lighted candle. Then, at that moment, comes the *certainty*; speech must now be content to wheel in circles around the bare fact.

Certainty of what? Words are heavy and slow, words are too shapeless or too rigid. With these wretched words I can put together only approximate statements, whereas *my certainty* is for me the archetype of precision. In my ordinary state of mind, all that remains thinkable and formulable of this experiment reduces to one affirmation on which I would stake my life: I feel the certainty of the existence of *something else*, a beyond, another world, or another form of knowledge. In the moment just described, I knew directly, I experienced that beyond in its very reality. It is important to repeat that in that new state I perceived and perfectly comprehended the ordinary state of being, the latter being contained within the former, as waking consciousness contains our unconscious dreams, and not the reverse. This last irreversible relation proves the superiority (in the scale of reality or consciousness) of the first state over the second. I told myself clearly: in a little while I shall return to the so-called 'normal state', and perhaps the memory of this fearful revelation will cloud over; but it is in this moment that I see the truth. All this came to me without words; meanwhile I was pierced by an even more commanding thought. With a swiftness approaching the instantaneous, it thought itself so to speak in my very substance: for all eternity I was trapped, hurled faster and faster toward ever-imminent annihilation through the terrible mechanism of the Law that rejected me. 'That's what it is. So that's what it is.' My mind found no other reaction. Under the threat of something *worse*, I had to follow the movement. It took a tremendous effort, which became more and more difficult, but I was *obliged* to make that effort, until the moment when, letting go, I doubtless fell into a brief spell of unconsciousness. My hand dropped the handkerchief, I breathed air, and for the rest of the day I remained dazed and stupefied — with a violent headache.

I shall now try to bring that wordless *certainty* into focus by means of images and concepts. To begin with, it must be understood that this certainty exists on a *higher level of significance* than that of our usual thoughts. We are accustomed to use images or illustrations to signify concepts; for example, a drawing of a circle to represent the concept of a circle. In the state I am describing the concept itself is no longer the final term, the thing signified; the concept — or idea in the usual sense of the word — is itself the sign of something higher. Let me recall that at the moment when the *certainty* revealed itself, my ordinary intellectual mechanisms continued to function; images took shape, ideas and judgements formed in my mind, but free

from the weight and tangle of words. This last condition accelerated these operations to the speed of simultaneousness that they often have in moments of great danger — as when one falls while mountain-climbing, for example.

Thus, the images and concepts I am going to describe were present at the time of the experiment on a level of reality intermediate between the appearance of our everyday 'exterior world' and the *certainty* itself. A few of these images and concepts, however, grew out of my having written down, later, a partially coherent account. Such an account was necessary, for as soon as I wanted to relate the experience to anyone, and first of all to myself, I had to use words, and therefore to develop certain implicit aspects of these images and concepts.

Even though the two occurred simultaneously, I shall start with the images. They were both visual and auditory. In the first case, they took the form of what seemed a veil or screen of luminous spots, a veil more real than the ordinary 'world,' which I could still make out behind it. A circle, half red and half black, inscribed itself in a triangle colored in the same fashion, with the red half-circle against the black segment of triangle, and vice versa. And all space was endlessly divided thus into circles and triangles inscribed one within another, combining and moving in harmony, and changing into one another in a geometrically inconceivable manner that could not be reproduced in ordinary reality. A sound accompanied this luminous movement, and I suddenly realized it was I who was making it. In fact I virtually *was* that sound; I sustained my existence by emitting it. The sound consisted of a chant or formula, which I had to repeat faster and faster in order to 'follow the movement.' That formula (I give the facts with no attempt to disguise their absurdity) ran something like this: 'Tem gwef tem gwef dr rr rr,' with an accent on the second 'gwef' and with the last syllable blending back into the first; it gave an unceasing pulse to the rhythm, which was, as I have said, that of my very being. I knew that as soon as it began going too fast for me to follow, the unnamable and frightful thing would occur. In fact it was always *infinitely close* to happening, and infinitely remote . . . that is all I can say.

The concepts revolve around a central idea of *identity*: everything is perpetually one and the same. They took the form of spatial, temporal, and numerical diagrams — diagrams that were present at the time but whose separation into these categories naturally came later along with the verbal description.

The space in which these shapes arose was not Euclidean, for it was so constructed that any indefinite extension of a point returned

THE PSYCHEDELIC REVIEW

to itself. That is, I believe, what mathematicians call 'curved space.' Transposed into a Euclidean scheme, the movement could be described as follows. Imagine an immense circle whose circumference reaches the infinite and which is perfect and unbroken *except for one point*; subsequently this point expands into a circle that grows indefinitely, extends its circumference to infinity and merges with the original circle, perfect, pure and unbroken *except for one point*, which expands into a circle . . . and so on unceasingly, and in fact instantaneously, for at each instant the circumference, enlarged to infinity, reappears simultaneously as a *point*; not a central point, that would be too perfect; but an eccentric point that represents at the same time the nothingness of my existence and the disequilibrium that my existence, by its particularity, introduces into the immense circle of the All — the All which perpetually *obliterates me*, reasserting its undiminished integrity. For it is I alone who am *diminished*.

In respect to time, the scheme of things is perfectly analogous. This movement of an indefinite expansion returning to its origin takes place as duration (a 'curved' duration) as well as space: the last movement is forever identical with the first, it all vibrates simultaneously in an instant, and only the necessity of representing all this in our ordinary 'time' obliges me to speak of an infinite *repetition*. What I see I have always seen and shall always see, again and again; everything recommences in identical fashion at each instant, as if the total nullity of my particular existence within the unbroken substance of the Immobile were the cause of a cancerous proliferation of instants.

In respect to *number*, the indefinite multiplication of points, circles, and triangles dissolves the same way, instantaneously, into a regenerated Unity, perfect *except for me*; and this *except for me*, throwing the unity of the All into disequilibrium, engenders an indefinite and instantaneous multiplication, which immediately merges with the uttermost limit, with a regenerated Unity, perfect *except for me* . . . and everything starts all over again, always in the same place, in the same eternal instant, and without producing any true alteration in the nature of the All.

If I continued thus to try to enclose my *certainty* in any sequence of logical categories, I should be reduced to the same absurd expressions: in the category of causality, for example, cause and effect perpetually blending into one another and separating from one another, passing from one pole to the other because of the disequilibrium produced in their substantial identity by the infinitesimal hole which *I am*.

Two Psychedelic Experiences

I have said enough to make it clear that the certainty of which I speak is in equal degrees mathematical, experimental, and emotional: a *mathematical* certainty — or rather *mathematico-logical* — as one can understand indirectly in the conceptual description I have just attempted and which can be abstractly stated as follows: the identity of the existence and of the non-existence of the finite in the infinite; an *experimental* certainty, not only because it is based on direct vision (that would be observation and not necessarily experimentation), not only because the experiment can be repeated at any time, but because I ceaselessly tested the certainty in my struggle to 'follow the movement' that rejected me, a struggle in which I could only repeat the little chant I had found as my sole response; an *emotional* certainty because in the whole affair — the core of the experiment lies here — it is I who am at stake: I saw my own nothingness face to face, or rather my perpetual annihilation, total but not absolute annihilation: a mathematician will understand me when I describe it as 'asymptote.'

I insist on the triple nature of this certainty in order to anticipate three kinds of incomprehension in the reader. First, I want to keep lazy minds from falling into the illusion of understanding me when they find only a vague sense of the mystery of the beyond to correspond to my mathematical certainty. Second, I want to prevent psychologists and especially psychiatrists from treating my testimony not as testimony at all but as an interesting psychic manifestation worth studying and explaining by what they believe to be their 'psychological science.' It is in order to forestall their attempts that I have insisted on the experimental nature (and not simply the introspective experience) of my certainty. Third, at the very heart of this certainty, the cry: 'It's I, I who am at stake,' should frighten the curious who think they might like to perform the same or a similar experiment. I warn them now, it is a terrifying experience, and if they want more precise information on its dangers, they can ask me in private. I do not mean the physiological dangers (which are very great); for if, in return for accepting grave illness or infirmity, or for a considerable shortening of the span of physical life, one could attain to a *single* certainty, the price would not be too high. I am not speaking, moreover, only of the dangers of insanity or of damage to the mind, which I escaped by extraordinary good luck. The danger is far graver, comparable to what happened to Bluebeard's wife: she opens the door of the forbidden room, and the horrible spectacle sears her innermost being as with a white-hot iron. After the first experiment, in effect, I was 'unhinged' for several days,

cut adrift from what is customarily called 'the real.' Everything seemed to me an absurd phantasmagoria, no logic could convince me of anything, and, like a leaf in the wind, I was ready to obey the faintest interior or exterior impulse. This state almost involved me in irreparable 'actions' (if the word still applies,) for nothing held any importance for me any longer. I subsequently repeated the experiment several times, always with exactly the same result, or rather I always found the same moment, the same instant eternally co-existing with the illusory unfolding of my life. Having once seen the danger, however, I stopped repeating the test. Nevertheless, several years later I was given an anaesthetic for a minor operation. The identical thing happened: I confronted the same unique instant, this time, it is true, to the point of total unconsciousness.

My certainty, naturally, had no need of exterior confirmation; rather it suddenly cleared up for me the meaning of all kinds of narratives that other men have tried to make of the same revelation. I understood, in effect, that I was not the only one, not an isolated or pathological case in the cosmos. First of all, several of my friends tried the same experiment. For the most part nothing happened except the ordinary phenomena preceding narcosis. Two of them went a little further, but brought back with them only vague recollections of a profound bewilderment. One said it was like the advertisements for a certain apéritif, in which two waiters are carrying two bottles, whose labels show two waiters carrying two bottles whose labels... The other painfully searched his memory in the attempt to explain: 'Ixian, ixian i, ixian i...' It was obviously his version of 'Tem gwef tem gwef dr rr rr...' But a third friend experienced exactly the same reality that I had encountered, and we only needed to exchange a look to know we had seen the same thing. It was Roger Gilbert-Lecomte, with whom I was to edit the review, *Le Grand Jeu*; its tone of profound conviction was nothing more than the reflection of the certainty we shared. And I am convinced that this experience determined the direction his life would take as it did mine, even if somewhat differently.

Little by little I discovered in my reading accounts of the same experience, for I now held the key to these narratives and descriptions whose relation to a single and unique reality I should not previously have suspected. William James speaks of it. O. V. de L. Milosz, in his *Letter to Storge*, gives an overwhelming account of it in terms I had been using myself. The famous circle referred to by a medieval monk, and which Pascal saw (but who first saw it and spoke of it?)

ceased to be an empty allegory for me; I knew it represented a devouring vision of what I had seen also. And, beyond all this varied and partial human testimony (there is scarcely a single true poet in whose work I did not find at least a fragment of it), the confessions of the great mystics and, still more advanced, the sacred texts of certain religions, brought me an affirmation of the same reality. Sometimes I found it in its most terrifying form, as perceived by an individual of limited vision who has not raised himself to the level of such perception, who, like myself, has tried to look into the infinite through the keyhole and finds himself staring into Bluebeard's cupboard. Sometimes I encountered it in the pleasing, plentifully satisfying and intensely luminous form that is the vision of beings truly transformed, who can behold that reality face to face without being

René Daumal (1908-1944) wrote the first version of this text in his late teens. It contains one of the most rigorous and unflinching analyses of supra-conscious experience to have been written in this century. Long training in the sciences, a fluent knowledge of Sanscrit and of its religious texts, and a period of turbulent relationships with the surrealists in Paris gave Daumal the power and the honesty to treat a subject usually relegated to visionaries and faddists. He worked at once as observer, critic, and poet.

During the Second World War the editor, Jean Paulhan, asked several authors to contribute to *Les Cahiers de la Pléiade* highly personal articles on the turning point in their lives. Daumal's early narrative of crossing the threshold of consciousness, rewritten under the title of *Une Expérience fondamentale*, was one of the only texts to come in. It has been republished in his volume of collected essays, *Chaque fois que l'aube paraît* (Gallimard, 1953).

The first volume of Daumal's to appear in English is the novel, *Mount Analogue*, which Vincent Stuart brought out this autumn with an introduction by Roger Shattuck from which the poem quoted below is reprinted.

In his last letter to his wife Vera, René Daumal wrote:

'This is how I sum up for myself what I wish to convey to those who work here with me.

*I am dead because I lack desire,
I lack desire because I think I possess.
I think I possess because I do not try to give.
In trying to give, you see that you have nothing;
Seeing that you have nothing, you try to give of yourself;
Trying to give of yourself, you see that you are nothing;
Seeing you are nothing, you desire to become;
In desiring to become, you begin to live.'*

THE PSYCHEDELIC REVIEW

destroyed by it. I have in mind the revelation of the Divine Being in the *Bhagavad-Gītā*, the vision of Ezekiel and that of St. John the Divine on Patmos, certain descriptions in the *Tibetan Book of the Dead* (*Bardo thödol*), and a passage in the *Lankāvatāra-Sūtra* . . .

Not having lost my mind then and there, I began little by little to philosophize about the memory of this experience. And I would have buried myself in a philosophy of my own if someone had not come along just in time to tell me: 'Look, the door is open — narrow and hard to reach, but a door. It is the only one for you.'

TRANSLATED BY ROGER SHATTUCK

A SUGGESTION ABOUT MYSTICISM¹

William James

MUCH INTEREST in the subject of religious mysticism has been shown in philosophic circles of late years. Most of the writings I have seen have treated the subject from the outside, for I know of no one who has spoken as having the direct authority of experience in favor of his views. I also am an outsider, and very likely what I say will prove the fact loudly enough to readers who possibly may stand within the pale. Nevertheless, since between outsiders one is as good as another, I will not leave my suggestion unexpressed.

The suggestion, stated very briefly, is that states of mystical intuition may be only very sudden and great extensions of the ordinary "field of consciousness." Concerning the causes of such extensions I have no suggestion to make; but the extension itself would, if my view be correct, consist in an immense spreading of the margin of the field, so that knowledge ordinarily transmarginal would become included, and the ordinary margin would grow more central. Fechner's "wave-scheme" will diagrammatize the alteration, as I conceive it, if we suppose that the wave of present awareness, steep above the horizontal line that represents the plane of the usual "threshold," slopes away below it very gradually in all directions. A fall of the threshold, however caused, would, under these circumstances, produce the state of things which we see on an unusually flat shore at the ebb of a spring-tide. Vast tracts usually covered are then revealed to view, but nothing rises more than a few inches above the water's bed, and great parts of the scene are submerged again, whenever a wave washes over them.

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Two Psychedelic Experiences

Some persons have naturally a very wide, others a very narrow, field of consciousness. The narrow field may be represented by an unusually steep form of the wave. When by any accident the threshold lowers, in persons of this type — I speak here from direct personal experience — so that the field widens and the relations of its centre to matters usually subliminal come into view, the larger panorama perceived fills the mind with exhilaration and sense of mental power. It is a refreshing experience; and — such is now my hypothesis — we only have to suppose it to occur in an exceptionally extensive form, to give us a mystical paroxysm, if such a term be allowed.

A few remarks about the field of consciousness may be needed to give more definiteness to my hypothesis. The field is composed at all times of a mass of present sensation, in a cloud of memories, emotions, concepts, etc. Yet these ingredients, which have to be named separately, are not separate, as the conscious field contains them. Its form is that of a much-at-once, in the unity of which the sensations, memories, concepts, impulses, etc., coalesce and are dissolved. The present field as a whole came continuously out of its predecessor and will melt into its successor as continuously again, one sensation-mass passing into another sensation-mass and giving the character of a gradually changing *present* to the experience, while the memories and concepts carry time-coefficients which place whatever is present in a temporal perspective more or less vast.

When, now, the threshold falls, what comes into view is not the next mass of *sensation*; for sensation requires new physical stimulations to produce it, and no alteration of a purely mental threshold can create these. Only in case the physical stimuli were already at work subliminally, preparing the next sensation, would whatever sub-sensation was already prepared reveal itself when the threshold fell. But with the memories, concepts, and conational states, the case is different. Nobody knows exactly how far we are "marginally" conscious of these at ordinary times, or how far beyond the "margin" of our present thought transmarginal consciousness of them may exist.² There is at any rate no definite bound set between what is central and what is marginal in consciousness, and the margin itself

² Transmarginal or subliminal, the terms are synonymous. Some psychologists deny the existence of such consciousness altogether (A. H. Pierce, for example, and Münsterberg apparently). Others, e. g., Bergson, make it exist and carry the whole freight of our past. Others again (as Myers) would have it extend (in the "telepathic" mode of communication) from one person's mind into another's. For the purposes of my hypothesis I have to postulate its existence; and once postulating it, I prefer not to set any definite bounds to its extent.

THE PSYCHEDELIC REVIEW

has no definite bound *a parte foris*. It is like the field of vision, which the slightest movement of the eye will extend, revealing objects that always stood there to be known. My hypothesis is that a movement of the threshold downwards will similarly bring a mass of subconscious memories, conceptions, emotional feelings, and perceptions of relation, etc., into view all at once; and that if this enlargement of the nimbus that surrounds the sensational present is vast enough, while no one of the items it contains attracts our attention singly, we shall have the conditions fulfilled for a kind of consciousness in all essential respects like that termed mystical. It will be transient, if the change of threshold is transient. It will be of reality, enlargement, and illumination, possibly rapturously so. It will be of unification, for the present coalesces in it with ranges of the remote quite out of its reach under ordinary circumstances; and the sense of *relation* will be greatly enhanced. Its form will be intuitive or perceptual, not conceptual, for the remembered or conceived objects in the enlarged field are supposed not to attract the attention singly, but only to give the sense of a tremendous *muchness* suddenly revealed. If they attracted attention separately, we should have the ordinary steep-waved consciousness, and the mystical character would depart.

Such is my suggestion. Persons who *know* something of mystical experience will no doubt find in it much to criticize. If any such shall do so with definiteness, it will have amply served its purpose of helping our understanding of mystical states to become more precise.

The notion I have tried (at such expense of metaphor) to set forth was originally suggested to me by certain experiences of my own, which could only be described as very sudden and incomprehensible enlargements of the conscious field, bringing with them a curious sense of cognition of real fact. All have occurred within the past five years; three of them were similar in type; the fourth was unique.

In each of the three like cases, the experience broke in abruptly upon a perfectly commonplace situation and lasted perhaps less than two minutes. In one instance I was engaged in conversation, but I doubt whether the interlocutor noticed my abstraction. What happened each time was that I seemed all at once to be reminded of a past experience; and this reminiscence, ere I could conceive or name it distinctly, developed into something further that belonged with it, this in turn into something further still, and so on, until the process faded out, leaving me amazed at the sudden vision of increasing ranges of distant fact of which I could give no articulate account.

Two Psychedelic Experiences

The mode of consciousness was perceptual, not conceptual — the field expanding so fast that there seemed no time for conception or identification to get in its work. There was a strongly exciting sense that my knowledge of past (or present?) reality was enlarging pulse by pulse, but so rapidly that my intellectual processes could not keep up the pace. The *content* was thus entirely lost to retrospection — it sank into the limbo into which dreams vanish as we gradually awake. The feeling — I won't call it belief — that I had had a sudden *opening*, had seen through a window, as it were, distant realities that incomprehensibly belonged with my own life, was so acute that I cannot shake it off to-day.

This conviction of fact-revealed, together with the perceptual form of the experience and the inability to make articulate report, are all characters of mystical states. The point of difference is that in my case certain special directions only, in the field of reality, seemed to get suddenly uncovered, whereas in classical mystical experiences it appears rather as if the whole of reality were uncovered at once. *Uncovering* of some sort is the essence of the phenomenon, at any rate, and is what, in the language of the Fechnerian wave-metaphor, I have used the expression "fall of the threshold" to denote.

My fourth experience of uncovering had to do with dreams. I was suddenly intromitted into the cognizance of a pair of dreams that I could not remember myself to have had, yet they seemed somehow to connect with me. I despair of giving the reader any just idea of the bewildering confusion of mind into which I was thrown by this, the most intensely peculiar experience of my whole life. I wrote a full memorandum of it a couple of days after it happened, and appended some reflections. Even though it should cast no light on the conditions of mysticism, it seems as if this record might be worthy of publication, simply as a contribution to the descriptive literature of pathological mental states. I let it follow, therefore, as originally written, with only a few words altered to make the account more clear.

"San Francisco, Feb. 14th 1906. — The night before last, in my bed at Stanford University, I woke at about 7:30 A.M., from a quiet dream of some sort, and whilst gathering my waking wits, seemed suddenly to get mixed up with reminiscences of a dream of an entirely different sort, which seemed to telescope, as it were, into the first one, a dream very elaborate, of lions, and tragic. I concluded this to have been a previous dream of the same sleep; but the apparent mingling of two dreams was something very queer, which I had never before experienced.

THE PSYCHEDELIC REVIEW

"On the following night (Feb. 12-13) I awoke suddenly from my first sleep, which appeared to have been very heavy, in the middle of a dream, in thinking of which I became suddenly confused by the contents of two other dreams that shuffled themselves abruptly in between the parts of the first dream, and of which I couldn't grasp the origin. Whence come *these dreams*? I asked. They were close to *me*, and fresh, as if I had just dreamed them; and yet they were far away from the first dream. The contents of the three had absolutely no connection. One had a cockney atmosphere, it had happened to some one in London. The other two were American. One involved the trying on of a coat (was this the dream I seemed to wake from?) the other was a sort of nightmare and had to do with soldiers. Each had a wholly distinct emotional atmosphere that made its individuality discontinuous with that of the others. And yet, in a moment, as these three dreams alternately telescoped into and out of each other, and I seemed to myself to have been their common dreamer, they seemed quite as distinctly *not* to have been dreamed in succession, in that one sleep. *When*, then? Not on a previous night, either. *When*, then, and *which* was the one out of which I had just awakened? *I could no longer tell*: one was as close to me as the others, and yet they entirely repelled each other, and I seemed thus to belong to three different dream-systems at once, no one of which would connect itself either with the others or with my waking life. I began to feel curiously confused and *scared*, and tried to wake myself up wider, but I seemed already wide-awake. Presently cold shivers of dread ran over me: *am I getting into other people's dreams*? Is this a 'telepathic' experience? Or an invasion of double (or treble) personality? Or is it a thrombus in a cortical artery? and the beginning of a general mental 'confusion' and disorientation which is going on to develop who knows how far?

"Decidedly I was losing hold of my 'self,' and making acquaintance with a quality of mental distress that I had never known before, its nearest analogue being the sinking, giddy anxiety that one may have when, in the woods, one discovers that one is really 'lost.' Most human troubles look towards a terminus. Most fears point in a direction, and concentrate towards a climax. Most assaults of the evil one may be met by bracing oneself against something, one's principles, one's courage, one's will, one's pride. But in this experience all was diffusion from a centre, and foothold swept away, the brace itself disintegrating all the faster as one needed its support more direly. Meanwhile vivid perception (or remembrance) of the various dreams kept coming over me in alternation. Whose? *whose?* WHOSE? Unless I can *attach* them, I am swept out to sea with no

Two Psychedelic Experiences

horizon and no bond, getting *lost*. The idea aroused the 'creeps' again, and with it the fear of again falling asleep and renewing the process. It had begun the previous night, but then the confusion had only gone one step, and had seemed simply curious. *This* was the second step — where might I be after a third step had been taken? My teeth chattered at the thought.

"At the same time I found myself filled with a new pity towards persons passing into dementia with *Verwirrtheit*, or into invasions of secondary personality. *We* regard them as simply *curious*; but what *they* want in the awful drift of their being out of its customary self, is any principle of steadiness to hold on to. We ought to assure them and reassure them that we will stand by them, and recognize the true self in them to the end. We ought to let them know that we are with *them* and not (as too often we must seem to them) a part of the world that but confirms and publishes their deliquescence.

"Evidently I was in full possession of my reflective wits; and whenever I thus objectively thought of the situation in which I was, my anxieties ceased. But there was a tendency to relapse into the dreams and reminiscences, and to relapse vividly; and then the confusion recommenced, along with the emotion of dread lest it should develop farther.

"Then I looked at my watch. Half-past twelve! Midnight, therefore. And this gave me another reflective idea. Habitually, on going to bed, I fall into a very deep slumber from which I never naturally awaken until after two. I never awaken, therefore, from a midnight dream, as I did to-night, so of midnight dreams my ordinary consciousness retains no recollection. My sleep seemed terribly heavy as I woke to-night. Dream states carry dream memories — why may not the two succedaneous dreams (whichever two of the three *were* succedaneous) be memories of *twelve o'clock dreams of previous nights*, swept in, along with the just-fading dream, into the just-waking system of memory? Why, in short, may I not be tapping, in a way precluded by my ordinary habit of life, *the midnight stratum* of my past experiences?

"This idea gave great relief — I felt now as if I were in full possession of my *anima rationalis*. I turned on my light, resolving to read myself to sleep. But I didn't read, I felt drowsy instead, and, putting out the light, soon was in the arms of Morpheus.

"I woke again two or three times before daybreak with no dream-experiences, and finally, with a curious, but not alarming, confusion between two dreams, similar to that which I had had the previous morning, I awoke to the new day at seven.

THE PSYCHEDELIC REVIEW

"Nothing peculiar happened the following night, so the thing seems destined not to develop any further."³

The distressing confusion of mind in this experience was the exact opposite of mystical illumination, and equally unmystical was the definiteness of what was perceived. But the exaltation of the sense of relation was mystical (the perplexity all revolved about the fact that the three dreams *both did and did not belong in the most intimate way together*); and the sense that *reality was being uncovered* was mystical in the highest degree. To this day I feel that those extra dreams were dreamed in reality, but when, where, and by whom, I can not guess.

In the *Open Court* for December, 1909, Mr. Frederick Hall narrates a fit of ether-mysticism which agrees with my formula very well. When one of his doctors made a remark to the other, he chuckled, for he realized that these friends "believed they saw real things and causes, but they *didn't*, and I did. . . . I was where the causes *were* and to see them required no more mental ability than to recognize a color as blue. . . . The knowledge of how little [the doctors] actually did see, coupled with their evident feeling that they saw all there was, was funny to the last degree. . . . [They] knew as little of the real causes as does the child who, viewing a passing train and noting its revolving wheels, supposes that they, turning of themselves, give to coaches and locomotive their momentum. Or imagine a man seated in a boat, surrounded by dense fog, and out of

³ I print the rest of my memorandum in the shape of a note:—

"Several ideas suggest themselves that make the observation instructive.

"First, the general notion, now gaining ground in mental medicine, that certain mental maladies may be foreshadowed in dream-life, and that therefore the study of the latter may be profitable.

"Then the specific suggestion, that states of 'confusion,' loss of personality, *apraxia*, etc., so often taken to indicate cortical lesion or degeneration of dementic type, may be very superficial functional affections. In my own case the confusion was *foudroyante*—a state of consciousness unique and unparalleled in my sixty-four years of the world's experience; yet it alternated quickly with perfectly rational states, as this record shows. It seems, therefore, merely as if the threshold between the rational and the morbid state had, in my case, been temporarily lowered, and as if similar confusions might be very near the line of possibility in all of us.

"There are also the suggestions of a telepathic entrance into some one else's dreams, and of a doubling up of personality. In point of fact I don't know now 'who' had those three dreams, or which one 'I' first woke up from, so quickly did they substitute themselves back and forth for each other, discontinuously. Their discontinuity was the pivot of the situation. My sense of it was as 'vivid' and 'original' an experience as anything Hume could ask for. And yet they kept telescoping!

"Then there is the notion that by waking at certain hours we may tap distinct strata of ancient dream-memory."

Two Psychedelic Experiences

the fog seeing a flat stone leap from the crest of one wave to another. *If he had always sat thus*, his explanations must be very crude as compared with those of a man whose eyes could pierce fog, and who saw upon the shore the boy skipping stones. In some such way the remarks of the two physicians seemed to me like the last two 'skips' of a stone thrown from my side. . . . All that was essential in the remark I knew before it was made. Thus to discover convincingly and for myself, that the things which are unseen are those of real importance, this was sufficiently stimulating."

It is evident that Mr. Hall's marginal field got enormously enlarged by the ether, yet so little defined as to its particulars that what he perceived was mainly the thoroughgoing causal integration of its whole content. That this perception brought with it a tremendous feeling of importance and superiority is a matter of course.

I have treated the phenomenon under discussion as if it consisted in the uncovering of tracts of *consciousness*. Is the consciousness already there waiting to be uncovered? And is it a veridical revelation of reality? These are questions on which I do not touch. In the subjects of the experience the "emotion of conviction" is always strong, and sometimes absolute. The ordinary psychologist disposes of the phenomenon under the conveniently "scientific" head of *petit mal*, if not of "bosh" or "rubbish." But we know so little of the noetic value of abnormal mental states of any kind that in my opinion we had better keep an open mind and collect facts sympathetically for a long time to come. We shall not *understand* these alterations of consciousness either in this generation or in the next.



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PSYCHEDELIC METAPHYSICS

DAVID DRAKE

I

THE WORD "reality" is commonly used in two quite distinct meanings. Understanding of one of these meanings, and the exploration of that reality, can be enhanced by the psychedelic drugs precisely because the other meaning is paramount in everyday life. Thus the drugs can help us to metaphysical understanding. At the same time, metaphysical analysis can help us to understand the experience of the drugs. The initial analysis of this essay will, I think, seem quite familiar to the reader (the two meanings of reality already have been recognized: e. g. by Northrup in "The Meeting of East and West"), and I request the reader's patience before proceeding to the somewhat more interesting conclusions.

The two meanings are: (1) a coherent, causality-representing model of human experience; (2) vivid, attention-compelling, value-giving experience. In the first meaning, for example, electrons are a reality because they fit into a conceptual scheme that provides explanation and prediction of some phenomena. In the second meaning, a vivid hallucination is a reality within the experience in which it occurs. The two meanings of course can coincide in their reference, which they do in clear, valid perception.

It is conjectured that the philosophically significant effect of the psychedelic drugs is to interfere with the usual mental "programs" of attention, thought, and action. These programs result in only some things being perceived — those relevant as cues to the progression of the programs. By suspending the programs, and incidentally the capacity for useful functioning, many new possibilities enter into experience. Thus it is no mystery that the experience of the drugs is both "psychotomimetic," disorganizing, incapacitating, and also revelatory, mystic, life-enriching.

Now the ordinary dominant programs of thought and action (e. g. to get to work, impress the boss favorably, go to lunch at a certain time, etc.) require a continual referencing of reality in the first sense, if the program is to progress successfully. The metaphysical significance of the psychedelics in crippling this process is

Psychedelic Metaphysics

to recall to us the separable, second meaning of reality: vivid, value-giving experience. Various philosophical assertions that tend to be uttered in the experience of the psychedelics are then quite meaningful and true as understandings of experience in general, in spite of the "psychotic" suspension of the causality-representing model.

We shall enumerate some of these understandings:

(1) Experience or mind is an "ultimate" reality, and the causal model is "mere thought," of less intrinsic interest. Any sophisticated philosophy of science acknowledges this, in the sense that we do not really know what is out there: e. g. electrons are a convenient conceptual construction, our conceptual constructions change through the history of science, and "ultimately" are validated by their reference to vivid experience. Nevertheless, in practice we commonly take the conceptual model as our frame of reference, and so live under the tyranny of "materialism," "clock time," etc.

(2) Experience or mind is "one," already including other people as much as "myself," nobody as much as anybody. In pure experience, bodies appear, which bodies utter speech, which speech is meaningful with reference to other aspects of experience. This body or that body can equally well describe that object over there. Any separation into "my" perceptions, "my" body, and "yours," is highly arbitrary.

(3) There is no such entity as an ego. The ego is a mere thought, a self-image, and from all such images mind has infinite possibility of choice. More generally, the objects and properties that we ordinarily perceive as real, we understand in the psychedelic experience as choices of mind to a very high degree, having a high arbitrariness from the viewpoint of phenomena as such.

Now these insights are true of vivid experience in general; they are not an illusion of the psychosis. The traditional philosophical methods of semantic analysis, honest confrontation of existence, meditation, etc., have yielded these understandings repeatedly in philosophical history: for example, among existentialists in the West, and especially among the Mahayana (including Zen) Buddhists in the East.

II

But at the same time, as the psychedelics are illuminating reality in the second sense, their existence and their effect amplify and confirm the causal model of modern science.

THE PSYCHEDELIC REVIEW

In this model, the phenomena of experience correspond to space-time events in conceptual entities called "brains," and since these brain-events in turn partially reflect (the logical structure of) other conceptual space-time events "of the outside world," it is possible for brains to reflect brains to some extent, and therefore to correspond to phenomena. And indeed we do perceive a particular configuration on opening someone's head, and we can stick needles into that phenomenon and record wavy lines on graph paper; and these wavy lines bear some logical relationship to that person's reports of phenomenal experience.

Now the causal validity of this model is enhanced by the fact that a psychedelic can be ingested, presumably to circulate in the blood to the brain, and cause the phenomenal reality.

The two "realities" are not at all contradictory. Nor is this position dualistic, for it does not assert two different and unrelated kinds of entities: minds and material objects. There are not two kinds of entities; there are simply two meanings of the word "reality": phenomena, experience, or mind; and within mind, conceptual causal models of the whole. The causal models include—very critically to the causal logic—the phenomenal fragments that we call "brains," "brain wave tracings," etc. The brain is the mind's "image" of itself "from the outside," and therefore is a part of mind—hence there is no dualism.

One major problem remains. How do we reconcile the insight into the oneness of mind with the plurality of separated brains in the conceptual model? The appearance of a contradiction is brought about by the two meanings of "space," corresponding to the two meanings of "reality." In conceptual space—i. e. in diagrams on blackboards and in textbooks, and in perception of the location of brains, etc., this space being a portion of phenomenal space, used as a vehicle of causal order—there are indeed plural, separate brains, each corresponding to the phenomenal world. A single phenomenal place (e. g. the location of an object, looked at by several people) can be simultaneously represented by several places in the conceptual model (the locations of the processes of space—perception in their different brains).

But we, in the phenomenal world with each other, are talking about the same phenomenal objects and qualities, and are ourselves fully manifest to each other, because this phenomenal world is logically one with the various brain-models. More fundamentally: our brain-models will necessarily have logical similarities (we can assert this before the brain is fully explored), and will be able to represent the oneness of mind in which we move and talk to each other.

ZEN BUDDHISM: A PSYCHOLOGICAL REVIEW'

EDWARD W. MAUPIN

ZEN, a sect of Mahayana Buddhism, originated in China and has played an important role in Japanese culture since its introduction there in the thirteenth century. It has traditionally sought to bring about in its students a direct experience of the enlightenment which characterized the Buddha. What makes this of interest to psychologists is that enlightenment is considered to be essentially a psychological problem to be worked out by the student. Appeals to divine intervention or intensive study of scriptures are felt to be irrelevant.

Zen involves a variety of training techniques designed to guide the student to a turning point, *satori*, which appears to be a major shift in the mode of experiencing oneself and the world, and which is an important step on the way to enlightenment. Since the individual, with *satori*, is described as living an increasingly effective and satisfying life, Zen is of interest in terms of psychotherapy. There is a growing body of literature by psychologists and psychiatrists on this aspect of Zen, and it seems likely that there are concepts and procedures here which will prove useful in Western psychotherapy. It is the purpose of this paper to distill out of the often-confusing literature in English a coherent picture of Zen, its procedures and the experiences which result. Without wishing to overinterpret or "pigeonhole" Zen experience, I have examined psychological literature which seemed to shed further light on the phenomena described.

Western interest in Zen began largely in response to the writings of Dr. D. T. Suzuki, Professor of Buddhist Philosophy at Otsu University, who has himself experienced *satori*. The burgeoning literature in English may be roughly grouped into four categories. The first consists of writings by contemporary authors who

THE PSYCHEDELIC REVIEW

have personally undergone Zen training and have firsthand experience of satori. This includes Suzuki's books (1927; 1933; 1934; 1949a; 1949b; 1956) and those of other twentieth-century Zen monks and masters (Chang, 1959; Luk, 1960; Senzaki & McGandless, 1953). With the sole exception of Eugen Herrigel (1956; 1960) all of these people are Chinese or Japanese. A second category consists of traditional sources — sutras and lectures of Zen masters from as far back as the eighth century now being translated (Huang-po 1959; Hui-hai, 1960). Thirdly, there are publications by Western interpreters of Zen (Humphreys, 1949; Watts, 1947, 1958, 1960). Finally there are a number of publications by psychologists and psychiatrists on various aspects of Zen (Ben-Avi, 1959; Benoit, 1959; Fingarette, 1958; Fromm, 1959; Fromm, Suzuki & De Martino, 1960; Holmes, 1957; Jung, 1957; Kelman, 1958; Kondo, 1953; Kondo, 1958; Sato, 1958; Sato, 1959; Van Dusen, 1958a; Van Dusen, 1958b; Van Dusen, 1961; Weisz, 1960). The experience of satori is the central core of Zen. Everything else is considered secondary to it. Since it must be experienced in order to be fully understood, I have given primary attention to the authors who have had it. Where pertinent issues are raised, and especially where these bear on psychotherapy, I have turned to the secondhand sources.

THE ORDINARY ADULT MIND AND SATORI

Zen literature makes no particular distinction between types of psychopathology. As a therapy it seems designed for people who are normally mature and have achieved a fair degree of self-control. Existential problems are seen as resulting from the way the ordinary adult experiences himself and his world — from the terms in which the problems are couched. For an answer, a radical shift in the mode of experience, satori, is proposed. The term "satori" seems to be used in two ways in Zen literature. One is to refer to an experience of insight, lasting only a short time, which may recur more than once. Another, vaguer usage refers to the changes in one's outlook and ability to function which are brought about as a result of the insight. A part of the confusion seems to stem from the timelessness of the experience, a feeling of immortality, which leads the person having it to deny that it comes and goes. It is an insight into the nature of things as they have always been.

Satori is not a trance. Consciousness is not lost, nor does it impair the ability to use ordinary cognitive functions as required. It is not a quietistic retreat. All of these possible outcomes of the

Zen Buddhism

training procedures are considered byways to be guarded against with the help of the Zen master. Satori is described as an added mode of experience, comparable to the opening of a third eye. It is considered impossible to express in rational language.

This raises the problem of irrationality in Zen literature, which warrants a short digression. The confusing, non-logical quality seems to stem from three main sources. First, there is the ordinary difficulty in describing any state of consciousness. Under the proper circumstances we can specify the content of consciousness — what fantasies, thoughts or sensations are present — but the formal qualities are much more difficult to communicate. One recourse is to speak in analogies and hope that the hearer has had such experience that the analogy seems familiar. We find one Zen master counseling his students to keep a kind of "doubt" which arises in the course of meditation "neither too fine nor too coarse." Both the term "doubt" and the sensory terms with which he qualifies it are analogies which become meaningful only when the student reaches that stage. This first source of unclarity in Zen literature, then, is one which often plagues the attempt to communicate subjective experience.

A second source is the teaching method of Zen. The problem to which the Zen master addresses himself is to have the student get beyond concepts of satori to the experience itself. The student may come with a question about some important aspect of Buddhism, the training, or his own problems in reaching satori. But a direct, conceptual answer would only be *about* the topic; it would not bring the student to see the thing itself. There is a deep feeling in Zen that conceptual knowledge can come only so close to its object. In satori one no longer mediates experience through concepts. So the Zen master may make an apparently illogical retort which may jolt the student into seeing the thing for himself.

The third source of unclarity seems to be a genuinely illogical quality of satori itself. Certain aspects of this new mode of experience, such as the feeling of oneness, seem genuinely inexpressible in a language posited on a subject-object dichotomy, conventional time, space, and so on.

Although descriptions of satori are given with a caution that they are only inadequate analogies, there are certain uniformities in the way people compare it with the ordinary mode of experience. The first contrast is between intellection and intuition. Suzuki writes that man tends to mistake his conceptual tools for reality. "He forgets that concepts are his own creations and by no means exhaust reality. Zen is fully conscious of this and all its *mondo* are

directed towards casting off the false mask of conceptualization" (1949a, p. 28).

Chang (1959, p. 141) outlines other characteristics of the ordinary mind. It must break reality into discrete entities and can only deal with a few things at a time. It is rigid and fixed, unable to deal with all possible aspects of a thing, and it tends to "cling" to the object thus separated and objectified. The term "clinging" hints at personal motivation to maintain the stability achieved by this kind of structuring. It will be noted that the conceptual mode is under attack not because it is useless in general, but because, improperly used, it separates the individual from another, more direct contact with his experience. It is this loss of immediate experience which plunges the individual into existential problems.

The intellect is primarily intended to have us get on well with a world dualistically conceived; but as to its probing into ultimate reality it is an inadequate instrument. (Suzuki, 1949a, p. 112.)

... human consciousness weaves a time-continuum and regards it as reality. When this is accomplished, the procedure is now reversed, and we begin to build up our experience on the screen of time. Serialism comes first now and we find our lives miserably bound up by it. The absolute present is pushed away back, we are no more conscious of it. We regret the past and worry about the future. Our crying is not pure crying, nor is our laughing pure laughing. There is always something else mixed up with it, that is the present has lost its innocence and absoluteness. The future and the past overlay the present and suffocate it. (*ibid.*, pp. 72-73.)

The loss of immediate experience refers in part to the tendency to live in a fantasy world (which treats objects and events in terms of a personal — and necessarily cognitive — network of goals, plans, wishes and fears). Also included is the tendency to impose too quickly the conventional structures like time, space, the subject-object dichotomy, and self-other value systems. It should be noted, too, that the psychological unconscious, as repository of repressed derivatives of unacceptable wishes, is included in this conceptual filter. Suzuki is inclined to think of this as merely a lower stratum of the same kind of conceptual mind, "probably accumulated ever since we began to become conscious of our own existence" (1949a, p. 95).

Contrasted with this is "intuition," which Dr. Akihira Kondo,

a Japanese psychoanalyst, interprets as "the function of the human mind for perceiving totality" (1953). Suzuki speaks of it in terms of the more traditional *prajna*:

Prajna is the experience a man has when he feels in its most fundamental sense the infinite totality of things, that is psychologically speaking, when the finite ego, breaking its hard crust, refers itself to the infinite which envelops everything that is finite and limited and therefore transitory. We may take this experience as being somewhat akin to a totalistic intuition of something that transcends all our particularized, specified experiences. (Fromm *et al.*, 1960, p. 74.)

Intimately connected with the conceptual mode of experience is the experience of self. The individual mistakes the self which he can take as an object of consciousness for his real self. Like other objects of consciousness it must be separated out, and this, in particular, leads the individual into a frantic scramble to defend, maintain, and bolster himself. Herrigel writes:

By learning to discriminate himself more and more from everything that is not himself, that does not belong to him, man experiences the tension between the ego and non-ego as an opposition. The more consciously he confronts everything not himself as an object, the more the ego places itself outside — outside what is "opposite" to it. The result is a continuous division of being into the two realms of subjective and objective. (1960, p. 19.)

Man feels and experiences himself as an ego. Egohood leads to selfishness and self-assertion in the face of everything that is not-self, and hence to hardness of heart. He feels himself and makes himself the center, if not consciously, then in secret (*ibid.*, p. 19).

It will be seen from this that the experience of a separate self is felt to stand in a causal relationship to other aspects of the clinging, conceptual mind. But from the standpoint of satori this self is a fiction.²

Satori, in contrast, is the intuitive seeing into the real self, the true author of one's behavior, which is at the same time a part of the whole flux of the universe.³ This contact, however, does not mean reflexive awareness of the real self — which would then only replace the old self as an object of conscious thought. One's experi-

THE PSYCHEDELIC REVIEW

ence is felt to take place directly through the real self unmediated by conscious thought, and without consciousness of the process. "It is rather a state of mind in which there is no specific consciousness of its own workings" (Suzuki, 1949b, p. 105). One is content to let behavior bring out a self which cannot be fully conceptualized. One trusts this self enough to suspend conscious reflective control over it.

It is this getting out of the way of the unfolding of the real self which is the "therapeutic" effect of satori:

Zen in its essence is the art of seeing into the nature of one's being, and it points the way from bondage to freedom. . . . We can say that Zen liberates all the energies properly and naturally stored in each of us, which are in ordinary circumstances cramped and distorted so that they find no adequate channel for activity. . . . It is the object of Zen, therefore, to save us from going crazy or being crippled. This is what I mean by freedom, giving free play to all the creative and benevolent impulses inherently lying in our hearts. Generally, we are blind to this fact, that we are in possession of all the necessary faculties that will make us happy and loving towards one another. (Suzuki, 1956, pp. 3 ff.)

Although one may make forays into the cognitive world as various situations require, there is direct contact with experience, unmediated by concepts. This means the transcendence of existential problems.

For satori stands firmly on the Absolute Present, Eternal Now, where time and space are coalesced and yet begin to get differentiated. They lie there dormant as it were with all their futurities and possibilities; they are both there rolled up with all their achievements and unfoldments. It is the privilege of satori to be sitting in the Absolute Present quietly surveying the past and contemplating the future. (Suzuki, 1949a, p. 61.)

"This very 'moment' is not subject to birth-and-death and therefore there is no going beyond it as long as we live this present moment. Here is absolute tranquility which is no other than this present moment. Bliss lies in the timelessness of this present moment. There is here no particular recipient of this bliss and, therefore, every one of us is blessed with eternal bliss. (*ibid.*, p. 111. Quoted from the ancient monk, Yeno.)

Zen Buddhism

It is important to note that ordinary perception and conceptualization are not impaired in satori. Rather, while intuiting totality, the individual sees objects more objectively than before, less distorted by personal motives. Cognitive skills remain available as required.

Thus far we have discussed satori as though it were more or less a constant state of mind after a certain point in Zen training. Actually, the first experience of satori probably lasts only a short time. Further training is directed toward expanding the situations in which such a state of mind may be maintained. Enlightenment, a nearly impossible ideal, is felt to be a constant experience of satori. Nevertheless, at times following satori, the individual may deepen the experience to a point of complete union. Relaxing conceptual consciousness and falling back on unreflected intuition are felt to have important effects on the range of stimuli to which one can respond. Zen-trained artists and soldiers especially have made use of this state of mind to heighten their effectiveness.

TRAINING

We turn now to the techniques which are used to lead the student toward the experience of satori. It must be emphasized that satori is felt to be an awakening to something which was always there, not the product of some particular technique. What procedures are used will depend on what the Zen master feels his student needs to awaken him to this kind of experience. Thus specific methods will vary far more than the present review can convey. Generally, however, the student sets aside a portion of the day for sitting motionless and engaging in some time of concentration exercise. The object of concentration varies considerably and may be changed as the student progresses. The aim is to suspend the ordinary flow of thoughts without falling into a stupor. The achievement of undistracted concentration is the first means of coming to grips with the purely conceptual mode of experience.

The bodily position used is of some importance. It must be relaxed and comfortable, yet not supine and likely to induce sleep. Ordinarily the crossed-legged half- or full-lotus positions are used by the Japanese. The eyes are kept partly open, again to avoid sleep or stupor.

Three subjects of concentration deserve special mention: breathing, the *hua t'ou* and the *koan*. Concentration on breathing

seems to be the simplest of these and is frequently used to develop the ability to concentrate. *Hua t'ou* is a Chinese word which means "ante-thought". It describes the state of mind of a person who approaches himself with the question "Who is this who calls on the name of Buddha?" (Luk, 1960). As such, it appears to define a particular attitude of detached observation toward one's mental contents, whose subjective origin is kept in mind. It is also an attempt to grasp the mind originating these contents. The *hua t'ou* overlaps with the koan, a statement which is impossible of rational comprehension but understandable to the person who has experienced satori. Any of a number of traditional exchanges between masters and monks may be taken as the object of concentration. The idea is not to run through the words themselves, but to penetrate to their meaning, the state of mind which they express. Not all Zen sects use the koan exercise. Where used, it seems to deepen the intellectual crisis preceding satori and to produce a deeper and more vivid satori experience. De Martino (Fromm *et al.*, 1960) suggests that the koan serves to crystallize and focus the desperate personal need to break through to an answer which is necessary for satori. As he describes it, the attempt to solve the koan becomes almost a surrogate for the struggle to solve one's life. In the wealth of subjective reports it is generally possible to distinguish two main stages in the course of training before satori. There is an initial phase in which concentration, difficult at first, eventually becomes more successful.

Relaxation and a kind of pleasant "self-immersion" begin to follow. At this point internal distractions, often of an anxiety-arousing kind, come to the fore. Herrigel (1956) indicates that the only way to render this disturbance inoperative is "to look at it equably and at last grow weary of looking" (p. 55).

Eventually a second phase begins (Herrigel, 1956). This is a state "in which nothing definite is thought, planned, striven for, desired or expected, which aims in no particular direction and yet knows itself capable alike of the possible and the impossible, so unswerving is its power..." (pp. 55-56). Concentration seems to be accompanied by a sense of calm stillness, of energy and vitality, and a feeling of invulnerability (Chang, 1959; Kondo, 1952, 1958). Sato (1959) and his students, who undertook a special "accelerated" course of training from a Zen master, reached this point after about five days. Both Chang and Herrigel suggest that the phase begins with a "jolt" or "shock," but this is not invariably mentioned.

This state of mind is traditionally described with the analogy of a mirror, which reflects many things, yet is itself unchanged by them. It seems likely that this phase of meditation, in particular, increases receptivity to previously excluded experience. But the ability to deal with it in a detached, non-anxious fashion is also facilitated. This state of mind is similar to a phenomenon reported by patients in psychoanalysis. Associations are experienced as derivatives of one's own mental processes, regardless of the reality of the objects represented. An observing attitude can be maintained until anxiety or other effects become too intense. (Cf. Sterba, 1930.) Sato (1958), too, feels this state of mind may have its counterpart in the free association method of psychoanalysis, but emphasizes the fact that Western therapy usually works with words, whereas the Zen student in this stage does not dissect what he is experiencing with ideational operations. "In Zen, the ideas, if they appear, are allowed to pass uncared about. They need not be grasped or verbalized" (p. 217).

Obviously, there are dangers. Traditional Zen literature considered this middle phase to be one in which the monk was in danger of possession by demons (Luk, 1960). There are handbooks, unfortunately not translated, which warn the student against the many experiences in this phase to which he might be tempted to "cling." While the Zen master does not attempt to interpret the emerging material, he is apparently active in guarding the student against acting-out, unconscious projection, and loss of awareness of its subjective origin. He also acts to curb temptations to go into a stupor, toy with paranormal psychic functions, indulge in ecstasies or quietistic retreat. All of these are considered blind alleys. Such dangers must be taken into account in any proposed application of Zen or its procedures. They do not seem to occur during the early portions of training, but later supervision may be critical. Herrigel (1956) does not report having had florid reactions at this stage, and there are apt to be gross individual differences. Where they occur they are considered to be manifestations of the dualistic mind attempting to defend a fictitious ego.

What follows seems to be a very long period of struggle until the intellectual approach is exhausted. Kondo (1952), Herrigel (1956), and Suzuki (1956) describe nearly identical experiences when, having reached a state of inner stillness, the student is given a koan to solve. Time after time he reaches an intellectual solution which is rejected by the Zen master. With increasing despair he

THE PSYCHEDELIC REVIEW

concentrates more and more on the koan until his concentration is no longer voluntary; the problem cannot be put aside. Where the hua t'ou is used, the feeling of doubt which emerges is carefully maintained until something like a crisis is reached. This crisis is still, rather than turbulent. Intellectual skills seem worthless for the problem, and one can only wait. Death images like "walking in darkness" or "enclosed in a black lacquer casket" are used to describe the state of mind. In the midst of it, the student "lets go" of his egoistic self, "throws himself into the abyss," and satori follows.

INTERPRETATIONS OF SATORI

Erich Fromm, who has conferred extensively with Suzuki, concludes that satori is not a pathological phenomenon. He interprets Zen statements about the limitations of ordinary consciousness in terms of his own explanations of estrangement and alienation. Social learning and individual conflicts tend to produce a "filter" through which only a part of one's experience may pass to be represented in consciousness. He understands satori to be the result of breaking through this filter: "the immediate unreflected grasp of reality, without effective contamination and intellectualization" (Fromm *et al.*, 1960, p. 133). In a sense it is a repetition of the direct grasp of the child, but on a new level, in the context of the full development of adult reason, objectivity and individuality. If one defines the unconscious to include *all* the aspects of experience which are filtered out, and if one carries the psychoanalytic goal of "making the unconscious conscious" to its ultimate extreme, then the goal of psychoanalysis approximates the Zen goal of enlightenment. The methods obviously differ. To Fromm, the difference is that Zen makes a frontal attack on the alienated mode of experience by means of sitting, koans, and the authority of the Zen master, while psychoanalysis trains consciousness to get hold of the unconscious by directing attention, step by step, to individual distortions and personal fictions in the perception of experience.

Schachtel (1959) appears to be in essential agreement, seeing the nature of satori as a breaking away from conventionalized and structured experience. He has traced the role of this mode of experience in adult amnesia for childhood experiences and brings forward the death-imagery surrounding the pre-satori state as

Zen Buddhism

evidence of the defensive purposes for which the conventionalized mode is used.

Fingarette (1958) has undertaken a fairly comprehensive mapping of mystic states into psychoanalytic ego psychology. His material is taken mainly from the Eastern literature of mysticism, including that of Zen. He feels that interpretations which emphasize pathological regression fail to take into account the "significant marks of insight" associated with the great mystics. Patients who have made progress in psychoanalysis describe their changed experience in terms which are sometimes comparable to mystic paradoxes. The mystics may be describing a singularly integrated mode of ego-syntonic functioning. Selflessness cannot refer to an actual loss of the subject-object distinction as it occurs in hallucinations and paranoid delusions, because the social behavior of mystics is often highly realistic and effective. Rather it refers, he feels, to that normal unselfconscious characteristic of experience which is non-anxious and motivated by neutralized drives functioning within the conflict-free portions of the ego.

The introspected, self-conscious "I" is not in fact a perception of one's total person; it is some particular part affect, idea or action of the person as perceived by the person in a context where the dynamically dominant affect is some form of anxiety. Consciousness of self is not an awareness of some self-identical entity; it is, rather, any consciousness colored by intrapsychic conflict and anxiety. (*ibid.*, p. 16.)

"Freedom from striving," "acceptance," and "desirelessness" seem to refer, not to a flaccid absence of motivation, but the absence of inner conflict. Similarly, "no-mind" refers to the absence of compulsive thoughts about thoughts. "Dwelling in voidness" refers to complete openness to experience, unblocked by preconceived ideas of overly-rigid maintenance of logical forms.

Fingarette suggests that such integrated functioning indicates that the mystic has undertaken a prior phase similar to psychotherapy in which he has achieved a deep personality reorganization by facing his underlying problems and gaining insight into them. The regressive phenomena — trances, hallucinations, and so forth — reported in the literature of mysticism appear to belong to an earlier phase of self-exploration rather than to the mystical state itself.

THE FEELING OF ONENESS

In satori, one experiences the universe as a totality of being, of which oneself and all other objects are manifestations. This is the aspect of satori which is most inexpressible, yet known so directly that it is irrefutable with logical argument.

William James (1928) considered mystic states to be characterized by a breaking through of the subliminal or subconscious mind into consciousness. He noted that union, ineffability, certainty, and passive reception were found in most such descriptions. While the experience carries strong authority for the individual himself, other people must evaluate it in terms of the empirical functioning of the individual after the experience. Mere contact with the subconscious, then, does not guarantee that the experience is psychologically constructive. Certainly the material which he reviews ranges between extremes of sickness and health. He does not carry his thinking about the subconscious far enough to try to account for those incursions which are apt to be pathological and those which are not.

Psychoanalytic interpretations of oneness begin with Freud's (1935) comparison of the oceanic feeling with the primal experience of unity of the satisfied infant with the maternal breast. This interpretation, in terms of oral fantasies, is followed by many subsequent psychoanalytic writers.

Bertram Lewin (1950) has explored the oral basis of the feeling of oneness as it occurs during the early phases of manic or hypomanic episodes and in the writings of two Christian mystics. Psychoanalytic material suggests that the earliest feeding experiences of the infant involve not only the wish to devour, but also the wishes to be devoured and to sleep. The well-fed and pre-dormescent infant apparently feels itself merged with and devoured by the breast, and later sleep comes to have this meaning. This is the matrix of subjective experience from which spring ideas of sleep, death, nirvana, immortality, heaven and the oceanic feeling. The continuing oral meaning of sleep among normal adults may be inferred from hypnagogic phenomena observed by Isakower (1938). Typically, the sleeper may feel something being pushed into his mouth (to devour) and feel that something is enveloping him (to be devoured).

In the hypomanic episodes studied by Lewin, the wishes to be devoured and to sleep may break through as deeply regressive phenomena leading, at times, to ecstatic experiences of union. In

ecstasies the breast is often condensed psychologically with the superego, a deathless one with which the ego identifies so as to participate in its immortality. Along with the active, devouring fantasies there is the sense of yielding, and ultimately joining it in sleep or a sleep-like state. The hypomanic episode may follow and serve to deny and ward off these wishes.

Lewin makes an interesting contribution by treating the feelings of inexpressibility and certainty as elements of manifest content. He points out that the mystics and his patients have sometimes given excellent descriptions. The indescribability is subjective and points to the nonverbal latent content, the union at the breast which is being relived. Similarly the noetic quality reflects the realness of the breast experience:

This experience is what one knows because it is primal, immediate, and unquestioned experience. It was not learned by seeing or hearsay, but represents the primitive narcissistic trust in subjective experience. (1950, pp. 149-150.)

Fingarette (1958) concedes that the feeling of oneness may be considered a fantasy of the primal unity, but occurring in the context of a highly integrated and flexible ego, and made possible by this flexibility. Acceptable residues of infantile fantasy and partial instinct gratification can be maintained without making experience anti-realistic. Thus the selflessness of anxiety-free experience would, through regression in the service of the ego, be deepened and colored by the selflessness of the primal fantasy. The sense of joy and power derived from conflict-free functioning would have ecstatic overtones of fantasies of primal gratification and omnipotence.

The feeling of oneness and its accompanying inexpressibility, certainty, and passivity may also occur quite unexpectedly to non-religious and apparently quite healthy people. James notes several recorded instances. One such person describes a preceding state of mind which may be characteristic.

"My mind, deeply under the influence of the ideas, images, and emotions called up by the reading and talk, was calm and peaceful. I was in a state of quiet, almost passive enjoyment, not actually thinking, but letting ideas, images, and emotions flow of themselves, as it were, through my mind." (Quoted by James, 1902, p. 399.)

THE PSYCHEDELIC REVIEW

This particular writer was a Canadian psychiatrist, Dr. R. M. Bucke. His experience began with a flash of light. He felt joy and assurance, and an "intellectual illumination." This was a "clear conception in outline of the meaning and drift of the universe," a whole to which he belonged. He saw that "all is life," man is eternal and the soul immortal, and all things work together for good (Bucke, 1923).

Coming as a complete surprise, this experience made a deep impact on Bucke. He evidently spent the rest of his life documenting similar cases and evolving a theory regarding them. He interpreted these experiences as manifestations of "cosmic intelligence," a coming evolutionary stage in human intelligence beyond "simple" and "self" consciousness. His episode lasted only about a half hour, but he noted a number of effects persisting for many years after: loss of fear of death and the sense of sin, "elevated moral character," and the certainty of immortality. He observed that episodes of cosmic consciousness occur among earnest people of "strong moral nature" and usually between the ages of thirty and forty.

If we assume, as Fromm does (1960), that Bucke had satori, then his account gives us important information. His sense of immortality seems to demonstrate the effect of culture on satori. Satori has overtones of immortality, but not of the soul after death. Rather, in the Zen accounts, it seems to be the present moment which is immortal and the universe to which one belongs. His comments about age and previous character of people experiencing genuine cosmic consciousness may be important contributions to understanding satori. Finally, Bucke never experienced cosmic consciousness again. Zen students may experience full satori several times and at other times abandon self-consciousness for various purposes. This may emphasize the importance of the social context in which satori occurs. It would seem that Bucke did not know what to do with the experience he had had.

James also noted that the experience of oneness sometimes occurs under chloroform. More recently Watts (1960) and Van Dusen (1961) have compared experiences under LSD with what they understand to be the nature of satori. If we apply James criteria, it seems clear that some LSD experiences exhibit the marks of mystical experience similar to satori. This writer feels, though, that the prior training of Zen students may lead to more thorough integration of the experience into their daily life.

The inspirational phase of creative work may also be accom-

Zen Buddhism

panied by similar experience for some artists. Anton Ehrenzweig treats this in a highly stimulating review of a book by Joanna Fields (Ehrenzweig, 1957). The problem of the artist, he says, is to maintain an ego organization flexible enough to gain periodic contact with the less differentiated images outside ordinary consciousness. These images rescue art from stultification by the clichés of surface consciousness. In the "creative surrender" the subject-object distinction may be temporarily abandoned in an oceanic fusion between inner and outer world. Since the ordinary feeling of self is abandoned in this state of consciousness, this surrender may be experienced in sado-masochistic terms as death and rebirth. The effective tone of this experience tends to vary from catastrophic fear to a blissful, almost austere stillness according to the flexibility of the ego and how easily the reversal in ego functioning may be brought about.

Ehrenzweig makes an extremely interesting comparison between the ways Schreber and Rilke dealt with the undifferentiated imagery stemming from regressed ego states. Both men apparently experienced bisexual fantasies of procreation in states of regressed consciousness which antedated distinctions between sexes and between bodily orifices. Schreber, in order to fend off the ego-disruptive effect of such imagery, imposed the precise verbal structuring of surface consciousness on his fantasy. The result was an obscene paranoid delusion. Rilke submitted to the undifferentiated state more voluntarily. And he was not compelled to articulate his fantasy fully in order to stave off disorganization, but kept its undifferentiated ambiguity in his poetry.⁴

This line of reasoning may help to explain differences in the experience of oneness as it is reported by different mystics. The "surface" consciousness is faced with the problem of rendering the experience into its own terms. In ordinary consciousness the undifferentiated experience undergoes a kind of "structural repression," the extent of which varies with the tolerance of the ego. A person raised in a culture which recognizes a personal deity is likely to turn to such terms to explain his experience. Individuals may also differ in their need to impose structure, so that, even in cultures where "God" is available, some people will not explain their feeling of oneness in these terms. Finally, the feeling of indescribability may be a residual awareness of the artificial structuring which has been imposed.

We have come now to a very complex situation. The experience of oneness, with its attendant feelings of ineffability, certainty,

and passive reception, may occur in many different situations — under the onslaught of deeply regressive oral wishes and of certain drugs, in quiet, reflective states of healthy people, and as a fairly voluntary act of some artists, Zen students and certain other mystics. Union may be experienced in terms of a highly personalized deity or of an impersonal universe. In affective tone the experience may vary from extreme ecstasy to austere stillness. It should be noted that the satori of Zen is clearly of the impersonal, non-ecstatic variety. Ecstasies, like trances, hallucinations, and similar phenomena are considered blind alleys, simply other manifestations of the egoistic mind defending itself.

Two main lines of explanation have been advanced. One is the classical psychoanalytic explanation in terms of a fantasy of the primal union of the infant with the maternal breast. One line of evidence supporting this view is the oral content given by psychoanalytic patients who have had this experience and the oral terms in which certain Christian mystics have expressed themselves. This genetic explanation refers the feelings of indescribability and certainty to the preverbal nature of the situation which is being "relived."

The other explanation is a structural one. The radical change in the state of consciousness is considered to represent, in psychoanalytic terms, a structural regression of the ego. This is more in line with Zen thinking, which construes satori as a breaking through of one state of ("conceptualizing") consciousness to another. Fingarette uses both explanations, and interprets mystic states as the function of a flexible ego, able to regress safely and voluntarily and, from a position of strength, able to entertain residues of oral fantasies without loss of reality. The Zen writers might take issue with this reference to fantasy. From a structural point of view, oneness and undifferentiation may be considered a characteristic mode of organization of a particular ego state. The Zen writers, quite consistent with this, attribute oneness to the state of mind which is no longer conceptual: an awareness of reality no longer encumbered by concepts or fantasies.

It is clear that the two explanations may easily be combined, but the genetic one offers little means for distinguishing psychologically destructive instances from constructive ones. The structural explanation is able to take into account both forms.

We turn now to the theory of regression in the service of the ego, both to consider how well satori fits this model and for the additional information which the theory may give.

REGRESSION IN THE SERVICE OF THE EGO

Schafer (1958) has organized an excellent review of the psychoanalytic concept of regression in the service of the ego. Satori seems to fit into this class of psychologically adaptive regressions for several reasons. First, discussions of satori repeatedly emphasize flexibility in the use of ego functions. One thinks when the situation requires it, and the intellectual mode may be abandoned when it is unnecessary. Secondly, other types of regressions which might be less adaptive — hallucinations, trances, ecstasies — are consistently rejected as spurious by the Zen master. Thirdly, the states of mind which become possible as a result of satori are clearly used for adaptive purposes. Zen was closely involved in the training of the samurai class in traditional Japanese society (cf. Reischauer & Fairbank, 1958, pp. 547-549): more effective action, rather than monastic withdrawal, was the goal. Finally, the implied increase in energy, and decrease in conflict, inhibiting self-consciousness, and anxiety suggest that satori promotes adaptation.

Since the concept seems relevant, we may use it to increase our understanding of Zen and its training procedures. Schafer has also reviewed some general factors which tend to hamper or facilitate the ability to regress for adaptive purposes. Conditions that interfere seem to center around the unconscious significances or the regressive process. Such meanings as passivity and femininity, sinful and defiant transgression, or magically potent destructiveness have been cited.

The ability to regress is fostered by a sense of self able to tolerate momentary blurring of boundaries, a well-developed set of affect signals to guard against getting too close to unassimilable contents, relative mastery of early traumata, moderateness of superego pressures, adequate trust and mutuality in relationships, personal and effective communication to other people, and self-awareness.

We might expect the hampering conditions to become issues in the period of Zen training which precedes satori. It is noteworthy that the Zen literature itself focuses mainly on issues involving the sense of self and the techniques used to defend it.

The sequence of Zen training might easily be conceptualized as a series of "regressed" states, each of which develops functions on which succeeding states must depend. For example, the first phase eventually deepens to a kind of relaxed drowsiness in which primary-process derivatives appear. The ability to deal with them

in an accepting fashion enables the student to get through to the next phase in which much more "regressed" elements are apparent. Feelings of omnipotence appear to color this stage of "mirror-like" detachment. The nonstriving quality of this state is apparently its chief safeguard against maladaptive reactions, even though further impulse derivatives are probably emerging. This nonstriving is probably a lesson of the previous phase. Satori, in turn, grows out of the second phase, and is probably based on certain safeguards which were developed there.

LIMITATIONS OF ORDINARY CONSCIOUSNESS

As we have seen, the Zen literature contrasts the limiting quality of ordinary consciousness with the broader "intuitive" functioning which becomes available as a result of satori. When the swordsman is able to lay aside his ordinary consciousness of himself and his situation and to rely on his "trained unconscious" (i.e., another type of consciousness which is not aware of itself), then he becomes capable of remarkable feats. His perceptual sensitivity becomes broader and his motor response becomes more accurate, less hampered by mediating thoughts.

Research on perceptual sensitivity in states of altered consciousness is clearly relevant. The oldest and best known phenomenon in this area is the increase in accuracy which occurs when a forced choice technique is used (see Erickson, 1958) in a sensory discrimination task. This essentially means that, when a subject is forced to make a definite comparison, he may correctly discriminate two stimuli above the level of chance even when he feels he is completely guessing. This "guessing state of mind" may be considered an altered state of consciousness.

Erickson reports that his group has found very marked individual differences in the intensity range between where a subject shows better than chance guessing and the point where he begins to report confidence in his judgments.

Another group of investigators has studied the influence of subliminal stimulation on the products of other states of consciousness: dreams, free associations, and spontaneous imagery. The classical study in this area was conducted in 1917 by Potzl (see Potzl, Allers, & Teler, 1960) who exposed pictures tachistoscopically for 1/100 of a second. He had his subjects report verbally and by drawings what they had consciously perceived. He demonstrated

that parts of the picture which had not been drawn or described appeared in the manifest content of dreams which the subjects reported next morning. Fisher (1954, 1957) and Shevrin and Luborsky (1958), using much the same procedure as Potzl, have confirmed this phenomenon. Later studies have demonstrated that "preconsciously registered" parts of subliminally presented pictures may subsequently appear in conscious imagery, free association and hallucinations as well as in dreams. Emergence of these elements seems also to be facilitated by LSD (Fisher, 1956, 1957; Friedman and Fisher, 1960). The following conclusions appear to be supported by these studies: (a) an enormous amount of intricate visual material is registered in extremely brief time intervals, such as 1/100 or 1/200 of a second; (b) while inaccessible to consciousness in the ordinary sense, the registrations may be demonstrated in their effects on the products of other states of consciousness such as dreams, spontaneous imagery, and free association; (c) while the previously unreported elements may be reproduced with photographic accuracy, the dreams and images more often show that numerous transformations and distortions have occurred. These distortions are closely related to characteristics of dream mechanisms or primary process patterns of thinking.

Klein (1959) has explored the implications of these studies in a paper on consciousness. He feels that the data warrant a distinction between "registration" and "conscious perception." Perception appears to be an experience which is not singular and unvarying from one state of consciousness to another. The problem-solving state of consciousness called forth by most laboratory situations tends to limit the range of registrations which may appear in conscious perception. Other states of consciousness, such as those explored in these studies, may draw on other registrations, differently structured.

This interpretation seems directly consistent with the Zen point of view regarding ordinary consciousness. The more limited nature of problem-solving consciousness has been explained by ego psychologists in terms of controlling structures which impose distinctions between wish and reality, certain and uncertain, dream and waking perception, and so on. Although the major emphasis has been placed on the role played by these structures in making veridical perception and appropriate response possible, it is conceivable that such structures might unnecessarily limit the range of stimuli available to the person in forming an appropriate response. This is acknowledged by theories concerning regression

for purposes of artistic creativity (which may require bypassing the well-trodden schemata of problem-solving consciousness), but the point has been little explored with reference to motor responses in complex and even dangerous situations.

A serious problem remains in this formulation. If preconscious registrations of stimuli are subject to such marked distortions, how can they facilitate accurate response? The transformations noted by Fisher are corroborated in studies of incidental stimulation by Pine (1960) and Goldstein and Bartol (1960), where the effects were assessed in the production of stories. Fisher has left open the question whether distortions occur in the process of registration or in the memory traces as they are utilized in the formation of dreams, images, and hallucinations. If the distortions occur only in the process of forming imaginative products, then we need only argue that the swordsman's state of consciousness, while certainly "altered," is not necessarily identical with the states whose products have been examined in these studies. The fact that unreported elements were reproduced occasionally with great accuracy in the dreams of Fisher's subjects suggests that preconscious perception need not be distorted.

The limitation imposed by ordinary consciousness on flexibility and adaptiveness of motor responses has received less attention. It is clear that there are certain motor habits, such as driving a car or using tools, which operate quite successfully outside the range of focused attention once they have been learned (cf. Hartmann, 1951; Kris, 1952). Consciousness does not necessarily improve function; rather, preconscious responses seem to have definite advantages. It should be noted that a part of the training in many of the Zen "arts" consists in overlearning specific motoric acts so that they may be utilized without thought in response to the intuitive perception of the situation. Of course, the ability to suspend conscious reflection is developed by other means. The acts performed in that state of consciousness are thus quite comparable to this class of automatized functions.

Some of the motor phenomena of hypnosis may be relevant. Weitzenhoffer (1953) concludes that most of these feats may be performed in the waking state with sufficient training, and that endurance in some tasks is often due to suggestions against fatigue. We are warned, then, against expecting miraculous increments in motor capacity under hypnosis. But the occurrence of any increment in performance or decrease in fatigue suggests that thoughts about one's capacity which exist in ordinary states of consciousness

may unnecessarily limit what one is able to do. The "second wind" phenomenon may also be relevant as a state of altered consciousness in which enhanced motor performance occurs.

There may exist another class of behavior of which the following is an example:

A student was working in a factory where extremely hot material was being poured into small portable molds. The temperatures involved were such that, if the molds touched water, a serious explosion would occur. He was sitting in a chair when he saw a mold begin to drop into a puddle. He was at the top of a 12-foot wall when the explosion occurred, but remembers nothing in between. He inferred that he climbed the wall with remarkable speed but had no reflexive awareness of the act.

Unless such reports are simply the product of some distortion, there appears to be a class of emergency behavior involving spectacular motor feats performed without awareness. It has received little attention in the psychological literature, and its very emergency character may have precluded systematic observation.

In summary, the material we have reviewed in this section seems consistent with some of the Zen assertions concerning the limitations of ordinary waking consciousness in forming adaptive reactions to complex situations. Certain states of consciousness, such as those which obtain during dreaming or other imaginal productions, seem to make use of stimulus registrations that are not available to the perception of ordinary consciousness, for example, that of a subject in a laboratory situation. Even in a laboratory, nonverbal responses may indicate accurate discriminations in the absence of correct verbal reports, and even verbal reports may show finer discrimination when the subject is forced to choose despite strong subjective uncertainty.

On the response side we have less information. Overlearned motor skills may operate best when not specifically attended, but there is little research concerning the effects of reflective consciousness on motor efficiency. Some of the motor phenomena under hypnosis suggest that ordinary consciousness may unnecessarily limit response because of the way one conceptualizes his capacity. Finally, we have a mere hint that much more dramatic motor activities may take place, without conscious reflection, in extreme emergency situations.

THE PSYCHEDELIC REVIEW

THE TRAINING PROCEDURES

We turn now to consider the basic exercises used in Zen training. Hitherto we have noted some similarities between satori and other, better known states of consciousness. These included mystical and creative "regressions" occurring in the context of well-integrated personalities. While in the West these transient episodes seem to have occurred unexpectedly, almost by accident, Zen uses methodical training procedures for bringing about satori. The basic exercise used for this purpose consists of motionless sitting and some sort of concentration. For ease of exposition we will refer to this practice by its Japanese name, *zazen*.

ZAZEN AND RELAXATION

Sato (1958) has compared the bodily adjustment of *zazen* to Jacobson's "differential relaxation," and it is useful to survey the literature related to relaxation and its therapeutic effects. First let us review just what is done with the body during *zazen*. The ordinary position used in China and Japan is the cross-legged "full lotus" posture seen in many Buddhist statues. The knees and seat form a three-cornered base which is very solid, but requires almost no muscular exertion. The back is straight, the head erect, the hands folded in the lap, and the eyelids partly open. The entire position is balanced, but not completely relaxed. Most Westerners cannot cross their legs this way without strain, but some Zen authorities feel that the same kind of balance can be achieved sitting on a chair (Kondo, 1958; Senzaki & McCandless, 1953). Next the breathing is allowed to become relaxed and natural, and the student begins to concentrate. More controlled breathing exercises may also be used.

Present day techniques of therapeutic relaxation training derive mainly from two sources: Jacobson's "progressive relaxation" (1938) and Schultz's "autogenic training" (Schultz & Luthe, 1959). There are other methods (see especially Begchi, 1936; Faust, 1949, 1952; Rathbone, 1943; and Yates, 1946), but these two are the most widely used and represent most of the variation to be found in this field.

Jacobson's procedures focus on training the subject to recognize muscular tension, this being considered a necessary step toward

Zen Buddhism

enabling him to relax it. One method is to have him contract large muscle groups in successively smaller degrees until he is aware of even small amounts of tension. Similar training may be given for the small muscles of sight and speech. With this greater awareness of tension, the subject is told to relax to a greater and greater degree. Toward the end of a training session the subject may often fall asleep. Jacobson considers this a sign of successful progress. Further supervision aims at counteracting habits of muscular tension of which the trainee is not aware.

After the subject has learned to achieve deep relaxation in a reclining position, he is taught "differential relaxation" in other positions. This training is to enable him to use the minimum muscular tensions requisite for an act. This phase of the training usually consists of a review, in the sitting position, of tension and relaxation in the various muscle groups. Full-scale training in progressive relaxation may involve several supervised sessions a week for several months, and the trainee is expected to carry out additional practice sessions alone each day.

While Jacobson's method is a direct approach to relaxation through training in the muscle sense, some other methods are more indirect and require no such conscious control of the musculature. Schultz's autogenic training, which derived originally from autohypnotic techniques, is one of these. This method while well-known and widely used in Germany, is virtually unknown in this country. The first presentation of the method in English (Schultz and Luthe) appeared as late as 1959, but it lists over six hundred clinical and research reports on its use during the past thirty years.

The method is as follows: the subject sits or lies down and assumes a relaxed state of mind. He concentrates on a "training formula," such as "my right arm is heavy," while maintaining mental contact with that portion of his body. An attitude of "passive concentration"—of focused awareness but unconcerned indifference to the functional outcome—is important in producing effects. Initial sessions may be as short as five minutes with one minute periods of concentration punctuated by one minute periods of rest. The full standard series of formulae proceeds from heaviness in one arm, then both arms, then both legs, to warmth in the extremities, "heartbeat calm and regular," "it breathes me," "my solar plexus is warm," and "my forehead is cool." Each formula is added only after preceding ones are well-established.

Since the kind of mental contact involved has very real consequences for the circulation, blood pressure, and so on in the body parts concerned, careful supervision is maintained to avoid

undesirable physical reactions. These are primarily of two kinds: (1) the trainee's mental contact may be incorrect (for example, the hand rather than the whole arm may be the area of focus), in which case a variety of minor symptoms may appear; (2) in the case of special irritability of certain body parts, such as psychosomatic conditions involving the heart or respiration, serious complications may occur unless formulae involving these areas are approached carefully. Thorough mastery of the series ordinarily takes from one to eight months.

The trainee should be capable of "switching on" the many various standard exercises effectively and almost instantly by applying the following pattern of formulae: "I am at peace... My arms and legs are heavy... I am at peace... Heartbeat calm and regular... It breathes me... My solar plexus is warm... My forehead is cool." As a result of the quick (20-30 second) and effective application of the standard formulae, most trainees will experience the body as a resting mass which is heavy and warm. Slow pulsation of the heart and deep and slow respiration may be perceived. The head is usually experienced as being "separated" from the rest of the body. (Schultz & Luthe, 1959, pp. 95-96.)

What are the effects of relaxation? In a series of studies using relaxation-trained subjects, Jacobson (1930a, 1930b, 1930c, 1930d, 1931a, 1931b) presented evidence that mental activity is impossible without minute quantities of muscular tension. Taking pains not to suggest his main interest in these studies, he had subjects visualize various objects. Regularly they reported minute quantities of tension in the muscles of the eye. Told to relax completely while visualizing objects, the subjects could do one or the other, but not both at the same time. Using a string galvanometer to measure muscle potentials, he demonstrated similar effects with imagined movements. Since this evidence indicates that mental and emotional activity are associated with neuromuscular activity, Jacobson conceived of relaxation training as providing a direct, mechanical, negative control over such functions and hence as a sufficient treatment in many neuroses (1920; 1941; 1943). While this formulation leaves important questions unanswered, the evidence does suggest that relaxation may affect the quantity of mental activity and that some measure of control over thinking and emotion may be exerted by relaxation procedures.

Another effect of relaxation procedures is less well documented

and more subjective, but it is worth examining. This is the possibility that by focusing attention on the present state of the body, relaxation techniques may indirectly act to lessen anxiety. Thinking tends to take the subject away from his immediate feelings and sensations: one can only anticipate the future, remember the past, or deal with distant objects cognitively. It is generally agreed that anxiety is an anticipation, even though the content (such as bodily destruction or loss of objects) may not be conscious in neurotic anxiety. Being anticipatory, it is cognitive. All of the relaxation methods reviewed seek in some way to heighten awareness of the present state of body. This awareness, in a sense, brings the subject back to a personal "here and now," away from the thought-world of distant objects and events. Thus it is reasonable to expect that cognitive elaborations of anxiety may be cut short. The means by which relaxation training lessens pain may, in part, be similar. Full relaxation may not be necessary to achieve these results. Jacobson, later in his life (1955), reported decrease in anxiety and greater feelings of control when subjects were trained to attend to the sensations associated with acts rather than attending simply to the goals sought.

A third immediate effect of relaxation may be cathartic release of thoughts or emotions of which the subject was previously unaware. This effect is not invariable, but seems to occur in a certain proportion of cases. It may be partly due to psychic content related to the tension itself. Jacobson (1938) was inclined to believe that muscular tension always had to do with some act — so much so that he was inclined to ask his trainees what they felt themselves tensing to *do*. Defensive conflicts may easily find expression in muscular tension:

The physical effects of the state of being dammed up emotionally are readily reflected in the muscular system. Pathogenic defenses generally aim at barring the warded-off impulses from motility (the barring from consciousness is only a means of achieving this); thus pathogenic defense always means the blocking of certain movements. (Fenichel, 1945, p. 246.)

Braatøy (1942; 1952; 1954, pp. 155-197) has discussed habitual patterns of muscular tension in neurotics as more generalized techniques of suppressing emotions. Relaxation on the psychoanalytic couch releases spontaneity. He suggests that hypertension of the anti-gravitational muscles may make it easier for high-strung

THE PSYCHEDELIC REVIEW

neurotics to stave off emotions and inner unrest. One may often observe these individuals exerting the anti-gravitational muscles when it is quite inappropriate: some lie in bed pushing their feet against the footboard. To repress an emotion it may often be useful to exert tension in the maxillary, respiratory and abdominal muscles, and these muscles in some neurotics may be involved in habitual automatic attitudes of tension. He feels that the respiratory pattern of neurotics may often be strikingly different from that of others.

The point is that muscular tensions often, if not always, express something. In certain individuals, the pattern of muscular tension may be involved in habitual, automatic, constant attitudes maintained to suppress emotion or to fend off the motoric expression of some impulse. These attitudes will interfere with the achievement of relaxation. When relaxation is achieved, anxiety, emotional catharsis, or emergence of previously repressed ideas may occur. So far we have only isolated clinical observations to support this. The relationship between muscular tension and psychic content has not been studied sufficiently to enable us to predict which individuals will react in this way. Hadley (1938) suggests that catharsis in a physically relaxed patient is more spontaneous and is not accompanied by the bursts of emotion which characterize ordinary catharsis.

Relaxation procedures appear to differ in the psychic state which they induce. Jacobson's techniques seem to lead to a "blank mental state" and frequently to sleep. It is noteworthy that the Zen literature warns the student against this blank state during zazen (Hui Hai, 1948; Luk, 1960). It is felt to be useless and to hinder the occurrence of satori. Bagchi (1936) notes that Hindu theories of relaxation aim at quiet attention, and later to a state of attenuated consciousness which they consider a state of equilibrium differing from sleep. He suggests that Jacobson makes use of attitudes similar to quiet attention, but his mechanistic outlook causes him to overlook their importance in inducing relaxation. Autogenic sessions do not necessarily lead to sleep. Interestingly, when the subject intends to sleep after a session he often finds it necessary to eliminate the formula related to breathing. Concentration on the rhythmic stimulus offered by natural, uncontrolled breathing seems to induce deeper, more generalized physical relaxation (Behrend & Weiss, 1941; Bowman, Briggs, & Harris, 1950; Herrigel, 1960; Schade, Hruza, Washburne, & Carns, 1952; Schultz & Luthe, 1959), and also to prevent sleep or the blank state.

Zen Buddhism

These long-range effects reported by trainees are remarkably uniform regardless of the method used. The pattern includes quicker and more restful sleep, feelings of increased energy and endurance, less tension and greater ability to cope with difficult situations, less susceptibility to emotional outbursts, and a greater sense of self-control. This last effect — the reassurance that one has an active means of controlling tension and difficult feelings — may be especially important.

Observations of behavioral changes from relaxation primarily concern reduction in symptoms of anxiety and tension. Jacobson (1938) records his impression that trainees move more slowly, without ill-coordinated movements. Their faces look calmer, less worried, and their voices often seem lower and less strained. Motor effects were studied by Haverland (1953), who gave biweekly training in progressive relaxation for six weeks to 26 subjects. Control groups received training in Rathbone's (1943) rhythmic exercises or ordinary physical education classes. The relaxation group showed significantly greater improvement on a reaction-time task, and on several tasks related to motor control (steadiness, aiming, tracing). Improvement in motor control and decreased muscular tension may also be involved in the results reported by Neufeld (1951). A group of several hundred Naval Air Cadets was given group training in progressive relaxation for five weeks, — a very short course. This group had significantly fewer physical injuries as well as fewer days lost for other sickness than similar groups of non-trained cadets. A smaller group was systematically observed for several nights while sleeping. Compared to an untrained control group they tended to fall asleep faster, move about and waken less often, although these differences were not significant. Yates (1946) reported good results using relaxation training to improve performance of college boxers and Army aviators, although World War II intervened before sufficient follow-up study could be made.

Where relaxation training has been used in conjunction with psychotherapy, therapists report that patients associate more freely (Hadley, 1938; Fascal, 1947; Schade *et al.*, 1952; Schultz & Luthe, 1959). Autogenic training particularly has frequently been used in conjunction with psychoanalysis. One interesting effect is that patients subject to anxiety dreams report that these dreams begin to assume benign endings. Most investigators have found that relaxation training alleviated symptoms of tension and promoted insight into psychosomatic relationships. This symptomatic relief

may leave patients better able to attack underlying problems in therapy. But Hadley and Schade *et al.* warn that the symptomatic relief may decrease motivation to continue treatment in some cases.

Much more extensive observation has been made on the effects of relaxation on psychosomatic disorders. This is especially true of autogenic training. The range of disorders treated and the varying effectiveness of the treatment in different disorders would be impossible to cover in detail here. Autogenic training is widely used in the treatment of bronchial asthma. Surveying five studies reporting 150 cases, Schultz & Luthe give complete symptom removal in 66% and significant improvement in another 25% with follow-up of 6 to 50 months. Other approaches were being applied simultaneously with many of these patients; so clear-cut conclusions cannot be drawn. On the other hand, most of the patients had been treated for many years with other methods without satisfactory results. A tendency for autogenic exercises to correct deviations in blood sugar balance has been demonstrated in well-controlled studies. Diabetics often require marked reductions in insulin dosage. A wide range of milder psychosomatic disorders, such as cardiac neuroses, neurotic epigastric symptoms, gastritis, etc., respond well. In some other disorders, where the effectiveness of autogenic training has not been established, there have been isolated instances of striking improvement. Some epileptic patients report being able to stave off seizure as a result of training, although the frequency of aurac remains the same. Jacobson (1920; 1938; 1940) reported cases of hypertension, mucous colitis and other disorders which responded well to progressive relaxation. His case reports, while covering very few patients, include excellent follow-up studies—some for ten years or more.

Most authorities agree that the applicability of relaxation training depends largely on the capacity of the individual to take responsibility for applying the exercises. Children under nine and mentally retarded individuals do not seem to respond well. Neither do people who lack self-direction, either by illness or excessive dependency needs. Beyond this limitation, the type of disorder involved need not preclude benefits. Schade *et al.* (1952) were unable to find clear-cut diagnostic groups which did not respond. Stokvis (1952) concurs that applicability depends more on the personalities of the patient and therapist than on the specific nature of the illness. There are, however, some suggested differences in response between different categories of neurosis. Hysterics seem to respond quickly at the onset of autogenic training, but tend to have trouble practicing without supervision. This interferes with

their further improvement. Obsessive-compulsive patients take a long time to establish the initial formulae in autogenic training, but beyond the initial stage they respond well (Schultz & Luthe, 1959). Both Schultz and Jacobson caution that these individuals must be watched lest the training exercises be used as compulsive rituals.

It seems clear from this review that, from a physical standpoint, the meditative sitting of Zen may be subsumed under the category of relaxation training. Nearly all of the methods extend relaxation training to some sitting position, and the majority of them use similar breathing exercises to facilitate relaxation. From this literature, then, we may gain information about the probable effects of zazen in its early stages. This includes the pattern of subjectively felt benefits, the possible physiological reactions, favorable and unfavorable, etc.

But in all of this literature there is no mention of any experience like satori. Zen Buddhists evidently regard meditative sitting as a means of suspending ordinary conceptual activity. Jacobson's evidence suggests that relaxation may indeed alter mental activity. The difference between zazen and these other relaxation techniques probably lies in the use to which the relaxed state of mind is put.

CONCENTRATION AND ZAZEN

The other aspect of zazen, and the one which receives the most comment in Zen literature, is an attitude of concentration. This is not a strained focusing of attention, but a state of mind quite similar to what Schultz calls "passive concentration"—a peaceful attention to the object of concentration without straining to achieve effects. Relaxation itself, by decreasing mental activity, appears to facilitate this state of mind. Extraneous distractions—thoughts and external stimuli—are not forcibly excluded but, rather, dismissed. Eventually a state of stillness ensues which is occasionally broken by spontaneous associations and feelings.

There appears to be good introspective evidence that focused attention as it is ordinarily deployed may serve to limit the form and quality of conscious contents. The reorderings and transformations necessary at certain stages of creative thinking (and in therapeutic insight) seem to occur most readily at the "fringes" of focal awareness. The "freely floating attention" which enables the psychoanalyst to "hear" his patient on many different levels seems

THE PSYCHEDELIC REVIEW

to involve a change in ordinary attention. Titchener (1912) noted that when attention is directed at affects they seem to evaporate, to lose their reality. When attention remains on the object of the affect, the affect remains vivid. There thus seems to be a close relationship between the logical, nonemotional schemata of adult waking consciousness and attention deployment.

Since attention deployment seems to be related to the logical schemata of adult waking consciousness, it is reasonable to expect that when attention is focused on one "corner" of the conscious field, differently organized content will emerge. Recent studies of perceptual isolation, where attention deployment is altered artificially by restricting afferent stimulation, seem to support this (Solomon, 1961). Imagery, primary process thought, and altered bodily feelings tend to occur quickly, although with marked individual differences in tolerance and in the patterns of alteration. It is tempting to explore the perceptual isolation literature further in search of possible insights into zazen. However, the differences seem more important than the similarities. The Zen student sets out to deal with mental activity in a fairly specific way, whereas the perceptual isolation subject is left to his own devices. The relaxation aspect of zazen is likely also to introduce important differences in the amount of anxiety, press of ideation, and affect which occur in the two situations.

As the spontaneous associations emerge in zazen, the student strives to maintain a detached view of them, without acting out or otherwise distorting reality in terms of them. He simply observes and accepts them until they pass. The Zen literature does not tell us specifically what the Zen master does to aid the student to maintain his detachment. Possibly the Zen master may not need to deal with "resistances" as actively as the psychoanalyst, because of the nature of zazen. If so, one factor may be that concentration is a less complex task than free association: the student may more easily become aware when he is deviating from the task. To put it another way, the attempt not to think may be particularly effective in helping the subject to be aware of the subjective origin of his thoughts and feelings. Another factor may be the increased awareness of the personal present which was discussed earlier.

There is some research indicating individual differences in attention deployment which could influence the manner in which different persons respond to zazen. This is the so-called "scanning control" principle which has emerged in studies by Schlesinger (1954) and Gardner, Holzman, Klein, Linton, and Spence (1959). These studies suggest that certain individuals tend to scan the stim-

Zen Buddhism

ulus field, or deploy attention broadly, while others tend to focus their attention more narrowly. The patterns seem to appear consistently, as characteristics of the individual in a variety of situations. The research also suggests a link between broad attentional scanning and the defense mechanism of the isolation, although broad scanning does not seem to be used for defensive purposes by all the subjects observed. Inasmuch as Zen training requires a more narrow focusing of attention, individuals who scan broadly might have special difficulty in carrying out the procedures. When broad scanning is involved in defensive patterns it should be particularly difficult to suspend. The relevance of this cognitive control principle to performance in situations similar to Zen meditation remains to be explored.

THERAPEUTIC APPLICATIONS

In order to explore possible therapeutic applications of Zen Buddhism, we must distinguish between the experience of satori and Zen meditation. Satori seems to be an experience which facilitates very healthy personality functioning. But satori takes years of training, and probably a Zen master as well. For practical reasons its applicability to Western psychotherapy seems limited. Most present-day applications of Zen to psychotherapy derive from zazen.

Dr. Akahisa Kondo (1958) reports that he instructs his neurotic patients to practice sitting and breath concentration in addition to their psychoanalytic sessions with him. After an initial exacerbation of systems, the exercise seems to facilitate progress in therapy. Activity which has previously served as "an escape mechanism to avoid facing their problems" is blocked by the sitting. A more unified feeling of self and a calm vigor is the eventual result. Gradually the patient "begins to show, unconsciously, more intensive concentration in working on his problems in the therapeutic situation . . . His psychic energy has begun to become assembled, unified, and available for constructive work." Kondo does not report individual differences in the reactions to this application. Fromm (1959) has suggested that some such application might be particularly helpful in the treatment of character disorders.

There have been several widespread applications of zazen in modern Japan. According to one very indirect source (Brower,

1961), Tokyo bus drivers have been required to practice zazen in recent years. The reported result is a decrease in street accidents involving buses. Many Japanese military officers are said to have received training in zazen before and during World War II. (Dewey, 1920; Malm, 1959). Unfortunately I have not found more direct information about these applications and their results.

Morita therapy, developed by a Japanese physician of that name, has recently been cited as a psychotherapy with a viewpoint akin to that of Zen (Kondo, 1953b; Kora & Sato, 1958). The treatment begins with several days of complete bed rest without distraction. The patient is simply instructed to leave himself to the "dynamics of the situation": to eat and sleep as he wishes, and to accept feelings as they come. As the patient permits himself to suffer, worry, be uncomfortable without resisting, his discomfort gradually recedes. After four or five days a feeling of ennui appears, and the patient is starved for stimulation. He is given simple chores. Gradually his work becomes more complex until he is able to return to his ordinary job. The whole treatment usually takes from four to five weeks. Morita himself emphasized the role of hypochondriacal attitudes toward minor discomforts in certain neurotics. The mechanism was felt to lead to greater and greater anxiety and functional impairment. The treatment was designed to reduce this self-perpetuating process by helping the patient to accept discomfort. The treatment is felt to require considerable ego strength, and it is used mainly with neurasthenic and obsessional patients. Results at the Kyushi University Medical School are a reported 76% cured, 7.6% improved (Kora & Sato, 1958). No follow-up information is reported.

Christmas Humphreys (1960) reports that his group of English subjects, which practiced sitting and breath concentration for several years, increased in intuitive development, withdrew projections by which they had tended to distort reality, showed greater serenity, ability to cope, and compassion. "All who have made this experiment in the last few years have changed remarkably, passing of course through periods of depression and doubt, but finding these well suffered as the price of wider awareness, deeper understanding of eternal truths, and many a brief experience of things no words can usefully describe" (p. 205).

It is significant that the benefits reported for zazen are so similar to the results of other relaxation techniques. Several possibilities need to be explored: (1) It may be that zazen has nothing special to offer. (2) The special consciousness induced by zazen may have more therapeutic usefulness than relaxation procedures which

produce sleep or a blank mental state. One factor is likely to be increased access, without ordinary anxiety, to repressed experience. (3) Other relaxation procedures, because they move more slowly and carefully toward establishing relaxation, may be useful in helping subjects practice zazen who would otherwise find it too difficult.

In closing we must raise the possibility that the use of zazen may enable patients to deal with problems which are by their very nature inaccessible to other kinds of psychotherapy. A number of psychoanalytic writers have pointed to such a class of problems. Balint's (1958) discussion is particularly broad in scope. The usual argument is that problems stemming from Oedipal sources are most amenable to psychotherapy. The Oedipal experiences, regressively resurrected in the transference, are susceptible to verbal report. Verbal interpretations are understood as such and can be worked through. Defenses at this level are such that the patient is able to internalize despite tension. But in the context of problems related to pre-Oedipal experience, the verbal communication of therapy runs into more difficulty. Words do not always have an agreed, conventional meaning. Externalizing defenses such as acting out and projection correspond to pre-Oedipal levels and are less amenable to therapeutic handling. In the self-exploration of zazen there is no need to verbalize emerging experiences, feelings, states of consciousness, yet anxiety and the need to externalize seem to be decreased. Might it not be that subjects could learn to face and accept experience corresponding of these lower levels by using zazen? Satori itself, with its marks of preverbal, prelogical experience, seems to affirm this possibility.

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NOTES

1. A version of this paper was originally published in the *Journal of Con-
 sulting Psychology*, whose publishers have kindly granted permission
 for this reprinting. The author is now at the Neuropsychiatric Insti-
 tute, UCLA Center for Health Sciences, Los Angeles.
 Regarding this fictional aspect, compare Sartre: "The ego is not the
 owner of consciousness, it is the object of consciousness. To be sure we
 constitute spontaneously our states and actions as productions of the
 ego. But our states and actions are also objects. We never have a direct
 intuition of the spontaneity of an instantaneous consciousness as pro-
 duced by the ego. That would be impossible. It is only on the level of
 meanings and psychological hypotheses that we can conceive of such
 a production — and this error is possible only because on this level the
 ego and consciousness are indicated emptily" (1957, p. 97).
3. The concept is a difficult one. Logically if we reject the conceptualized
 "I" as the author of one's behavior, then there remains a real self
 which actually acts. Groddeck's description of the "it" has been ad-
 vanced as an insight parallel to what is experienced as the real self
 in Zen. "The it of a particular man starts — if we must start somewhere
 — with fertilization. It embraces all the powers which govern the forma-
 tion and further development of individual man. The outstanding fact
 of this being is that without a brain it fulfills the most difficult functions

Zen Buddhism

of life, and indeed that the brain — and with it the power of thought
 and later of consciousness and the ego itself — are created by the it.
 The it is the deepest nature and force in man. It accomplishes every-
 thing that happens with and through and in man" (Weisz, 1960).

4. Rilke has a rare sensitivity to this level of experience. His *Sonnets to
 Orpheus* celebrate and record an experience of intense inspiration. In
 the portions quoted below, he describes the stillness of the creative
 state and distinguishes it from other states.

A tree ascending there. O pure transcension!
 O Orpheus sings! O tall tree in the ear!
 All noise suspended, yet in that suspension
 what new beginnings, beckoning, change, appear!

(Rilke, 1949, Sonnet I, 1. 1-4)

A god can do it. But can a man expect
 to penetrate the narrow lyre and follow?
 His sense is discord. Temples for Apollo
 are not found where two heart-ways intersect.

For song, as taught by you, is not desire,
 not wooing of something finally attained;
 song is existence. For the god unstrained.
 But when shall we exist? And he require
 the earth and heavens to exist for us?

It's more than being in love, boy, though your ring-
 ing voice may have flung your dumb mouth open thus:
 learn to forget those fleeting ecstasies.
 Far other is the breath of real singing.
 An aimless breath. A stirring in the god.
 A breeze.

(*ibid.*, Sonnet III)

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REVIEW ESSAYS:

ALL AND EVERYTHING by G. I. GURDJIEFF

Terry Winter Owens & Suzanne D. Smith

THIS BOOK is without doubt one of the most extraordinary books ever published. Its title is no exaggeration, for the book not only touches on all and every conceivable subject, but it also is all and everything — that is, a collection of science fiction tales, an allegory, a satire, a philosophical treatise, a sociological essay, an introduction to psychology, a cryptogram and, for those who follow Gurdjieff's teachings, a bible. It is a highly unusual mixture of entertainment and esotericism, of humor and seriousness, of obscurity and clarity. Despite its scope and diversity, it does not suffer, as one would expect, from lack of organization or direction, but on the contrary it is very much intact.

The author, George Ivanovitch Gurdjieff, ranks among the most controversial men of the 20th century, and he may well be one of the most important. He was born in 1877 of Greek ancestry in what is now Russian Armenia and died in Paris in 1949. As a young man he devoted all his energies to searching for the fundamental truths of life. He traveled extensively throughout the East, sometimes gaining entrance to esoteric schools that few, if any, Westerners had ever been admitted to. From what he learned in his travels, he became convinced that there was a way for man to become much more than what he is. He then set about putting what he had learned into a form that would be understandable and meaningful to the Western world. He developed a method whereby a man could evolve through his own efforts, and he taught it in Moscow, Fontainebleau, London, Paris and New York. The basis of the method seemed simple enough — to observe oneself objectively, impartially and at the moment, but the execution of it was extremely difficult, which led to it being called "the Work." Through efforts "to work on oneself" and increase one's self-awareness or consciousness, Gurdjieff maintained that a man could develop new faculties which, because they are based on objectivity and impartiality, would enable man to function harmoniously. Gurdjieff believed, unlike many religious philosophers, that man has to develop a soul — he is not born with it — and these new faculties contribute to the development of the soul. He presented his ideas in three forms — lectures and writing, music, and

sacred dances and movements to correspond to the three main areas of man — his intellect, his emotions, and his physical body. What was possibly most important and unique about Gurdjieff was that he was a living example of what his method could produce. Even people who didn't like him had to admit that here was a man in control of himself, a man who operated from the inside out rather than being in the power of external influences like most men.

It is indeed fortunate that he put his ideas in writing, because throughout history we can see what has happened when wise men have entrusted the dissemination of their teachings solely to their disciples. Distortions, disagreements and even reversals are inevitably the final result. This is not to say that many of the books written about the ideas and method of Gurdjieff are not quite good. Ouspensky's *In Search of the Miraculous*, Kenneth Walker's *A Study of Gurdjieff's Teachings*, and C. Daly King's *The States of Human Consciousness* are excellent introductions to Gurdjieff and his ideas. But these are second-hand and consequently not as complete or as accurate as something coming directly from Gurdjieff himself. They are only substitutes — necessarily colored and limited by the nature and understanding of their authors, while with *All and Everything* we have the man himself, and we do not have to settle for anything less.

Because the book is so unique, the reading of it does present certain challenges. Gurdjieff suggests that *All and Everything* be read three times, and not until the third reading should the reader try to fathom the gist of it. However, this does not mean that a tremendous amount cannot be gleaned from the first reading. A good guide to understanding the book is the section "From the Author" at the very end. Here Gurdjieff steps out of his role as story-teller and talks to the reader directly. He presents a marvelous perspective for viewing his system in forthright and compelling language. Although his picture of man is far from flattering, it is filled with hope and the promise of man's possibilities.

Another good guide is to keep in mind Gurdjieff's purpose in writing *All and Everything*, which he states in no uncertain terms: To destroy mercilessly, without any compromises whatever, all man's beliefs and views about everything existing in the world. To reinforce this aim, Gurdjieff selects a most diabolical name for his hero — the name of the devil himself — Beelzebub. However, *All and Everything* is not like so many philosophy books that brilliantly show man what a farce he is and then leave it at that. Its exposé of man is not an end in itself, but rather a beginning. Gurdjieff sets out to destroy only in order to create. He believes that before man can

THE PSYCHEDELIC REVIEW

proceed to uncover and develop his hidden possibilities, he must first question the condition in which he is, must feel dissatisfaction, must have an inkling that there is more to life than what the senses perceive. An apt analogy to the Gurdjieff method is the formation of a pearl. The analogous irritant is the many provocative statements set forth by Gurdjieff which one cannot easily dismiss or ignore. This irritant can constitute the beginning and provide material for man's development in just the same way that the foreign substance in the oyster causes it to start forming a pearl. When man's inner development or soul reaches fruition, like a pearl it then exists independently of that which created it and is not affected by death.

Two other important points to keep in mind are the subtitle, "An Objectively Impartial Criticism of the Life of Man," which implies that this is no ordinary criticism, and Gurdjieff's statement that the book is written "according to entirely new principles of logical reasoning." It is impossible to explore here all the ramifications of these two points, but it is apparent that Gurdjieff does not propose the usual palliative measures of reform nor does he present his arguments in a traditional way. He makes it clear that mankind cannot be "worked on" from the outside; that is, things like war or disease cannot be eliminated even through the best forms of legislation or science or artistic endeavor. The only possible solution is that enough men embark on a road leading to higher states of consciousness.

Probably the biggest challenge in reading the book lies in its richness of content. What is said can be taken on so many different levels, and it is often hard to know how to go about deciphering it. In general, it could be said that Gurdjieff is working on the hypothesis "as above, so below." Thus, when he talks about the universe and the sun and the moon, he is also talking about man and what he is composed of. Modern scientists do the same thing when they compare atomic configurations to solar systems — nucleus to sun and electrons to planets in orbit.

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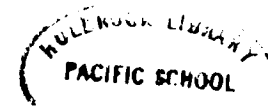
Since Gurdjieff has chosen to present his ideas chiefly in the form of allegory, one can read a great deal of this book simply as fascinating science-fiction. The story opens aboard the spaceship Karnak. Beelzebub is traveling to a conference where his sage advice is needed on matters of cosmic significance. He is accompanied by his grandson, Hassein, and his old and faithful servant, Ahoon. As they travel, to please the interest and curiosity of Hassein, and also

Review Essays

to educate him, Beelzebub regales Hassein with tales about the Earth, about events in the universe, and about cosmological and psychological law. First of all, Beelzebub tells Hassein how he happened to become interested in the planet Earth. It seems that during his youth, he intervened in affairs that were of no concern to him and as punishment was banished to Mars, a "remote corner of the Universe" (our solar system). There he builds a telescope in order to study the goings-on on Earth and to observe the strange customs of its inhabitants. He finds man's inclination to "destroy the existence of others" and the whole question of war particularly strange and repugnant. Allegorically, the telescope on Mars can be considered as something each man has to build for himself in order to view his functioning — perhaps the first step in the acquisition of objective self-knowledge. The significance of Mars is perhaps in its distance — that is, one cannot become emotionally involved or as easily prejudiced if one is so far removed.

Beelzebub then relates to his grandson an engrossing story — about the early life of Earth — which is filled with psychological implications. Due to cosmological disturbances, two fragments broke off from the Earth early in its creation — one was the Moon and the other was what Gurdjieff calls Anulios, of which Earthmen are entirely unaware. In order to maintain the balance of the universe, it was necessary to ensure that these two satellites remain orbiting around the Earth, and Earthmen were required to give off a certain substance that would facilitate that end. Fearing that if the Earthmen discovered their real function, they might find no reason for continuing to live, the higher powers implanted an organ in them called Kundabuffer which prevented them from perceiving their true condition. Later the organ was removed, but unfortunately its consequences had become crystallized and they remain to this day. Whereas the Kundabuffer was only intended to prevent man from seeing reality, it caused the additional qualities of self-love, vanity, swagger, pride, etc. These qualities are psychological and emotional props which put a cloud over the true nature of man. Hence, man needs a vantage point beyond the cloud, or a means to see through it to his real nature and to discover there the purpose of his life. Gurdjieff presents this purpose not only as an aim, but as a duty which he calls Partkdolg-duty — a duty quite separate from the usual ethical and moral obligations.

Beelzebub also tells Hassein of his personal visits to the planet Earth, where he learns more about the nature of man after gaining preliminary knowledge through his telescope. These trips might be construed as a more advanced step in the method of working on one-



self — perhaps implying that once having acquired the ability to see oneself objectively as if from the outside, one could then make closer observations and still retain one's state of non-involvement or impartiality. These descents to Earth are narrated to Hassein for educational purposes, but they are always entertaining stories. In all, Beelzebub makes six trips to Earth, each possibly representing a specific portion of the body or psyche deserving study.

His first trip is to the then-existent continent Atlantis where one of his fellow countrymen has become involved in governmental affairs. In attempting to correct apparent injustices Beelzebub's countryman has, in short, made a mess, because although he is more highly developed spiritually than the Earth king, he does not have as much practical experience. Beelzebub goes to Atlantis to get his kinsman out of this situation and to help set things straight. There is much ingenuity and guile in this episode, and although much of it has serious implications, there is also an element of comedy when Beelzebub helps stage a revolution. An important psychological analogy in this first descent is the idea of immature intervention. Perhaps an area of our functioning is a "know-it-all" (like Beelzebub's kinsman) and it tries to change something in us which it does not understand. Perhaps even with the best of intentions it blunders because of lack of experience.

Beelzebub is not alone in his quest for development, and he tells Hassein of other people — some extra-terrestrials, some Earthmen and some of divine origin — also in pursuit of objective truth. The first of them is Gornahoor Harharkh, whom we first meet in the chapter "The Arch-preposterous." He is an "essence-friend" of Beelzebub living on Saturn. His prime interest is electricity (called Okidanokh) which participates in the formation of all new arisings. Gornahoor Harharkh invents a machine which demonstrates and makes available for his use the properties of Okidanokh. He enters into the machine and through its operation is able to become a witness to the operation of the cosmic law to which Okidanokh is subject. This, he states, is not possible for the uninitiated. The purpose of his experiments is to develop his Reason — an attribute which, according to Gurdjieff, man does not have by nature but must acquire through effort. The machine is described in great detail, and the experiment might correspond to an exercise or practice connected with "the Work." But even Gornahoor Harharkh makes a mistake while performing the experiment and has to suffer some unpleasant consequences — again, perhaps a warning that exact knowledge is required in order to make such experiments.

Perhaps the most outstanding character in the book (outside

of Beelzebub) is Ashiata Shiemash. We learn about him in a series of four chapters which are some of the most emotionally stimulating in the book. Ashiata Shiemash was sent to Earth as a messenger from above, a messiah figure of enormous nobility and beauty. He was also concerned with consciousness, and with the conscious fulfillment of one's possibilities in relation to "His Endlessness" or God. His writings are unusually moving and have a scriptural tone and quality. An example are his three verses on what he calls the sacred being-impulses of Faith, Love and Hope:

Faith of consciousness is freedom

Faith of feeling is weakness

Faith of body is stupidity.

Love of consciousness evokes the same in response

Love of feeling evokes the opposite

Love of body depends only on type and polarity.

Hope of consciousness is strength

Hope of feeling is slavery

Hope of body is disease.

Ashiata Shiemash is greatly concerned with attaining Conscience which would involve the "inevitable struggle with the arising and the proceeding within [us] of two quite opposite functionings, giving results always sensed by us either as 'desires' or 'non-desires.'" Ashiata Shiemash establishes five rules of objective morality which are called "being-obligolnian-strivings," and they lead to genuine conscience. It is stated that in order to fulfill these "strivings," man has to "work consciously on himself." These five rules are:

- (1) to have everything satisfying and really necessary for one's body.
- (2) to have a constant and unflagging instinctive need for self-perfection in the sense of being.
- (3) the conscious striving to know ever more and more concerning the laws of World-creation and World-maintenance.
- (4) to strive from the beginning of one's existence to pay for one's arising and individuality as quickly as possible, in order afterward to be free to lighten as much as possible the Sorrow of our Common Father.

THE PSYCHEDELIC REVIEW

- (5) the striving always to assist the most rapid perfecting of other beings, both those similar to oneself and those of other forms, up to the degree of self-individuality.

Gurdjieff points out that one of the psychological traits of contemporary man which impedes the formation of a Conscience is the "disease of tomorrow" — i.e., putting off until tomorrow what you could do today.

* * * * *

Intricately woven into Beelzebub's stories are pieces of information that seem quite straightforward. For instance, Beelzebub explains to Hasein that man is composed of three brains or centers. They are the instinctive or moving center, the emotional or feeling center, and the intellectual or thinking center. Perhaps Beelzebub and his party can be seen as a demonstration of the three centers functioning together as a unit, each having a definite role to fulfill. Beelzebub himself would correspond to the thinking center. He has all the information, is the maker of plans and decisions, and is the leader of the group. Ahoon, the servant, represents the physical center. He is described as faithful. He is always there, ready to serve, and does not intrude with his own personal desires — perhaps a more ideal condition for the body to be in than is generally the case with man. Hasein represents the emotional center. He is young, not fully developed, is in the process of being educated, has willingness and eagerness to grow up, and is often intensely moved by what Beelzebub tells him. In this analogy it can be seen how Gurdjieff's system, which has been called the Fourth Way, differs from the three ways of the monk, the yogi and the fakir. They each try to develop primarily through the means of one center: the fakir through chastisement of the body, the yogi through mental discipline, and the monk through prayer and belief which are chiefly emotional. For Gurdjieff's work, all three centers must be utilized so that man can develop harmoniously, not lopsidedly. In this connection it is most interesting to read about the Alla-attapan in the chapter "Heptaparaparshinokh." The Alla-attapan is a device invented by Chinese twin brothers and, in part, shows how the three centers can function in man in the proper

Review Essays

way. The various portions of the apparatus can be clearly seen to correspond to centers in man.

The knowledge of this concept of three centers is a prerequisite to Gurdjieff's treatment of the Law of Three or, as he calls it, Triamazikamno. It is quite an unusual concept and rarely, if ever, appears in contemporary scientific knowledge. Yet Gurdjieff maintains that it is the underlying principle in all noumena and also plays a very significant role in man's possible development. The Law of Three states that there are three, rather than two forces always in operation. Usually, of course, we know only positive and negative. To this, Gurdjieff adds the neutralizing force. One of the most poetic illustrations of this principle appears in the chapter "Purgatory," in which three beings unite in a special way in order to create a new being. This takes place in another solar system which might correspond to a certain stage of a person's development in which the three centers fuse and give birth to a higher state of consciousness. Perhaps this is the state of "oneness" which mystics write about.

In relation to the Law of Three, Beelzebub tells how each of man's three centers can play a part in his development through the use of consciously ingested and digested substances. Unfortunately, man in his present condition does not take in these substances and therefore does not fulfill his potentialities. At one point in the discussion of these substances required for spiritual growth, reference is made to alchemy and the changing of base metal into gold. The chapter "Hypnotism" goes into it even further, telling what these substances are, how they are to be ingested and digested, and what the results of this could be. It is interesting to note that one of the substances is the very air we breathe.

Toward the end of the book, in the chapter "Form and Sequence," Gurdjieff draws an interesting distinction between knowing and understanding. Understanding can only result through the conscious verification of knowledge. So, although the book presents knowledge, and perhaps knowledge of a very high order, it is not in itself useful unless one puts it to the test — digests it and converts it into understanding.

Throughout the book, Beelzebub often after an explanation of some principle or possibility, tells Hasein that he will give him further details after they reach their home planet Karatas. The narration of the story ends just before they reach this "promised land." Perhaps this implies that the reader needs to digest and use the ideas set forth in the book before further information or understanding will be forthcoming. But this Mecca is not always in the unforeseeable distance, because there are several points where Hasein is said to

see the "reflections of the lights of Karatas"—a glimmer of what is to come, inspiration to continue in that direction. Perhaps also for the reader this can take place.

* * * * *

Interspersed with his stories, Beelzebub discusses various theoretical and philosophical subjects. At one point in their travels through space, Beelzebub's party learns of the impending appearance of a comet which will, if they cross its path, damage their ship. Beelzebub decides that the Karnak should wait in outer space until the comet has gone by. He makes use of this time to explain to Hassein the dynamics of space ships, much as the contemporary father explains the workings of an automobile to his young son, and also in keeping with the best tradition in science-fiction. But here, in allegory perhaps, are principles dealing with the methodology of "work on oneself." Included in his explanations is the idea of perpetual motion which Beelzebub puts forth in such a plausible way that one is hard put to find any theoretical flaw in it. Perhaps there are indications here of what kind of fuel could be used to keep oneself in perpetual effort to develop.

During this interlude in outer space, Beelzebub speaks about time, which he calls the Unique-Subjective (Beelzebub is not one to waste time). This chapter is very valuable for understanding the idea of relativity, and of parallel values on different planes. The meaning behind the use of "Unique-Subjective" is that all beings on whatever plane of existence, from microcosmic to macrocosmic, experience the flow of time in the same way; that is, the time duration for an event in the life of an amoeba is relative and comparable in length to a similar event in the life of a human being, even though in the case of the latter only three seconds may have appeared to elapse, whereas with the former an entire lifetime has gone by.

This chapter is also one of the most philosophically exciting in the book. A great many provocative statements are made: "Time in itself does not exist . . . cannot be understood by reason . . . only time has no sense of objectivity." Balanced against this, Gurdjieff indicates the possibility of understanding time through a direct experience of it (rather than through a mental process), an experience which he calls the Egokoolnatsnarian sensation.

Another exciting principle which Gurdjieff brings forth is the

Law of Seven or, as he calls it, Heptaparaparshinokh, to which he devotes a whole chapter. If one can in any way sum up the intricate logic of this law, it is that all events proceed in seven steps or "deflections," each step having specific attributes and properties which determine the progress of every activity. Gurdjieff links this law and its progressions rather intimately with the stages of a man's development.

The Law of Seven has at least several illustrations in contemporary knowledge—obviously in the music octave, but more profoundly in the periodic table of elements in chemistry. When the elements are lined up in tabular form, each series headed by an inert element, it can be seen that certain of their characteristics repeat in patterns of seven. It is interesting to note here that the electrons of inert elements have closed orbits; they cannot combine with the other elements of this world easily. Thus, we see that Gurdjieff's theories are not solely a product of his rich imagination, and it is fascinating to see how he finds psychological applications in them.

* * * * *

In many ways, Gurdjieff seems to be trying to discourage people from reading *All and Everything*. In the introduction, which he calls "Arousing of Thought," not only thought, but many feelings are aroused—some unpleasant ones towards Gurdjieff himself. Gurdjieff helps to invoke these by such statements as, "cheerful and swaggering candidate for a buyer of my writing . . . before embarking in the reading . . . reflect seriously and then undertake it . . . you might lose your . . . appetite for your favorite dish and for your . . . neighbor, the brunette." Apparently Gurdjieff does this to keep the reader from being lulled or feeling complacent. He wants to agitate and unsettle us—shake us loose from our ordinary way of thinking and of receiving new impressions.

One of the aspects of the book that is quite decidedly "arousing" is the very manner in which it is presented. Sometimes there is digression upon digression, so that to the inattentive, Gurdjieff appears rambling and disconnected. But actually each seeming digression adds a new dimension to that which is being discussed.

Another problem is that people are so used to what Gurdjieff calls "bon ton literary language"—that which produces exciting

THE PSYCHEDELIC REVIEW

images and lulling reveries smoothly and easily so that very little effort is required on the reader's part. Gurdjieff writes quite otherwise on purpose; he constructs sentences which are, at times, outlandishly long and complex — sometimes a quarter of a page in length.

Gurdjieff seems hell bent on disturbing one's equilibrium, for there is hardly a "quiet" moment in the book that is not disturbed by one of Gurdjieff's classic "Otherwises." This, as he explains in the introduction, is based on an injunction from his grandmother which states, "In life never do as others do . . . Either do nothing — just go to school — or do something nobody else does."

It is sometimes hard to determine when Gurdjieff is being humorous and when he is being serious. He will often discuss a most weighty problem in a tone which is light, sometimes facetious, often with tongue-in-cheek. A prime example of this is his discussion of our responsibilities toward, as he puts it, "Mister God." In reverse, in the chapter "America," Gurdjieff discusses many topics with mock seriousness — the American "dollar-business," drinking and prohibition, the Chatterlitz school of languages, a strange fellow from Chicago called Mr. Bellybutton and on and on. This chapter is really spiced with pungent wit!

One of the best elements of Gurdjieff's humor is his timing. He doesn't allow the reader to get heavy and ponderous, because he sprinkles his humor strategically throughout. Often when considering a most serious question, he interrupts with a quote from the Arab philosopher, Mullah Nassr Eddin. These quotes punctuate the book at the most unexpected moments. For instance, at the very end amidst a series of emotionally charged events in which Beelzebub is receiving something akin to sacred rites, Mullah Nassr Eddin is suddenly quoted as saying "Don't shed tears in vain like that crocodile which snapped at the fisherman and missed biting off his lower left half."

Also contributing to the fact that the course of the reading is not, again to quote Mullah Nassr Eddin, "Roses, roses," is the liberal usage of the Karatasian language — the strange words that belong to Beelzebub's vocabulary. These words are often an unusual assemblage of syllables with three or four consecutive vowels. Some of the roots are traceable like in Triamazikamno (tri = three) and Egoplastikoori and Legominism (ego = I), but always connected with them are syllables not so easily traceable. This is not to imply that Gurdjieff leaves the reader hanging, for he often goes to great length to define and illustrate these words. But an examination of their construction can no doubt shed even further light on them,

Review Essays

and Gurdjieff offers quite an adventure in word exploration for those so inclined. There is the word "zion" in the names of two "searchers after truth" — King Konuzion and Makary Kronbernk-zion. There are also connections such as those between the Society of Akhaldans and a specific substance in the blood of the Astral body which is called Aiesakhaldan, possibly implying that the findings of the Akhaldan society bear directly on the understanding of what this substance is and how it can be acquired. Then there are words which seem to come directly from various Eastern languages, like the name of the space-ship Karnak that Beelzebub and his company are traveling in, which means "dead body" in Armenian.

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Despite all the inherent difficulties which Gurdjieff has implanted in the book — complexities in writing and in concepts, the rewards are there also. But in keeping with Gurdjieff's philosophy, the rewards are commensurate with the reader's struggle to find them. The book is well worth the struggle, for the man definitely has much to say of import.

In the last chapter, Beelzebub, in an exultant experience, is graduated to a state of higher Reason, which he has earned through his efforts to develop. The ritual connected with this has the solemnity of a religious ceremony and is deeply moving and inspiring. So, "An Objectively Impartial Criticism of the Life of Man" ends with a triumphal sense of hope, of salvation, of redemption. But not before Hasein is invited to ask one final question of his grandfather. Hasein asks what hope there is for the salvation of people on Earth, and Beelzebub most aptly ends the story with the reply:

"The sole means now for the saving of the beings of the planet Earth would be to implant again into their presences a new organ, an organ like Kundabuffer, but this time of such properties that every one of these unfortunates during the process of existence should constantly sense and be cognizant of the

inevitability of his own death as well as of the death of everyone upon whom his eyes or attention rests.

"Only such a sensation and such a cognizance can now destroy the egoism completely crystallized in them that has swallowed up the whole of their Essence and also that tendency to hate others which flows from it — the tendency, namely, which engenders all those mutual relationships existing there, which serve as the chief cause of all their abnormalities unbecoming to three-brained beings and maleficent for them themselves and for the whole of the Universe."

RE-BIRTH WITHOUT FEAR

(*The Psychedelic Experience* by Timothy Leary,
Ralph Metzner & Richard Alpert)
Gerald Heard

NO PSYCHOLOGICAL TRAINING MANUAL is more needed today than *The Psychedelic Experience: A Manual Based on The Tibetan Book of the Dead*,¹ by Doctors Timothy Leary, Ralph Metzner and Richard Alpert. For here, in present-day psycho-therapeutic terms, we are provided with a method which can give us essential aid and guidance in and for the most vital and most neglected phase of our lives. The text is, of course, a rendition of the Mahayana Buddhist *Bardo Thödol*. This is the Tibetan "office for the departing," "the last rites" performed to instruct and prepare the person who is leaving this physical body and this phenomenal three-dimensional world for the next, out-of-the-body experience. It gives the instructions whereby the lama informs and guides the dying person into the "intermediate" or "threshold" (that is, "Bardo") state that awaits the newly released soul as it reassembles itself after disengagement from the physique. But however necessary it is that our American and, indeed, all our "modernized" societies be taught how to get over our death phobia and so to be freed from the ridiculous tabu-dishonesties whereby we attempt to disguise our rightful exit, we shall not try out this method and undergo this training unless we can be reassured on two points, unless two quite sensible questions can be answered, two rational objections be met.

The first is: "How can a Westerner accept the Buddhist, ori-

¹New Hyde Park, N. Y.: University Books, 1964. \$5 (Psychedelic Monograph I.)

ental, pessimistic, pre-modern, pre-scientific view of life: namely, that the best thing to do with it is to get out of it!"

Of course, there is no logical reason why a method should not be accurate and useful even though it may have been used for improper purposes. A skeleton key, even though a burglar may use it to enter your house, is more often used by a locksmith. For example, he employs the very same instrument to let you in when you have locked yourself out.

Sooner or later everyone comes to die. We in the West have no psychiatry nor psychophysical therapy for dealing with this important event, and the inherited religious methods seem increasingly to be inapposite. For they were made to fit an earlier and disproved view of Nature, Life and Man. Of necessity, such a mistaken view of Reality cannot fail to deduce mistaken and misguided rules of conduct in regard to man's destiny, behavior, obligations and initiative. So an increasing number of responsible people find they cannot accept or believe such rulings and ritual. Some still try to do so but find, because of these general doubts, that, though they conform because of their need for emotional support, their conviction is not strong enough. The lack of any system that might both win their intelligent conviction and also strengthen their wills makes their compliance ineffectually wavering.

The second question runs: "Granted, that out of the psychological methods developed by Buddhism a valid terminal therapy could be extracted, what use could that therapy be to any but the old?" The vast majority of people now have their lives still before them, and they feel their obligation is to serve the Human Race and help forward its future. All the more do they feel this because they realize that the dedication of those who will so serve could prove decisive, and for two reasons: In the first place, desertion by a few in the present desperate pass could precipitate disaster; in the second place, we now know that there is in Life a vast purpose that we can fulfill. Conversely, we have historic evidence that when the intelligent and concerned, in order to save their souls, deserted the human venture and humanity's hope, then this failure of nerve has proved fatal to civilization.

Does not the Buddhist conviction, that life is evil and man's only comfort is in rejecting it, permeate and orientate its whole teaching? If this process for release at the completion of life were not hopelessly pessimistic, would not this method of completion, this rite of departure be the last and crowning aid in a series of preliminary enlarging releases? In fact it would and should be the fourth act of a fourfold series of psychiatric performances. For life

THE PSYCHEDELIC REVIEW

is a cycle of entry (Birth), growth (to maturity), involution, de-involvement (Old Age), and elimination and exit (Death).

This undoubtedly is true. But when we actually study the basic structure of Buddhist thought, we see that the system is not confined to a terminal therapy. The centuries-old religious theory and practice, which we collect (but do not order) under the label "Buddhism," conceive of life as this Fourfold process. The Life Process was rightly recognized as marked by four great turns, four pivotal twists.

Because they are each of them a detaching process, a disengaging act, Buddhist classifiers called all of them "Dukkas," which means "dislocations."

Further, because at each of these attempts at detachment the organism might easily get caught and bound, these four Dukkas are called *Fetters*.

Unfortunately, Buddhism, during its scholastic-schematic epoch, concentrated on pain as the dominant reality of Life. For this epoch tallied with that phase of acuity, of hyper-sensitive negative and personal-bodily-confined feeling (and so of life-rejection) which I have called the great Ascetic epoch, the epoch of the self-absorbed stage of man's intensifying self-consciousness.² The dominant conviction was not only that pain was the supreme experience in the physical life, and always exceeded pleasure. But even worse than this: these ascetic scholastics built a system (not based on any actual demonstrable evidence) which was said to prove that pleasure was the cause of pain, that any pleasure would and must be paid for by pain, so the only way to stop the unbearable and futile pain was to stop all pleasure, to cut off all physical sensation.

The painful effort, the 'agōn'³ of disengagement, so obsessed these monks that they disregarded the fact that it has a purpose. The dislocation, the disengagement, is *from* a condition that up to that point was necessary for growth. Then, if there is to be further growth, at that point the growing organism must free itself for a more stimulating experience. It must loosen its purchase on the now-too-small location and so, able to reach out, must relocate itself for a freer life in a larger frame of reference.

Hence in standard orthodox Theravada Buddhism the four stages of life are named negatively. They are all Dukkas, all disloca-

²See *The Five Ages of Man: The Psychology of Human History*, by Gerald Heard. N. Y.: Julian Press, 1963.

³The Greeks had two words for pain: *patheia*, pain that has become degenerative (sickness); and *agonia*, literally a wrestling match: pain which is used to attain to, and is transmuted into, a heightened consciousness.

Review Essays

tions. The fact that they lead to larger relocations is dismissed as being no more than a new and larger opportunity for suffering. We are told that the first stage, Birth, is a Dukka. And, indeed, giving birth (for a self-conscious, psychophysically uninstructed woman in a pain-conscious society) is a traumatic dislocation.⁴ But then at the second, third and fourth big turns of the Life curve we are *not* told, as we might expect, that weaning and childhood, adolescence and attaining maturity are Dukkas.⁵ Maybe the monk felt that all self-conscious life up to the end of first maturity was a seducing bait, a further acquiring of a deepening addiction, enticement into that pleasure which (because life was evil) must, according to their suffering-scarred minds, be paid for in pain.

The second Dukka is, we are told, *sickness*. This we see is *not* a dislocation, it is a degeneration. It is *not* one of those successive phases of growth wherein the preceding location, having yielded that purchase, growth-stimulant and area of response (which at that stage the growing person *did* then require), must now be disengaged from, in order that the developing person may re-engage with a higher and wider frame of reference. In the Buddhist canon, however, after that wrongly specified, mistakenly named number two of the four Dukkas, the teaching does return to the Biological curve with Old Age, the beginning of that curve's decline.

Certainly, in passing, we should note that there is enough evidence that growing up is not less exacting than growing down. Development in and of the body during that period needs just as much understanding-training as is needed to make the more publicized tasks, problems and difficulties of old age an undefeating and a worthwhile accomplishment. Indeed, in becoming adult and completing First Maturity (to 45), the individual probably goes through more locating and dislocating than during the rest of his life. For, after the secure location of mother-embracing intimacy comes the dislocation of weaning. After weaning comes small-childhood — whose dreams must be abandoned while rough discipline enforces an unexplained obedience. With adolescence comes a tide of new inner forces either unexplained or misexplained, but always forbidden any honest and full investigation, exploration and experi-

⁴We know now, from microscopic study of the milk teeth of infants and children, that in a severe parturition the infant suffers too. For in the fine growth rings of the child's teeth (which, from the first tooth formation, are laid down about every 36 days), all its illnesses are recorded and show up in a distorted ring. Among these disease-distorted rings, none is so ill-made as that which marks the trauma of birth.

⁵See the writer's *The Five Ages of Man*.

mentation. And lastly, after adolescence there has to be faced the entry into adulthood wherein dutiful conformity and responsible cooperation are required of the new subject, citizen or comrade who is not permitted to choose his loyalty or to question the irrational assumptions of whatever state holds possession of his body.⁶

But about our mishandling of the Third Dukka of Old Age—the disengagement from the physical growth process when, First Maturity being over, the racial and biological process is ended—there can be no doubt. Here, in the way we handle (or rather fail to handle) old age, we must recognize that the Buddhist canon was right. As we know from our own mounting “casualties of unhappiness,” the post-reproductive phase of our lives is marred not only by the geriatric diseases, the specific complaints of physical decline and the degenerative failures of function and organ, but also with involuntional melancholy. For the unprepared, uninstructed, untrained, we may be fairly certain that involuntary Old Age will prove for the elders distressing, an inability to understand dislocation, an incompetence to practice release. Yet in this Dukka the Buddhist therapies had much to offer. When we reach the fourth and final disengagement of Death, the casting off of the body, here we know that Buddhism, because of its exclusive concern with escape from this life, did devote nearly all of its highly skilled and efficacious attention.

But now let us see how the series looks if we regard it in the light of our present biological and psychological knowledge. First, we can accurately name these four life-stages as (1) Voluntary Birth, (2) voluntary conscious Biological-Physiological Growth, (3) intelligent, informed and purposed Psychological-embryonic Growth (in the womb of the body), and then (4) intentional, informed, Psychological Birth out of the body. All these engagements and disengagements are strenuous and need skilled instruction. They are effortful ‘agōns,’ but if handled as such, they are not pathological and need not be debilitating if we train and prepare for them.

Secondly, as soon as we have thus scaled and evaluated this fourfold structure of life, we see that these four steps divide very clearly into two pairs. The first pair belong to the life of the race. These two are the biological phase in which we perform and fulfill our role as reproducers, *epigenetic*⁷ carriers-on (at least potentially) of a consciously, purposively, rapidly self-evolving species. After ful-

⁶*ibid.*

⁷Epigenesis is a more accurate word than is evolution. For it describes what has actually happened in evolution—the emergence of types that have risen above the early rudimentary types, rising from the single cell and in man to self-conscious, self-directing evolutionary advance.

filling that phase (instead of being, as we would be if we were only a particular animal species, “too old at 40”), we are ready for our specific, unique, psychological phase. We can then go through the second pair of purely human stages: (1) voluntary involution, disengagement from the biological concern, dislocation from this three-dimensional, space-time, entropic process in which the race develops; and (2) when that involuntional disengagement is done, we are then free-movers and can and should achieve voluntary discarding of the husk-body in which we have ripened.

So we emerge into the Fourth Dimension outside space-time and are free to exist liberated, disengaged from the entropic down-pull which can only act on the appetitive, possessive physical body and has no purchase on the psyche. All wild animals (because they belong to their race, and their consciousness is not separate but that of their species’ field) must die when their use in, and purpose for, the race is over (in the *Hominidae Genera*, at 45); for they are not self-conscious. And so being conscious of, and run by, only the racial clock time, they therefore are identified with their reproductive body. When it is finished they fall naturally into coma and die, while the species life is carried on by the young they have bred and reared and which are the complete fulfillment of the physiological, instrumental constituents which thus discharged themselves.

But is there any evidence of all this? There surely is, right through the four stages. To start then with the first pair of turning points that rule the human biological process. As to Birth we have now learned to achieve “childbirth without fear.”⁸ We have discovered that the prospective mother can be taught to welcome the parturition with her entire psychosome. She can learn to join up her surface, personal, forebrain-mind with the race mind in her mid-brain. So without fear the process is transformed—because, for the pathological experience of the animal-victim, which feels itself being sacrificed in torture, is now substituted the rightful ‘agōn.’ For instead of a helpless prisoner on the rack, we now have a magnificently braced and alert contestant. ‘Agōn’ means the wrestling match. And this is a good name for the wrestle in which the instructed and heroic-minded mother with magnificent effort delivers her child, sends him out, disengages him from her now imprisoning womb and re-engages him into her arms and to her breast.

Indeed ‘agōn,’ though a fine term full of initiative, is still too narrow because too competitive. Dance—the utmost athletic dance (the superb expressive mastery of the ultra-acrobatic ballet premiere

⁸See *Childbirth Without Fear: The Principles and Practice of Natural Childbirth*, by Grantly Dick Read. N. Y.: Harper, 2nd rev. ed., 1959.

THE PSYCHEDELIC REVIEW

dance as she demonstrates, in utmost rhythm with the splendid and miraculous competence of harmonious, ultra-expressive dilation, the spirit which the trained, informed and inspired body can reveal and express) — dance, the Sanskrit symbol of the very world's creation, is the only term in which can be rightly phrased the miracle of a birth achieved by a mother wholly in time and rhythm with the rhythms and tempi of her body.

And this, the starting step of the voluntary acceptance of the biological advance, is naturally followed by the second of these two steps. This second step embraces all the other 'agōns' of psychophysical growth into maturity: that is, weaning and childhood, puberty and adolescence and first maturity. And throughout life from birth to death, sickness — the pathological relapse — is *not* included. Instead we are offered and can have a sequence of 'agōns' of ever more daring dilations. These are in those ordeals⁹ of heightening resistance, of intensifying, conscious, voluntary, strenuous health, of more alert, self-detached awareness by a constant psychosomatic education of the entire mind-body.

Now we have ample evidence that this, the first two-step phase of the human being, is well mapped for him and actually wrought into him. Indeed, he will be prodded by penalization if he won't obey. For from birth to 45 we today fulfill the biological racial life of our species. We now know¹⁰ that man belongs to a genus (or to genera), the large-brained, upright *Hominidae*, and that the life term of these creatures is some 45 years. That is, at 45 years they have reached the end of their reproductive cycle and so the end of their use and purpose for the advance of their species. *Homo erectus* was, we know, a creature of great competence, well adjusted to use an understanding that made it the ablest of animals and perfectly competent to grasp and fulfill the racial plan implanted in it. But its still unfinished brain kept it from the consciousness of its separate selfhood.

That species (*Homo erectus*) appears about a million years ago. After half that time (circa 500,000 years ago) appears *Homo sapiens*, a creature with a reflective mind, aware of time and of separation. Hence follow inevitably agriculture, the solar calendar and an awareness of death.¹¹

⁹'Ordeal' only means setting resources in order, so that with these free assets we may and can achieve a larger life, a fuller, conscious re-engagement of a wider frame of reference.

¹⁰See Carleton S. Coon, *The Origin of Races*. N. Y.: Knopf, 1962.

¹¹We have actual evidence of rites that indicate the speculations about and the conviction of persistence after death — for example, the child burials with their shell coronals in the Neanderthal graves in the Carmel caves.

Review Essays

Man now enters on a new extension of life and so must take the second pair of *specifically* human steps, old age and death. The new extension raises his expectation of life from 45 to 75.¹² This extension of another 30 years in which he is free to become specifically human, free from the racial responsibility and the advance of the genetic process, is, we then see, what we should expect if this upper process is intended and can and must be man's conscious and intentional advance into the two specific human freedoms: voluntary old age is for disengagement and for preparation for voluntary death, when we can competently discard and eliminate the diminished and loosened husk. That achieved, we naturally are emerged from this Third Dimension into that Fourth which we now know is the next frequency above this the Third. It is this new non-physiological frame of reference that now awaits us. It is as natural as was the life out in this world that awaited us when we left our mother's womb. In brief we were 9 months in that first womb, and now we are given 900 months (75 years) in this psychologically embryonic condition, the womb of the body.

In this frame of reference we are provided with the outline of a comprehensive chart for the entire life cycle. In this frame of Life-acceptance, we see how the Four Disengagements, Dislocations and larger Relocations are to be achieved: Firstly, wholly voluntary childbirth, not merely without fear but with strenuous psychophysical ecstasy.¹³ Secondly, wholly voluntary, strenuous acquisition of conscious, intentional heightening of health of awareness by skilled ordeal. Thirdly, wholly voluntary and intentional discarding of the biological concerns and obligations which have been discharged. And finally, fourthly, the voluntary emergence into the new birth.

We may find the instruction, as to how this is actually done, by our present study and practice of the method whereby today the pregnant mother, her full time come, brings about her delivery. The present birth-training teaches the woman to get into touch with her mid-brain and join with its intention. So she cooperates consciously with the subconscious racial effort. The same process of instructed, skilled, trained cooperation of the self-conscious fore-brain with the deep mid-brain permits that same union of the mind-that-controls-the-body with the intentionally conscious person. So the birth into the Fourth-Dimensional life becomes as purposive

¹²See Gavin De Beer, *Embryos and Ancestors*. N. Y.: Oxford Univ. Press, 3rd ed., 1958.

¹³These are the statements of ever larger numbers of mothers who are trained in this re-naturalized childbirth.

THE PSYCHEDELIC REVIEW

and sure as is the present intentional parturitional behavior of the mother who practices "childbirth without fear."

Into this frame of reference we can fit, as a culminant procedure and in terms of total life-acceptance, this skilled modernization of the *Bardo Thödol*. Here in THE PSYCHEDELIC EXPERIENCE is the crowning efficacious rite whereby, after the physical, racial, three-dimensional life has been fulfilled, we go on to that specific psychological growth which raises us to the goal that alone makes sense of Life, that brings us those powers and freedoms, to attain which we took a human body and lived the strenuous preparatory 75 years as an embryonic psyche.

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BOOK REVIEWS

THE PEYOTE CULT

By Weston La Barre. (New Enlarged Edition.) Hamden, Conn.: Shoestring Press, Inc., 1964. Pp. 260; illus. \$7.50.

Of all the hallucinogens, peyote — the small, innocuous-looking spineless cactus, *Lophophora Williamsii* — has attracted probably the most widespread attention, and this over a relatively long period of time. The bibliography concerning peyote and its chemical constituents covers many fields and is staggeringly extensive. Known since the days of the Spanish subjugation of Mexico, peyote increasingly seems every day to be claiming the attention of serious scientific investigators.

Twenty-seven years ago, Weston La Barre published his Ph.D. thesis in anthropology at Yale University. It appeared as No. 19 of the Yale University Publications in Anthropology. The volume quickly became accepted as the authoritative work on the peyote cult, but only a few years after publication it was unavailable. Mainly anthropological La Barre's treatment succeeded — it is generally agreed — in presenting what we might term an interdisciplinary approach. He reviewed much of the botany and ethnobotany, chemistry and pharmacology basic to a solid understanding of peyote itself and, in turn, of the native religious cult that had grown up around it. This, combined with his meticulous field work, gave La Barre's treatment a singularly sympathetic and objective character that one finds too often wanting in sundry studies that are otherwise sound and superbly executed. What

stands as fact is simply this: La Barre's *The Peyote Cult* is still quite generally considered to be the outstanding work on peyote. It is not often that any monograph in such a fast-moving field can hold a position of primacy for a quarter of a century. Consequently, I refrain here from being ludicrous enough to present a "review" of so well known and tested a document.

As we all rejoice in having the original again easily available, we are still more grateful that this new, enlarged edition has two appendices, bringing peyote studies up to date in an astonishingly masterful way.

The second part of this new edition, entitled "Twenty Years of Peyote Studies" (taking us from 1938 to 1958), was first published as No. 1 in Vol. 1 of *Current Anthropologist* in 1960. In addition to a bibliography of some 163 titles, mainly ethnological, La Barre presents a clear picture of the increasing political persecution of the American Indians' rights to free exercise of the peyote religious cult. He likewise gives illuminating insights into the direction of psychiatric and psychological research concerning peyote and mescaline in this period.

The third and perhaps most significant part of the new edition is "The Last Five Years of Peyote Studies." Totaling 37 pages, it is divided into sections on ethnography, problems of acculturation and diffusion, the Native American Church, mescalism, mescaline and its experimental uses, peyote as a "narcotic," peyote and the law, the secularization of peyote, chemical mysticism and an academic debacle.

All of this is not only highly interesting but its significance to the ever more complicated role of peyote in North American Indian relations with the United States and local governments is presented in a most authoritative, unbiased and realistic point of view.

Perhaps the last two topics discussed in this section of the book will interest many readers of *The Psychedelic Review* more intimately. La Barre follows the search for the "mystic experience" through use of chemical substances—a new fashion, albeit as old as history—in an unusually objective manner; without stating his position in so many words, he leaves no doubt as to where he stands on this new search that has been embraced by many, from professors of theology and psychologists to beatnik poets and bohemians. In "An Academic Debacle," La Barre discusses the role of psilocybine, LSD and other psychotropic substances—of which peyote or mescaline form but one group—in academic circles, especially in the experiments conducted at Harvard University by Alpert and Leary. The entire history of events at Harvard that led to the dismissal of these two faculty members and their later activities with these hallucinogens, is related with factual objectivity.

At the end of this, La Barre's latest contribution to his peyote studies, he writes the following, which should be very widely respected as the judgment of a reasoned specialist and a widely recognized authority in the social sciences: "The promise of an understanding of schizophrenia—at least so far as experiments with mescaline are concerned—has now, according to the experts, largely faded away. As for hedonic escapes, Western man already complacently accepts (since it is ours) the mass use of substances

such as tobacco and alcohol which, to physical health, can be far more dangerous than a weekly Indian use of a feebly psychotropic desert plant. And as for his mental health, Western man is already imbedded in narcotic institutions such as advertising, television, and movies—which invite illusions about ourselves fully as dangerous as any Indian religious cult."

The only unfortunate aspect of the publication of La Barre's new, enlarged edition is the fact that it will not become a best seller, will not become widely available to the great mass of American readers and, because it does not beat the drum for currently popular movements, probably will not be heeded by those most in need of its lessons.

Richard Evans Schultes

LSD — THE CONSCIOUSNESS EXPANDING DRUG

Edited by David Solomon. Introduction by Timothy Leary, Ph.D. N. Y.: G. P. Putnam's Sons, 1964. Pp. 273. \$5.95.

This volume is a collection of what by now may be considered a representative selection of some of the classic papers and articles on the psychedelics. Fifteen contributions form a spectrum of views—from the most enthusiastic to the most negatively conservative, with much material in between that deserves careful appraisal.

Timothy Leary's excellent introduction locates the present controversy within a historical, social, scientific, and religious perspective. The various contributions represent, as Leary suggests, "an early exploratory probe into the area of accelerated and expanded consciousness." Each chapter views the

question of the expansion of consciousness within a different interpretive framework—with resulting differences in suggestions for the social and cultural implications of the psychedelics. Rather than a host of contradictions among the views (with one or two notable exceptions), there is a set of converging perspectives.

The inclusion of Roy Grinker's "warning" editorial (reprinted from the A.M.A. *Archives of General Psychiatry*) may represent, at some not too distant future, an embarrassing professional position.

The Grinker invective, however, is set into sharper perspective by the contribution of Cole & Katz ("The Psychotomimetic Drugs: An Overview") in which the question of the therapeutic potential of the psychedelics is raised within a psychiatrically-based discussion of existing social and scientific use and abuse. A third medically-oriented contribution, by Dr. Eric Kast, describes the employment of LSD-25 in the amelioration of the painful and desperate situation of the terminal cancer patient. He reports that in a study of 128 patients given LSD once, significant reduction in pain intensity was observed over a three-week period. There was a corresponding general lifting of negative affect and an increase in personal indifference to the fact of approaching death. Kast's paper stands out as one of the most specific clinical applications of the psychedelics in an increasingly wider area of social settings.

Included in this volume is Unger's excellent and comprehensive survey of psychedelics and the issue of rapid personality change, which appeared first in *Psychiatry*. Unger also contributes a bibliography of the English-language literature on LSD and psychotherapy (which was also published in the last issue of this *Review*).

Terrill, Savage, and Jackson's contribution to the NAPA State Hospital Symposium on LSD, entitled "LSD, Transcendence, and the New Beginning," sketches with some interesting case histories the medico-religious framework so successful in the psychedelic treatment of alcoholism.

A special note is Humphry Osmond's "Review of the Clinical Effects of Psychotomimetic Agents." This chapter is an excellent brief survey of the pharmacologic, therapeutic, psychological and experiential aspects of the so-called "psychotomimetic" substances. The value of this paper lies in its outline of a historical perspective in which much of the contemporary scientific and social controversy may be located. In addition, the essay is full of intriguing research suggestions.

Three essays, originally pub-

**The
Peyote Cult**

by Weston La Barre

New enlarged edition
260 pp., illus., app., bibliog.

\$7.50

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Harvard Botanical Museum

lished in *Playboy* magazine, are also included in this collection. Dan Wakefield's essay, "The Hallucinogens: A Reporter's Objective View," although somewhat presumptuous in title, is a reasonable account of the psychedelic controversy at Harvard University and in Mexico, touching repeatedly on the ongoing process of current cultural assimilation of psychedelics.

Aldous Huxley's "Culture and the Individual" elaborates on the classical ongoing dialogue between socially conditioned, so-called, "normal" waking consciousness and the potential of the human nervous system.

Alan Harrington is represented by "A Visit to Inner Space," an honest and amusing description of the author's personal psychedelic exploration. There are some additional enlightening, anecdotal side-trips descriptive of the socio-political characteristics of the Harvard situation, with brief personal life-histories of the players involved. The essay gives one a taste for the flavor of the Harvard scene, a commendably explicit personal attempt at evaluation.

Other contributions to this collection include Alan Watts' "A Psychedelic Experience: Fact or Fancy?" Watts replays a meta-scientific theme persistent in his more recent writings, the organism/environment relationship, and the possibility of epistemological discovery which the psychedelics portend.

Huston Smith's essay, "Do Drugs Have Religious Import?", discusses, in a commendably precise way, the issue of the veridicality of chemically-induced religious or mystical experience. Smith's distinction between religious experience and the religious life throws light on what has been described elsewhere as the "problem of psychedelic re-entry."

Timothy Leary's "How to Change Behavior" is a remarkable essay; an excursion into the psychology of personal change and applied mysticism, it represents the author's perspective during the early period of the Harvard research project. When read in conjunction with his introduction to this book, one sees an orderly sequence of experientially-grounded intellectual constructions. This essay gains greater import when read and perceived within this context.

The publication of this volume at this time probably coincides with a growing acceptance of the psychedelics. It will also probably help to determine this acceptance. In any case, on informative grounds alone it is a welcome collection of interesting and wide-ranging essays.

GUNTHER M. WEIL

UTOPIATES:
THE USE AND USERS
OF LSD-25.

By Richard Blum and Associates. Foreword by Nevitt Sanford. [A Publication of the Institute for the Study of Human Problems, Stanford University.] New York: Atherton Press ("Behavioral Science Series"), 1964. Pp. 303. \$8.00.

Dr. Blum's timely book, *Utopiates*, is about LSD and those who use it for individual growth, spiritual illumination, and artistic expression.

If this were all, the book would scarcely be remarkable. In fact, it is important for the cross-lights it throws on one close-knit group of LSD users and for the subtlety and range of its criticism. Underlying the strength of this study is the presentation of essays on law and related topics, essays by leading

practitioners in the field of drug use. It can be seen from this book that there is now an acceleration of social interest in the problem of acculturating the psychedelics.

These essays span the last decade: from early research in California conducted at what is called "a religious medical center" (the International Federation for Advanced Study [IFAS]), using therapeutic models of human consciousness, to the IFIF Mexican Center established by Leary, Alpert and Metzner, for whom LSD appears as a new chemical tool for human expression and development (chapters VIII and IX). Blum has also included studies of the ideas about LSD and its use by individuals who take the drug as an adjunct to their own personal explorations. Their comments and reflections on private LSD use are quite diverse, but one can claim on the basis of Blum's evidence that in the aggregate the appeal is one in which humanistic values prevail.

This book can also be praised for its treatment of some of the major social problems faced by society through the availability of

powerful mind-altering substances. Together with his associates, Blum has succeeded to some extent in exploring and explaining an unfamiliar research area composed of a wide range of *sub rosa* activity, utopian dreams, religious aspirations, and ordinary vague enthusiasm, interpenetrated by a certain atmosphere of personal life-renewal, a contagious psychological aspiration, as Blum himself admits. This book, therefore, illuminates the great stress placed on the contemporary individual psyche in its relationship with an increasingly complex and impersonal society. That the light it throws is sometimes a lurid one, does not seem completely inappropriate to our present human situation. We are living in a strange period following two major wars and constantly under the shadow of the next. Young people, particularly intellectuals and artists, are looking inward and back into their personal and archetypal past, turning, as it were, toward the inner life via the use of mind-altering substances, just as in the '30s many young intellectuals turned to the inner life via the church.

LSD

THE CONSCIOUSNESS-EXPANDING DRUG

Edited by David Solomon

Introduction by Timothy Leary, Ph.D.

CONTRIBUTORS:

Aldous Huxley	Humphrey Osmond, D.P.M.
William S. Burroughs	Jonathan O. Cole, M.D.
Alan Watts	Huston Smith, Ph.D.
Dan Wakefield	Roy R. Grinker, Sr., M.D.

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THE PSYCHEDELIC REVIEW

Every movement of human life is affected by the way man's mind works. Everything we see, touch, think and feel is linked with it, so that when the mind is extended for brief moments, these elements can be used more freely and creatively, and can therefore be a tremendously important influence in personal and social change. So far from LSD necessarily being the withdrawal of the mind from reality, it has brought it, for certain people, once again into an enriched, common everyday life. Both tendencies are represented in Blum's research data.

It seems likely that no quick rational explanation will be forthcoming for the range of the emotional power of LSD on the human psyche. As this book suggests, LSD has a different meaning for different people, a different meaning for different professions, and even a different meaning for different social classes; no doubt people will continue to employ it to fill their own particular needs.

This is an extremely timely and important volume and will be of great interest to readers of this journal.

Michael Hollingshead

(Appendix to Hollingshead review:)

Readers may wish to know the contents in detail: I. Background Considerations (Richard Blum). II. The Research Enterprise and Its Problems (R. Blum). III. The Natural History of LSD Use (R. Blum, E. Blum, & M. L. Funkhouser). IV. LSD "Regulars": Continuing Users Compared with Discontinuers (*ibid.*). V. Rejection and Acceptance of LSD: Users and Controls Compared (*ibid.*). VI. Psychopharmacological Considerations (Keith Kilham). VII. The Institutionalization of LSD (R. Blum et al.). VIII. Zihuatanejo: An Experiment in Transpersonative Living (Joseph J.

Downing). IX. Rationale of the Mexican Psychedelic Training Center (T. Leary, R. Alpert, & R. Metzner). X. Psychedelic Experience and Religious Belief (J. J. Downing & William Wygant, Jr.). XI. Social and Legal Response to Pleasure-Giving Drugs (Joel Fort). XII. Police Views on Drug Use (R. Blum & Jeanne Wahl). XIII. A Police Administrator Comments on the Drug Movement (Edward Comber). XIV. Conclusions and Commentary (R. Blum).

THE BEYOND WITHIN THE LSD STORY

By Sidney Cohen, M.D. New York: Atheneum, 1964. Pp. vii & 268. \$5.00.

The Beyond Within is an intriguing title for a fascinating book. Author Sidney Cohen is currently one of the leaders in the field of psychopharmacologic research with the psychedelic agents. His previous works in this field, dating back to 1959, have been written for a medical audience and have dealt with the psychotherapeutic potential of LSD as well as its possible harmful effects. In 1962 he co-authored the volume *Psychochemotherapy: The Physician's Manual* (Los Angeles: Western Medical Publications) in which the biochemical theories of mental illness were reviewed in light of the increasing knowledge of the chemistry of LSD. In this work it was stated: "Whether or not any of all of these theories will be substantiated by future research, the psychotomimetic drugs, by making possible the study of 'model' psychosis, provide a useful tool for investigation from which may emerge knowledge of these disorders in human beings" (p. 38). In

Book Reviews

his latest work, however, Dr. Cohen has assumed the larger task of reviewing the entire scope of LSD knowledge and theory and his undertaking has been most successful. The many facets of "The LSD Story" are explored for a non-medical reader in prose that is simple and enjoyable.

As an overture to his descriptive study, Dr. Cohen offers the hypothesis that man alone seems to have a persistent desire to alter his state of awareness and reality, for they are not fully satisfying as ordinarily experienced. Historical and anthropological evidence is outlined to support his opinion. He shows how Greeks, Egyptians, Orientals, Indians, and North and South American natives have all discovered some naturally occurring substance which will change the state of consciousness. When there was no actual ingestion of some agent, men induced a change in awareness through self-sacrificing physical practices that were often painfully rigorous, and occasionally lethal. The methods varied, but the goals were constant: to induce a personal alteration in reality. In our present century, these practices continue — some condoned, many condemned — but the search for substances that will, in some way, temporarily alter awareness continues. The remarkable story of Dr. Albert Hofmann's discovery of LSD-25, by accidentally ingesting a minute amount of the substance, concludes this introductory chapter.

The major portion of the book is devoted to an examination of the effects of LSD. It begins with a discussion of the perceptive and cognitive distortions produced by the drug, and includes a review of some of the studies of sensory deprivation, indicating that many of the signs of sensory deprivation are similar to certain effects seen occa-

sionally with LSD. In a study of subjects given LSD in a state of sensory impoverishment, the author noted that "sensory deprivation can abort the LSD reaction in some people," which suggests that this drug may alter the coding mechanism of incoming sensations.

Hallucinations are examined in a separate chapter, since they are considered to be disturbances in "thinking-feeling" rather than visual aberrations. Drug induced hallucinations are compared with those naturally induced, those secondary to a psychotic process, and those of delirium tremens. Somewhat unexpectedly, this discussion is concluded with a consideration of the creative aspect of a psychedelic experience, noting that there is often a strong subjective feeling of creativity when LSD is taken.

Several accounts of subjects' personal experiences are included in the general examination of the effects of LSD. The reports vary from ecstasy to terror, from psychoanalytic insight to mystical union. The examples are well chosen for the authors are articulate, and their experiences easily understood. Dr. Cohen interweaves some of his own experiences which add further perspective to the accounts.

In perhaps the most challenging and controversial chapters, LSD is discussed as a psychotherapeutic tool. The author upholds his earlier views that the drug can be a potent adjunct to the therapeutic process, although he now disclaims its effect as a "model psychosis". He sees LSD as reducing the patient's defensiveness, thus allowing repressed memories and conflictual material to come forth which then may be dealt with therapeutically. The need for further investigation of these properties is noted, along with the difficulties of doing such research. After discussing these potential

benefits, there is a long description of the possible harmful aspects of LSD ingestion to the patient, the therapist, and the casual unsupervised user. Dr. Cohen strongly warns against the unrestricted use of these substances, both professionally and publicly; he cautions that unskilled, unsupervised use can cause much suffering. A discussion of LSD as an agent of war seems to echo these somber tones. Almost as an apology to these preceding chapters, the author concludes his work with a general positive view of the potential of LSD in the fields of psychology, religion, and psychiatry.

The Beyond Within is a comprehensive, well-written survey of what is currently known of LSD, its uses, abuses, and potentials. Like most broad surveys it sometimes suffers from over-simplification and occasional lapses into the philosophic. It is, however, a fascinating and thoroughly readable account of a controversial topic that daily increases in complexity.

Carl Salzman, M.D.

BEYOND THEOLOGY

By Alan Watts. *The Art of Godmanship*. — New York: Pantheon Books, Random House, 1964. Pp. 236. \$4.95.

In his latest book, Alan Watts plays the part of court jester in order to take the reader behind the scenes of the Heaven and the God of established theologies; hence, the subtitle of the book: "The Art Of Godmanship." In previous works, as Watts notes in the Preface, he had attempted a synthesis between traditional Christianity and the unitive mysticism of Hinduism and Buddhism along the lines of "the perennial philosophy." After further reflection, this view was found wanting. Watts proposes a new project in this work:

"What we need is a new kind of theological critique — not a polemic, not a debunking, not even a 'restatement in contemporary terms.' We need a natural history of theology, wherein the development of religious ideas and practices be studied, not as something good for life or bad for it, but as a form of life itself, like a particular species of flower or bird." (p. 11)

The natural history model is a questionable analogy; what he seems to be calling for is already a very large enterprise — the phenomenology of religion. Would Watts direct phenomenology to a study of theology and its history? The pioneer effort in this area is Werner Jaeger's *THEOLOGY OF THE PRESOCRATIC PHILOSOPHERS*. Eric Havelock's brilliant *PREFACE TO PLATO* now supersedes Jaeger's work; these two studies, along with Bruno Snell's *THE DISCOVERY OF THE MIND*, chart the course of the rise of rationality in the Greek context, a development which includes the beginning of theology as a rational reflection, the word coined by Plato in his *REPUBLIC*. This pre-Christian Greek development, which must include Aristotle, Philo and Plotinus, is then taken into Christianity. But this kind of scholarly approach is not what Watts has in mind. By pursuing what he calls 'metatheology' he does not mean the historical sources that lead to theology as a rational pursuit; in proposing a 'metatheology' he specifies three operating principles:

1. observe religion as a form of life, 'a kind of existing, an involvement, a participation.'
2. illumine one theological system by looking at it and seeing what happens to it in the context of another.

3. deal with the subject at its mythic level.

These proposals indicate that Watts tends to equivocate between religion and theology — they are not identical. However, given the notion of a post-Christian era in which we are presently living, a viewpoint that takes into account the dialogue going on between the world religions, as Watts proposes, can only be supported. Watts' knowledge of Eastern religions affords him such a vantage point.


In a chapter entitled, "How MUST We Have Faith," he speaks about and against the hypocrisy of much of Christianity in a post-Christian world. Although one might agree with the general outlines of his critique, this reader was put off by such sweeping assertions as: "Outside Quaker meetings and Catholic monasteries, there is hardly the slightest concern for the inner life, for the raising of human consciousness to union with God — supposedly the main work of religion." (p. 86). Aside from the issue of what most adequately defines the main work of religion, the first part of the sentence is obviously untrue. In calling the Church out of its involvement in irrelevancies, Watts announces that "the basic design of traditional Christianity must first become clear." To whom? To those more clear about this design than Watts? His own attempt at clarity is his discussion of the symbolism of the First and Second Adam, the Fall and the Incarnation. But why read Watts' sketchy account, where no references are made to the brilliant discussions of these themes by Kierkegaard, von Rad, Barth, Tillich or Ricoeur.

Alan Watts is a charming man, and a marvellous speaker — his new books reads like a script for one of his television shows or like an edited tape from a number of dinner conversations. (The most delightful

and rewarding chapter in the book is chapter six, "This Is My Body.") But the book is admittedly not a work of scholarship. However, if he manages to shake any of the complacent-pious out of their rut, he will have served a worthwhile purpose; for the rest, *BEYOND THEOLOGY* is an amusing and entertaining divertimento, abundantly scattered with passages of insight and wit.

PAUL LEE

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NOTES ON CONTRIBUTORS

RENE DAUMAL died at 36, in 1944, a poet, philosopher, Orientalist. His *Mount Analogue* (A Novel of Symbolically Authentic Non-Euclidean Adventures in Mountain Climbing) [Vincent Stuart, London; Pantheon Books, New York] carries an introduction by the translator, Roger Shattuck... DAVID DRAKE is assistant professor of mathematics at the University of British Columbia, Vancouver... GERALD HEARD has also appeared in our first and third issues. His recent book, *The Five Ages of Man*, will be reviewed in our next issue. In the Winter, 1965, number of *The Kenyon Review*, he contributes "The Poignant Prophet," reminiscences of Aldous Huxley... WILLIAM JAMES was perhaps the first American psychologist and scholar of mysticism... GEORGE LITWIN is an instructor at the Harvard Business School... EDWARD W. MAUPIN, Ph.D., does research at the Neuropsychiatric Institute, University of California Medical Center (Los Angeles)... RALPH METZNER, Ph.D., co-editor of the *Review* and co-author of *The Psychedelic Experience*, has recently been traveling in India... TERRY WINTER OWENS and SUZANNE D. SMITH are two free-lance writers who are students of the Gurdjieff ideas under Dr. Willem A. Nyland... GUNTHER M. WEIL, Ph.D., is co-editor of the *Review* and assistant professor of psychology at Brandeis University, Waltham, Mass....

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