# HANDBOOK
# FOR
# THE THERAPEUTIC USE OF
# LYSERGIC ACID DIETHYLAMIDE-25
# INDIVIDUAL AND GROUP PROCEDURES

1959

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In the 1950s and 1960s, mimeograph copies of the following Handbook were shared among pioneering therapists exploring the therapeutic utility of LSD. To this day, it remains one of the most relevant documented explorations of the guided psychedelic session.

## ACKNOWLEDGEMENTS

It will be obvious to the careful reader but it is a pleasure to acknowledge here as well, the debt which the authors owe to the work of Dr. A.M. Hubbard and the help of Dr. H. Osmond.

The work could not have been completed without the continuous assistance of Mr. A.B. Levey, Mr. Francis Huxley, Dr. C.M. Smith and Dr. A. Hoffer. Many colleagues, including in particular Dr. S. Jensen, Mr. J.F.A. Calder, Mr. A.R. Cambell, Dr. T.T. Paterson, Dr. M.G. Martin, Dr. J.R. McLean, Dr. T. Weckowicz, Mr. F.E.A. Ewald, Mr. G. Marsh, Mr.R. Thelander and Mr. M.E. Rubin, have given us freely of their insightful observation and of their time and energy.

## PREFACE

It will be evident to the reader that the authors have not attempted to deal with the material presented within a theoretical system.

The experience described and utilized in therapy represents so remarkable an extension of common experience that an eclectic approach has seemed mandatory.

The clinician may feel that the depersonalization and rapport which develop in the experience are of prime significance. The experimentalist may see the induction of marked inconstancy of perception or the inconstancy of the sense of time in particular as the important aspect of the experience. In any case, clinician and experimentalist alike will find much of value and of interest in studying the drug effect.

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## Notes for the Digital Version

This handbook has been considered important for many years as one of the earliest descriptions of how to use LSD in psychotherapy. It has been mentioned and referenced in many discussions of psychedelic psychotherapy since its original publication in 1959. This version was made available online in March 2002 through work by MAPS and Erowid. MAPS scanned & OCR'ed this document in early 2002 and Erowid edited, HTMLed, and created a printable PDF version. This 2014 edition was edited and prepared by MAPS. The formatting and look of the document has been kept as close to the original as possible and OCR errors have been removed where found.

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# Chapter 1
# PSYCHIATRIC RATIONALE

## THE FRAME OF REFERENCE

In the broadest terms there are, at present, two main philosophies of psychotherapy. One of these, based upon the concept of "adjustment" sees as the goal of treatment a happy and comfortable acceptance by the patient of the norms of his society. The other concept sees as the goal of therapy the maximal realization of the individual potential, the flowering as it were, of the personality.

In considering the therapeutic merits of LSD-25, one can scarcely fail to pose such problems as how the drug can contribute to the therapeutic process, how its use affects the therapeutic process, how its use affects the therapist-client relationship, or how its effects seem to relate to various aspects of psychological and psychiatric theory.

Under present day conditions the therapist, though desiring to lead the patient toward full self-realization, almost invariably finds that pressures of time and convention force him to work toward the goal of adjustment more or less to the exclusion of any but the most cursory consideration of those particular facets of the psyche which render each of his patients unique.

When therapy begins, the patient already possesses a complex of motives and mechanisms which have proven more or less inadequate and while the forms and techniques employed in treatment may vary widely, depending upon the theoretical outlook of the therapist, there is nevertheless an underlying process which is common to all psychotherapeutic progress. It might be summarized in the following steps:

> The patient must realize that his present methods of behaving are inadequate and unsatisfying to him personally.
>
> He must develop sufficiently strong motivation to carry him through the difficult and painful process of coming to understand and accept himself.
>
> On the basis of this self-understanding, he must learn how to alter his Behavior to satisfy the new pattern of motivation which has developed out of self-understanding.

The therapist cannot learn these things for the patient, just as the teacher cannot learn for the pupil. It is the role of the therapist, as it is of the teacher, so to structure the situation as to maximize the opportunities for learning. The expertise of the therapist lies essentially in his knowing how to structure the situation so as to fit best the personality of the patient and of himself and the environmental variables which seem of greatest relevance.

Many of the treatment methods in psychiatry have been derived and are currently utilized with a pragmatic disregard for theoretical considerations. This is true of the physical and chemical therapies generally. To the extent that they are regarded as adjuncts to psychotherapeutic treatment but because of their relatively rapid effect and the tremendous economy in terms of treatment time they are frequently used with minimal psychotherapeutic accompaniment.

These treatment methods might be classified in terms of the aim of the therapist. One group including electrotherapy, insulin therapy, psycho-surgery and narcotherapy, is utilized to make the patient more accessible to the therapist, that is to say to alter the patient so that he is better able to utilize the help which the therapist can offer through appropriate structuring of the therapeutic situation. The other group would include such methods as hypnosis, amytal and pentothal, and CO2.

Here the aim is to help the patient overcome his reluctance to face himself as he really is-to hasten the learning process and ease the pain involved in gaining greater self-understanding.

In these methods the main effect appears to be cathartic. Troubling material is brought up, resistances are reduced and the therapist, having become aware of the nature of the patient's highly emotionally charged experiences, can better structure the therapeutic situation to help the patient understand himself.

To a greater or lesser extent each of these methods permits the expression of emotions which were ordinarily suppressed, and the release of the dammed-up tide of emotional energy relieves the pressure under which the patient has been living. The release of repressed or suppressed, however, is likely to offer but temporary relief. Unless the pattern of values and motives which originally prevented the acceptance of those aspects of self which engendered the emotional potential are altered, the dam to emotional expression will remain and the pressure will again begin to increase.

The great value of LSD-25 lies in the fact that when the therapeutic situation is properly structured the patient can, and often does, within a period of hours, develop a level of self-understanding and self-acceptance which may surpass that of the average normal person. On the basis of this self-knowledge he can, with the therapist's help, clearly see the inadequacies in the value system which has underlain his previous behavior and can learn how to alter this in accordance with his altered understanding.

So sweeping a claim must, upon first reading, seem like nonsense but a growing number of people have come to accept it as undeniable fact. These are the people who have tried the drug on themselves and on their patients. They are convinced that within the next two or three decades LSD-25, will be by far the most common adjunct to psychotherapy. They feel too that since the psychedelic experience can lead to a very high level of self-understanding, and since self-understanding is the key without which the doors to interpersonal, intergroup or international understanding can not be opened, its use as a catalyst in the development of better human relations will become almost universal. To reject the views of this group as being too extreme without investigating the matter seems a remarkably unscientific attitude. The fact that those who have tried it feel that it offers astonishing possibilities would, in itself, seem to be sufficient reason for a thorough testing of the claims made.

While a certain amount is known about the drug at the present time, investigators have barely begun to explore its potential. Although our knowledge is as yet remarkably incomplete, the following is an attempt to outline the more important aspects of the drug reaction and to outline what appear, at present, to be the most rewarding methods of using it in therapy.

The data from which these methods are derived are by no means extensive but the drug has repeatedly offered help where other methods had failed. It has been used in the most refractory cases, the most unpromising situations, and frequently has been employed only once in the case of an individual patient, yet it has proven surprisingly successful as such reports as those of Smith (45), Chwelos et al (13), Eisner and Cohen (16), and Abrahamson (1), (3) indicate.

## Chapter 2
# NATURE OF THE DRUG REACTION

## FEATURES OF THE EXPERIENCE

There are two reasons why the LSD experience does not lend itself readily to verbalization. Firstly, the sensory aspect of the experience is outside the bounds of the usual experience from which language has developed and for the description of which it is intended. Secondly, the experience is mainly in the sphere of emotions or feelings which are difficult to objectify or verbalize at the best of times.

Before attempting to draw any conclusions about the suggested value of LSD one would want to know something of the nature of the experience which the drug induces. Also, it is inevitable that effective methods of using the drug must be dictated by the nature of the experience.

Because of the difficulty in describing the experience in any but subjective terms, our knowledge of it has been built up bit by bit from personal LSD experience and through observations and reports of other individual and group experiences.

In reading accounts of the experience, one cannot fail to be struck by the fact that although there is tremendous variety in these reports there is a relatively consistent communality in certain areas of the experience. In an earlier report (13) we enumerated these commonly reported areas and illustrated them briefly with transcriptions from actual experiences as follows:

1. A feeling of being at one with the universe.
   "I had finally understood by experience. The feeling of union with the cosmos."
2. Experience of being able to see oneself objectively or a feeling that one has two identities.
   "If we had the gift to see ourselves as others see us, well, I did this morning. There seemed to be two of me and there seemed to be a conflict between these two."
3. Change in usual concept of self with concomitant change in perceived body.
   "I had the feeling of leaving my body and drifting off into space. I had no worldly connections and felt as if I was only a spirit.
4. Change in perception of space and time
   "I was looking deeply in the picture until the objects in the picture were beside me."
5. Enhancement in the sensory fields.
   "The flower was a thing of inestimable beauty as was its scent. It quite transfixed me in essential contemplation, ecstasy and timelessness."
6. Changes in thinking an understanding so that the subject feels he develops a profound understanding in the field of philosophy or religion. Associations of ideas are much more rapid and clear and one tends to see many alternate solutions to each problem. There is a great tendency to think anologically.
   "I found I was outside our bounds to space and time and had an understanding of infinity."
7. A wider range of emotions with rapid fluctuation.
   "During this period I was swept by every conceivable variety of pleasant emotion from

my own feeling of well-being through feelings of sublimity and grandeur to a sensation of ecstasy."

8. Increased sensitivity to the feelings of others.
   "I was conscious of an extremely acute sense of awareness of perception of another's mood, almost thoughts. I likened it to the recognition of emotional atmosphere that the child or animal seems to have."
9. Psychotic changes. These include illusions and hallucinations, paranoid delusions of reference, influence, persecution and grandeur, thought disorder, perceptual distortion, severe anxiety and others which have been described in many reports on the psychotomimetic aspects of these drugs."

## CHARACTERISTIC TYPES OF REACTION

These aspects of the experience tend to form various combinations and constellations which give rise to certain characteristic types of experience. It is important to attempt to identify and catalogue these since some such classification must form the basis for any scientific description or understanding of reaction patterns. The types of experience listed here have been found to be by far the most commonly occurring. They appear to be ranged along a continuum. Though the exact nature of this underlying variable is not clear, it does appear to be related to the individual's level of self-acceptance, which in turn, is closely related to the degree to which he is able to surrender his usual self-concept. To the extent that the postulated continuum does exist, these six types of responses might be regarded as various levels of such surrender.

Paradoxically the ability to abandon the established self-concept increases with self-acceptance and decreases with diminished self-regard. The person who does not accept himself fears the exposure of the unacceptable elements and struggles to maintain control in the face of the drug's effects.

Several of these levels are likely to occur within a single experience and a person may frequently move from one to another. However, the tendency is to move from the first two levels (in which the subject tries to deny that the drug has any psychological effect) through the 3rd and 4th levels (in which the attempt to explain and thus control the psychological effects leads to psychotic reactions) to the 5th and 6th levels (in which, having realized his inability to prevent, control, or explain the psychological effects within his usual frame of reference, the subject surrenders his habituated self-concept with its limitations, and accepts the psychedelic or mind-manifesting aspects of the reaction as real and useful).

## ESCAPE REACTIONS

In the first two types of experience, the reaction is one of attempting to resist and escape from the effects of the drug.

1. The first type of experience might be called a flight into ideas or activity. The drug begins to disturb the individual's perceptions. He reacts against the effects of the drug by concentrating either upon concepts or things outside the self or upon some activity which can absorb his full attention. Any concept, such as, for example, abstract art, religious dogma, racial prejudice or unemployment may be seized upon and the person may devote his full attention to an elaboration to a variety of aspects of this concept

while continuing to deny that the drug is having any effect upon him. In other cases, the individual may plunge into some particular activity-usually his own area of work, in which the familiarity of the activity lends reassurance and stability. He seeks to minimize the effect of the drug by this diversion and narrowing of interest.

He attempts, in this fashion, to control the emotional component of the experience and to minimize his awareness of any physiological or psychological change. He will report that nothing is happening. To an observer, it is evident that the individual is expending an amount of energy in his pursuit of the ideas he is considering; that he is excessively talkative and serious; that he grows progressively more irritable and intolerant of interruptions or questions and that, in many cases, he seems to be suffering from severe tension.

If, after the experience, the individual is asked to describe what happened, he is likely to state that little if anything occurred.

2. The second type of experience might be termed a flight into symptoms. This type of reaction seems to be correlated with an inability or unwillingness to direct one's attention to things outside oneself. When the drug begins to affect the individual, he tends to concentrate upon the physiological sensations. The strangeness of these becomes alarming to him and his alarm increases the physiological disturbances, altering his perception to a still greater awareness of bodily discomfort and malfunction. The individual may develop physiological symptoms of various kinds such as violent nausea; palpitations; feeling of constriction in the throat and chest; pain at the base of the skull; numbness of the limbs or violent headache. Sometimes he may express a fear of dying.

   In this variety of experience, the individual will voice very frequent complaints about feeling unwell.

   To an observer, he will seem to be extremely ill at ease and his nausea may lead to vomiting, although this is unusual.

   Afterwards, when asked to describe his experience, the individual is likely to state that the drug's only effect is to make a person terribly sick.

In the first two types of experience, the self-concept is maintained despite the action of the drug. The individual is able to minimize the psychological effects of the drug by developing an idée fixe and by clinging desperately to it in a battle against the drug's effects.

The employment of small doses of the drug tends to contribute to the production of these types of experience. Little or no therapeutic benefit is derived from them, since the individual, by successfully fighting the drug's effects, succeeds in denying himself any possibility of therapeutic change.

Frequently such reactions develop early in an LSD experience as a result of pre-treatment apprehension. It is of particular importance that the therapist be aware of the possibility of the subject concentrating on the physical effects of the drug, for unless the subject's attention be diverted before the symptoms become oppressive, they can rapidly become so marked as to prevent the subject from being able to shift his attention.

## PSYCHOTOMIMETIC REACTIONS

The next two varieties or levels of experience which are frequently observed are those which have given rise to the use of the terms hallucinogen and psychotomimetic agent in connection with LSD.

These states, offering as they do an opportunity to study the interior of certain psychotic conditions, have remarkable possibilities as staff training experiences. On the other hand it is most unfortunate that so much stress has been placed upon these particular aspects of the LSD experience. Not only are they of limited therapeutic value, but, when regarded as the only levels attendant upon taking the drug, they cause the therapist who would otherwise be interested in its therapeutic possibilities to hesitate in including it among his treatment methods.

3. The third type of experience might be termed a confusional state. It is characterized by confused thinking and perceptual distortion. The individual attempts to rationalize what is happening to him but visual imagery and ideas flood into his awareness at so high a speed that he cannot keep up with them. He is like a person trying to listen to a foreign language with which he is only vaguely familiar. He rapidly falls behind and loses the context.

   In this state the alterations in the various areas of perception become so overwhelming that they cannot be interpreted; the intellectual or rationalizing processes are swamped and the attempts to establish order fail. The subject is acutely aware of the confusion of visual and sometimes auditory perceptions which become a vast jumble, often frightening and unpleasant. This results in a state which would appear to be very much like an intensification of the schizophrenic breakdown, particularly as it occurs in catatonic and hebephrenic states.

4. The fourth type of experience is characterized mainly by paranoid thinking. It appears that in this type of response the individual reacts to the impact of the drug by rationalizing all of the aspects of the experience as being a function of the drug alone. All aspects of his perception appear to be enhanced or altered-music is felt physically; is heard with greater clarity and intensity and with new meaning; colors are brightened and seem more intense; patterns take on new significance; and an enhanced awareness of feelings of others is noticed. To a greater or lesser extent all of the senses may appear sharpened in their awareness. Smell, taste, texture, pain, temperature, and balance may also be sensed in a novel way.

   The individual's thinking stresses the fact that his perceptions are altered by the drug. He mistrusts his own sense data and begins to question the validity and reality of everything he does and perceives. Thus, he interprets the state as delusional, implying that he is incapacitated and helpless. Further, we have previously mentioned that in the experience the subject seems to develop an acute sense of awareness of the feelings of other people. This is so unusual that the subject begins to misinterpret feeling as thought and believes that other people are becoming aware not only of his feelings, but of his thoughts as well. This feeling of empathic proximity seems to the subject to lay bare the unacceptable aspects of himself. He tries to hide his incapacities and imperfections from those around him. He feels that he is completely at their mercy and is uncertain as to whether or not he can trust them.

   Ordinarily, small areas or phases of mistrust are not particularly important in interpersonal relations. In the experience, however, overwhelming feelings of

inadequacy and inter-dependency tend to develop and the level of trust becomes an extremely important variable. In order to fully stabilize the experience at the psychedelic level, trust must be absolute. Huxley (26) has described this as "the willingness to be completely implicated." Osmond (41) in a personal communication points out " a minimal amount of trust is essential, how much we don't know but absolute trust is desirable and essential for using the psychedelic experience fully."

Inability on the part of the subject to accept others forces him to try to conceal both his present incapacity and those aspects of himself which he feels he cannot trust others to accept. Despite these efforts, he feels that those about him are aware of his weaknesses and his imperfections. When they act as though they were unaware of these things he feels that they are either toying with him or are too embarrassed to mention his difficulties. This feeling causes suspicion, referential thinking and a marked reduction of insight.

Occasionally, the subject reacts with aggression and hostility rather than withdrawal. In such cases there develops a grandiose contempt for the views or wishes of other people and a disregard for convention. This reaction may be characterized by such paranoid delusions as the feeling of being a God. The person may verbalize the idea that nothing matters any more. In some instances excitement may develop into manic-like behavior. We have found that such grandiose reactions are very rare, occurring not more than once in 50 cases. Their mention here is justified in part as a reassurance to the therapist, for although when they do occur, they tend to give way in a few hours to more amenable states, they can pose management problems. When this condition persists, beyond an hour the therapist should consider the administration of a booster dose of the drug. Although it would seem that increasing the drug dosage would simply add to the subjects discomfort, it does not do so. Rather, it helps him to extricate himself from the dilemma in which he finds himself.

These states tend to occur when the subject comes to a point in the experience at which he is aware of the shortcomings of his accustomed value system but finds the alternative values, growing out of the experience, unsatisfactory to him. In this situation he attempts to deny all value and may declare that nothing matters. Agitation and excitement may build up to a point at which some restraint is necessary. An additional dose of the drug permits him to assess old and new value systems much more objectively and he finds it much easier to accept what he finds in the process. As the subject begins to recover after an experience of this nature he may go through a phase of schizophrenic-like activity in which there may be markedly stereotyped behavior and the subject may seem to be completely unaware of the therapist. In cases we have observed, this phase lasts about an hour, after which the subject becomes completely rational and very calm and relaxed.

## PSYCHEDELIC REACTIONS

The next two varieties or levels of experience are those referred to by the term psychedelic. A word of explanation seems necessary here to clarify our differentiation between psychotomimetic and psychedelic experience. We have used Osmond's (40) terms in this regard. He pointed out that the LSD experience can be broken into two categories-the psychedelic (mind manifesting) aspect during which the person learns only of the inside world of madness. He related the perceptual changes in the LSD

experience to what William James has termed "unhabitual perception." James felt that the essence of genius lay in the ability to perceive the world in an unusual manner, i.e. with the absence of one's usual rigidity and Osmond (40) suggests that the ability to perceive the world in a new and unaccustomed manner permits the reorganization of one's system of values.

When a state of unhabitual perception comes upon one through disease process as in schizophrenia or when it is induced by LSD it can be a frightening and distressing experience. As long as the unhabitual perceptions are not organized into an understandable pattern, the person in whom they occur remains confused, uncertain of his reality. Unless they are aided in this process by people familiar with the drug experience they can spend many hours in very uncomfortable circumstances. Because of this fact, LSD has most frequently been described as a psychotomimetic or hallucinogenic drug.

It undoubtedly does have this potential. However, when an individual who takes the drug is offered support and guidance in the experience by people who have already established order and organization to the unhabitual perceptions, he is usually able to do so himself in a short time. Such organized unhabitual perception makes up the so called psychedelic experience which offers marked therapeutic possibilities.

In the psychedelic reactions the person is no longer concerned with escaping from or explaining the drug effects but accepts them as an area of reality worthy of exploration. They might be termed stabilized experiences in that the distressing effects of the drug tend to be minimized and the individual is enabled to gain remarkably in terms of increased insight and self-understanding.

There are the levels at which the therapeutic possibilities of the drug are most fully realized. These types of experience are closely related and while the difference between them may not actually seem great enough to merit their separate considerations, the levels of stabilization which they represent differ so markedly that they have both been outlined.

5. The fifth type of reaction is one in which the effects experienced are accepted as comprising a separate but equally real and valid reality to which the drug gains one entry. The person accepts as genuine his apparently enhanced intellectual capacity and his ability to empathize with and to appreciate, accept and understand others. His thinking may be somewhat disrupted by a frequent involvement in what Levey (23) has termed the dilemma of alternates. This is a sort of parallel awareness of opposites which impeded the usual flow of thought. The subject may also find himself increasingly aware that he is thinking analogically; that there is a tendency to extend logical classification beyond the usual bounds and that his perception increasingly tends toward the breakdown or subdivision of usual gestalts.

   In this state the person is keenly aware of the possibility of slipping into a psychotic state for madness appears an ever-present possibility and he feels that he is walking a razor's edge, gaining slowly in confidence as he goes.

6. In the sixth type of reaction the experience is accepted as offering a new and richer interpretation of all aspects of reality. The person feels strongly that there is a unifying principle underlying all things, an essence with which he feels in complete accord. He may feel that he is a part of all things and all things are a part of him. His self-concept is in no way limited by the usual restraints of body image. These feelings or beliefs are accompanied by feelings of reality so intense that conviction is inevitable. William James in writing of such intense feelings of reality states, "they are as convincing to those who have them as any direct sensible experience can be, and they are, as a rule,

much more convincing than results established by mere logic ever are."

At this level of experience no doubts remain as to the reality and usefulness of the experience and the individual, freed from this concern feels no possibility of unpleasant or psychotic features developing. Once this level is attained it is doubtful if any manipulation of the environment could induce a psychotic state in the experience.

Some may feel that the individual has already, by accepting the experience as reality, fallen into a delusional or psychotic state and, indeed, there is no ready criterion to determine whether or not this is actually the case. The only method of accessing this possibility seems to be that of "By their fruits ye shall know them."

These brief notes upon the nature of the experience are in no way complete. No individual reaction will fit neatly into the categories outlined. There will be frequent overlapping of levels and in some cases little or none of the experience may accord with the reactions outlined above. The classification is intended only as a rough chart of a largely unknown area rather than as a detailed guide.

More exact mapping of the area will attend the observations of many therapists over a number of treatment sessions. However, we believe the present classification to be useful, chiefly as an indication that although the LSD-25 or mescaline induced experience is vast and rapidly shifting, communalities in the experience may be catalogued in a way that will eventually offer a sounder scientific understanding of this area of experience.

## INDIVIDUAL REACTIONS

There is much individual variation in regard to the levels of experience attained. Most people pass though a phase in which they struggle against the effects if the drug and a period in which they try to explain the effects themselves. Only individuals seem to attain the psychedelic level rapidly in the first experience and, if they lapse at all into denial, confusion or paranoid thinking, do so but briefly and infrequently. Still other individuals may spend as much as a half a dozen sessions being frightened or ill or paranoid or otherwise distressed before they attain the psychedelic experience. The methods utilized by the therapist play a critical part in determining both the level which [the] subject can attain and the ease with which it is accomplished.

## Chapter 3
# THE DEVELOPMENT OF TREATMENT METHODS

LSD-25 was first isolated by Hoffman and Stoll in 1938. It is a synthetic derivative of lysergic acid of the ergonovine group. This group of drugs is derived from the ergot fungus which grows on rye and several members of the group have been used in medicine for several years. In the 1940's the effect of LSD-25 on smooth muscle contraction was being studied and assessed against the effect of other ergonovine derivatives. The psychological effects attendant upon its ingestion were discovered by accident when Hoffman happened to swallow a minute quantity from a pipette.

Hoffman and Stoll (48) first reported some of the psychological properties of the drug in 1949 and pointed out that it could reproduce most of the major symptoms of schizophrenia when taken in extremely minute quantities. They did not, however, discuss the extreme variability of the reaction which seems to alter as a function of the surroundings.

Following their report the drug came to be regarded as something of a pharmaceutical curios but a great deal of work was begun and many reports were published on its ability to induce, for a period of hours, major symptoms of psychosis. It should be stressed at this point that the drug does not necessarily produce a psychotic reaction and when it is given in a therapeutic setting rarely is there much psychotic manifestation.

It was not however until 1950 that the drug was reported on as a therapeutic agent in a study by Busch and Johnson (10). They cited the usefulness of the drug in permitting extensive recall and abreaction and in producing an enhancement of insight.

In 1953 Katzenelbogen and Fang (30) published a report dealing with the use of small doses of LSD as an aid in interviewing. They reported that the drug induced a greater ventilation of emotion in schizophrenics than was produced with amytal or with methedrine.

In 1954 Sandison (43) published an account of his work in which he employed varying dosages with chronic neurotic mental hospital patients.

In 1955 Frederking (18) outlined a method in which he used mescaline and LSD-25 as adjuncts to psychoanalytic therapy.

Abramson's group subsequent to 1955 have published a number of papers dealing with the LSD reaction (1), (2), (3). Therapeutically they employ the drug in a modified psychoanalytic approach utilizing small doses in a series of interviews.

The literature on the use of the drug in various areas of study has mushroomed remarkably. Several hundred articles are now available on the drug and bibliographies have been prepared by Certelli (12), by the Sandoz Company (44) and by Caldwell (11).

In the main, reports dealing with LSD as a therapeutic instrument, cover such aspects as the effect of LSD on memory, as a catalyst to ventilation and as an aid in the development of transference, particularly through the reduction of various areas of resistance.

Therapeutically, however, we believe that the great potential of a psychedelic drug lies in its capacity to permit the subject to achieve a remarkable degree of insight and self-understanding. While the drug does permit a review of those repressed or suppressed areas which are the wellsprings of unacceptable behavior, these effects are but the seeds of its full growing. Vastly more important is the new level of identity at which the individual can arrive. He learns that he can be truly himself, perhaps for the first time in his life, and sham and pretense become unnecessary to him. He finds that he can

control his own feelings independent of his circumstances or surroundings, a knowledge that frees him from fear and uncertainty of himself or of others. He learns that to him, the world is what he feels it to be. Abraham Lincoln made this point when he said: "A man is just as happy as he makes up his mind to be."

For this reason, the method outlined in detail in this manual is one aimed at the realization of this level of self-understanding. This method grew out of the early work of Hubbard (24). Since 1954 Hubbard has been studying the therapeutic use of the drug and has dealt with a very large number of subjects.

The LSD experience is so vast, so shifting and so unusual that without some specific techniques, it is virtually impossible to contain and control it is as a therapeutic procedure. In the course of his work Hubbard evolved techniques which give structure to the experience. Among these were the introduction of the idea of using music, paintings and various other stimuli to initiate and illustrate various trains of thought which frequently occur in the experience. His work, which demonstrated the usefulness of the psychedelic aspects of the experience, showed that it was not necessary for the subject to develop a psychotomimetic reaction even when large doses of the drug were used.

Therapists found that the ingestion of dosages of 75 gamma or more created perceptual changes and other alterations which provoked extreme anxiety in the subject. Hubbard (24) indicated how to avoid this disruptive feature by training his subjects to be able to relax in the face of the loss of control of physiology and awareness precipitated by breathing CO2. This capacity to remain relaxed and unconcerned by the early symptoms of LSD, permits the use of large doses without the arousal of intense anxiety.

Hubbard went beyond this, structuring the situation such that the subject was provided with a new framework into which the experience fitted. His method employed a religious setting involving religious themes in pictures and music and a general stressing of the spiritual aspects of the experience. In these terms the experience was understandable to the subjects for, with the exception of the psychotic changes, each of the features, outlined by Chwelos (13) and quoted earlier in this report, can be fitted into this pattern.

One of the unfortunate procedures which has been widely used to prevent the arousal of anxiety in the LSD session is the system of beginning with a small dose and gradually increasing the amount given over a succession of experiences. This procedure is used to reduce anxiety. It is reasoned that as the drug effect is being sampled a bit at a time, it will at no time become so overwhelming as to induce distress. Unfortunately, such a procedure is unlikely to be rewarding. Small dosages, when they produce any reaction, are unlikely to induce confusion and psychotomimetic features. When they provoke little or no reaction, the procedure drastically reduced the therapeutic effect of the drug. Psychotomimetic features tend to appear at that point in the experience at which the individual's accustomed concept of himself and the world about him-the frame of reference which constitutes his ties with reality-is becoming no longer tenable in the face of the habitual perceptions induced by the drug. When the drug effect is sufficiently pronounced, the accustomed frame of reference is overwhelmed. In the process of having his accustomed attitudes and sets demolished and of finding a stability in experience outside this psychological framework, the individual finds he has acquired a new outlook. In instances in which the drug effect is insufficient, the individual is left in a state in which he has a very tenuous hold on the reality ties represented by his accustomed concepts and yet is unable to structure or accept the unhabitual perceptions and concepts which the experience has engendered. This confusing, painful and often frightening state constitutes a psychotomimetic experience.

When small dose techniques are employed, the individual, by learning through gradually increased effort, as the dosage is increased from experience to experience, may well develop methods of controlling the effects of the drug according to his accustomed pattern of thinking. He may never come to the point of accepting and utilizing the alterations which the drug may make in the mould of feeling and thinking which initially induced his difficulties.

While this objection may be felt to be simply a play with words, it is a very serious one. True, the individual eventually learns, in a stabilized experience, to control and use the drug effects. However, this is a control based upon a new level of self-understanding and self-acceptance which alone can permit the acceptance of others. Unless this level of experience can be attained the therapeutic potential of the drug is not realized. If the person learns gradually to fit the drug effects into his accustomed self-concept, he is simply learning how to pigeon-hole the experience within an unaltered frame of reference. It is, in fact, the acquisition of the ability to remain unchanged. Not only is such a procedure unlikely to have any therapeutic effect but it tends to immunize against his ever being able to gain self-understanding through the psychedelic experience.

As Osmond (40) has stated "our work started with the idea that a single overwhelming experience might be beneficial in alcoholics, the idea springing from James (27) and Tiebout (48)." We have discovered no reason to alter this view as regards the usefulness of the overwhelming experience. However, subsequent work has shown that is often of great value to repeat the experience and has suggested that the method is applicable to the treatment of the neuroses and psychopathy as well as alcoholism.

We feel that it is extremely important that the therapist have a clear understanding of the effects of the drug. This can only be gained by taking the drug one's self. Osmond's (40) golden rule in work with model psychoses "you start with yourself" is even more applicable in work utilizing the psychedelic experience as therapeutic. By gaining this first hand experience the therapist will become much more effective in dealing with subjects during the experience and in aiding them in fitting the insights gained during the experience into their daily lives. Indeed, it is well to have as many as possible of the staff members who will come in contact with the patient similarly trained.

## Chapter 4
# INDIVIDUAL AND GROUP METHODS

We have utilized both individual and group techniques of administration, and have been able to make fairly extensive investigation of their relative therapeutic efficacy as well as their relative usefulness in other areas of investigation.

In the individual method the subject is given the drug and the therapist, often with one or more staff, stays with him throughout the experience. In the group method one or two therapists and possibly other subjects also take the drug. In such group sessions it is unwise to have more than one person in the group who is taking LSD for the first time and the others should ideally be quite experienced.

In the individual session the subject is more on his own. The therapist should have a good knowledge of what to expect from the LSD experience for this will add an empathic sensitivity on the part of the therapist which is invaluable in this procedure. Being "alone" in the experience, the subject is less distracted from self-analysis and may therefore arrive at a more complete self-understanding. When one takes the drug alone it is more difficult to communicate with other people partly because one's awareness is increased beyond the level of the staff. When one becomes so aware of what is going on in other people, he tends to think that the increased awareness and empathic communication is shared by the staff and feels little need for communication by the usual channels of verbalization. Because of this difference of awareness, there is a relative increase in psychological distance between subject and staff. This problem is not at all insoluble in that empathic sensitivity on the part of the therapist and occasional reminds to the subject that his awareness is expanded beyond that of the others tends to bridge the gap considerably. Indeed the problem is a relative one in that the intensified feelings of the subject make it much easier than usual to empathize with him.

Because the subject begins to feel somewhat unique due to his expanded awareness, there is some danger that grandiosity may develop. It is worthwhile to remind the subject that everyone has the same potential which is brought out by the drug.

One of the main disadvantages then of the individual procedure is the difficulty in following the subject closely enough through his experience. Provided the therapist has an accepting but not sympathetic attitude there is little if any danger of the subject getting into any serious difficulty because of this difficulty in communication. The individual session has the advantage that less staff time is used. Individual sessions tend to last a shorter period and the subject can be sent back to the ward after 7-8 hours, whereas, in the case of group sessions, 12-14 hours may be occupied. In individual sessions, the staff involved are not in any way incapacitated from doing other things during or immediately after the session if the need arises, though they should try as much as possible to avoid distractions.

The subject, in an individual session, feels less encroached upon and is more likely to investigate painful areas than he is in a group session where he is aware that the staff can follow his feeling tone to a very high degree.

Indeed, one major disadvantage of using the group method for the subjects first experience is the alarm frequently precipitated in the patient when he realizes the degree to which the therapists are able to identify and communicate with him non-verbally. This relationship is so close that the patient begins to misinterpret feelings as thought and comes to believe that the therapists can read all his thoughts. Because of this, feelings of inadequacy and guilt frequently lead him rapidly to withdrawal

and paranoid thinking. Also the subject is to some extent frightened away from the investigation of problem areas out of the fear of exposing hidden areas to others. This difficulty poses much less of a problem, however, to a subject who has had an individual session and has worked through his main problem areas or to the person whose problems are not marked.

Another difficulty in the extensive use of group sessions is the frequency with which the therapist must use the drug. Further when two therapists are involved, staff time becomes a major consideration. It has been stated that tolerance for LSD builds up quite rapidly but even when we have run group sessions as frequent as three times a week this has not appeared to be a problem and the therapists have been able to work in close empathy with the subject on doses as low as 25 gamma on the third day of such series.

Much more extensive work must be done on the investigation of tolerance in terms of the psychological effects of the drug. There is much to suggest that these effects are much altered in group settings by the impact of the drug on other individuals in the group. These effects cannot simply be brushed aside as suggestion or as a placebo reaction where tolerance has been established. Their effect upon the level of empathy, their duration within a session, their intensity and their persistence from occasion to occasion and their absence when the drug is not ingested, indicate that they are not likely to be the products of suggestion.

Frequently, the question of addiction is brought up in connection with therapists who repeatedly use the drug. We have seen no evidence either in the literature or in our own work to suggest any addictive potential. Further, we find that people using the drug frequently find that tolerance is opposite to that found in addiction. With experience, the subject can reach the same level with smaller and smaller doses as he learns to break down his resistance psychologically. Also the effects of the drug are not pleasant in themselves. Subjects have pleasant experiences only if they work through their problem areas and are able to stabilize the experience by reaching a fairly high level of self-understanding and self-acceptance.

Further, whereas in addiction the subject is striving to reach some form of escape from, or oblivion toward his personality difficulties, in the case of LSD these are brought into sharp focus and are exaggerated to painful proportions until the subject works them through.

Some critics who have never tried the experience have called it an escape into transcendental experience. If this could be termed an escape then all forms of yielding to the desire to learn could equally well be classified as escapes. This would appear to be taking the concept of escape to ridiculous extremes.

In view of the difficulties cited, it may appear that group sessions are difficult and unnecessary. However, the group method does have many remarkable advantages. It offers the subject an opportunity to understand himself in terms of how he relates to others. It permits him, when more than one therapist is involved to see objectively from extremely close range, in terms of understanding, how other people relate to each other. It shows the subjects how his views of the world accords with, and differs from, the views of others. It lets him understand that each person's frame of reference, although peculiarly the person's own (and therefore different from any other view) is nevertheless as valid as his own. Further, the group method fosters a ready transfer of training and knowledge from the LSD experience into day to day living.

Most important, however, would seem to be the great value of the group experience in staff training and particularly in research. The research aspects of working with the psychedelic drugs deserves particular mention and is spelled out more fully in the following chapter.

Therapeutic trials with groups of various sizes have been carried out at various centres in Saskatchewan. This work has suggested that the number in the group is a variable of marked importance.

In therapy a group of three, perhaps because of its particular instability, seems most useful. In a group of two, there is a continuous pressure to relate to the same person. It is impossible to withdraw from this relationship and the intimacy of the empathic bond may be disturbing. Any note of suspicion or hostility is excessively disruptive and its effect tends to be prolonged.

By comparison, in the three groups one can, to some extent, withdraw from the others from time to time, leaving them to relate to each other. The possibility of shifting from relationship to relationship makes it easier to learn gradually to accept the group members completely. Temporary feelings of hostility, anger or suspicion are much less destructive of the empathic bond in this situation and are much more quickly overcome.

The four group is much more complex than the three group and the establishment of the empathic bond is much more difficult since the addition of the fourth participant has doubled the number of relationships involved. This group size appears to lead to a high level of intellectual stimulation and to excellent and rewarding discussion. However, the participants do not readily develop the same high level of empathy as is found in the three group. Frequently the empathic bond is established more completely within pairs than between pairs. It commonly happens too that one individual is not able to accept the others readily and a group of three is formed from which the fourth feels excluded. This makes it still more difficult for him to integrate.

Our knowledge of group relationships in drug sessions involving more than four persons is extremely limited. What we do know is drawn from a few five and six group experiences and from the peyote experiences of the Native American Church. Research in this area of group psychedelic experience will be so interesting and rewarding that it will no doubt gain momentum rapidly.

In considering the staff time involved in group therapeutic sessions it should be recognized that aside from pre-treatment interviewing the treatment is completed in one day. If the subject is to have two sessions they are usually several months apart. Even where two group session are used, such a treatment program could be likely to consume something less than 30 hours of staff working time per patient. If the treatment were not more effective than any other this would correspond to something less than 25 ordinary treatment interviews, allowing time for recording the sessions. Considering the difficult nature of the cases handled, this in no way seems excessive. Also it must be taken into account that nursing time and secretarial work are reduced to an absolute minimum and hospitalization, in the case of in-patients, is remarkably shortened.

There is little doubt that both individual and group experience have much to offer and the therapist could consider giving both experience to each subject. There has been much discussion but no research upon the order in which these experiences should be undergone. Priority must therefore be assigned on the basis of clinical judgment. It is the authors' point of view that, in general, it is advisable to have the individual experience first. The subject is less likely to become alarmed and withdrawn and he is more likely to persevere at investigating painful and unacceptable areas for the therapist, to inadvertently "help" too much and help the subject stabilize the experience without working though his difficulties.

The individual session is so called because the subject alone takes the drug. However, this technique may involve a group. Hubbard (24) uses a method in which a group is selected to sit in on the session. The group lends support to the therapist as well and permits him greater freedom and more relaxation. When this technique is used the subject should have met each group member previously

and should know which people will be present at the session. Such group members should have had experience with the drug. The numbers in such a group should probably not exceed four including the therapist. When the group becomes large the subject tends to feel like the lead player in a public execution.

The method which has been outlined below may be adapted to either individual or group procedures. Although the empathic bond is less obvious in the individual session, the role of the therapist remains very much the same.

## Chapter 5
# RESEARCH IMPLICATIONS

The experiences induced by LSD and mescalin are opening vast new areas to the researcher and while such considerations may be felt to have only indirect bearing upon therapy, they should not be passed over.

It is the view of the authors that the psychedelic drugs present the most potent tools for psychological research which have yet been discovered. Research possibilities range from simple perceptual experiments to highly complex empathic studies. The research value of the psychedelics stems from two major aspects of the experience which they induce.

Firstly, when the experimenter takes the drug, he becomes aware of his own awareness. He becomes a witness to his own emotions, his own intellectual processes, and his own activity. He can examine the articulation of each of these upon the others and observe their relationship to his perception. Indeed, he can observe concept formation and learning going on from the inside.

Secondly, when a group of investigators take the drug at the same time, they develop a closeness of relationship in terms of feeling which verges upon the telepathic. Thus scientists can develop shared introspection and can begin to evolve research techniques which will permit the comparison of emotional states-the measurement of emotion.

Experimentation and study in these areas offer the hope that eventually they may permit a signal advance in psychological understanding. Early introspectionists were unable to provide shareable information as a basis for scientific inquiry. Only through limiting investigation to the behavior of organisms have we been able to arrive at some level of objectivity and shareability of results. Such an approach, however, confines psychology to the observation of activity and to a concept of man as the sum of his activity.

Psychedelic research promises eventually to permit the investigator to get beyond the behavioral manifestations and into the area of the underlying motivation.

One source of error in framing research in this area should be pointed out. The investigator should not try to study the drug effect in subjects until they have the experience fully stabilized. Ideally, an individual should have taken the drug a half a dozen times before he is used as a research subject. There is a basic confusion of purposes when one attempts to determine the drug effect upon various tasks during the first session. The administration of tests completely alters the experience in early sessions. What is assessed is the degree of confusion in a subject whose reality ties are loosened by the drug and further altered by the testing. The test administration and indeed the research set up in which he is a guinea-pig may alter the entire nature of perceptions. Almost universally, results obtained from testing under such circumstances will show decreased efficiency of one kind or another and there is no method of sorting extraneous situational effects from drug effects as such.

However, once the subject has learned and practiced how to stabilize the experience, testing could be expected to reveal the extent of such phenomena as perceptual enhancement and empathic sensitization. It becomes a challenge to the researcher to seek out and classify the variables involved and to devise tests which will yield valid and, if possible, quantifiable measure of them.

An outline of various areas in which research seems indicated is presented in Appendix C.

## Chapter 6
# THE SETTING

The setting in which the treatment session is to be conducted must be comfortable and quiet. Frequently the subject may feel like lying down. It is best to provide enough chesterfields, cots or beds so that each person who has had the drug has a place to stretch out comfortably.

The place should be quiet, not only as far as the general noise level is concerned but particularly in terms of interruptions or intrusions of the outside world upon the experience. Worries about getting home for supper or getting certain work done are disruptive and all such interference should be reduced as much as possible. People coming into the room can cause the subject to become upset, particularly from the second to the eighth hour after he has taken the drug. If a group is to be used, all members should be present when the experience begins. Other intrusions should be kept to a minimum. This is more difficult than it at first appears because LSD therapy usually catches the imagination and provokes the curiosity of nearly all the staff members of the unit involved. Many people will find excellent reasons to be in and out of the treatment room unless the policy of no visitors is established.

The telephone too can be exceptionally disturbing. It is often the greatest nuisance in a session. If the telephone is in the treatment room, the noise of its ringing is a bother but no matter where it is, it is troublesome for the person called, whether or not he has taken the drug, to completely alter his frame of reference such that he can conduct a normal telephone conversation. As much as possible, telephone calls should be held up.

At times, particularly in individual sessions, the subject may become extremely restless or violent. At the height of this disturbed state he is apt to knock or throw things about. For this reason it is wise to use fairly durable furnishings.

Washroom facilities should be relatively nearby. It is often a severe strain on the subject to have to walk through a ward or indeed to walk any distance under the effect of the drug. Also, in subjects who become paranoid, the trip to the washroom offers opportunity for them to attempt to get away from the session.

## Chapter 7
# EQUIPMENT

A record player and a dozen or so recordings of classical selections covering a variety of moods are so useful as to be virtually essential. Music is an important feature in permitting the person to get outside his usual self-concept.

Other useful equipment includes paintings, photographs of the subject's relatives, collections of photographs such as the Family of Man series, flowers and gems. A mirror is particularly useful. The subject often can use his reflection in the mirror more objectively than himself and can frequently clarity many aspects of his own self-concept by studying his reflection though it is unwise to present the subject with the mirror until he has worked through the more frightening stages of self-appraisal and has gained at least some degree of self-acceptance. For this reason the mirror should not be mounted on the wall.

Frequently one of the side effects of the drug is a sensation of dryness in the mouth and throat. The people in the experience may feel more than usually thirsty and it is well to have a quantity of fruit juices on hand. The participants may at times feel quite fatigued and may find chocolate or other candy a ready source of additional energy. Fresh fruit provides a light food which is easy to eat and keeps one from becoming excessively hungry during the day.

Niacin is useful in bringing a person out of the experience although this should only be done in case of some emergency which necessitates the subject's leaving the experience. A dose of 400-600 mgms. intravenously should be adequate to terminate the experience. Unpleasant phases of the experience should not lead to its termination as they most frequently indicate that the person is working through some troublesome problem-often a necessary and beneficial process leading to emotional growth.

After the session the subject may find difficulty in going to sleep although he feels quite tired. For this reason it may be considered wise to give him a sedative which he can use if he so desires.

## Chapter 8
# INDICATIONS AND CONTRA-INDICATIONS

Because of the limited number of studies yet reported, there are many blank areas in current knowledge as to the relative usefulness of LSD in various psychiatric disorders. Much of the work which has been done to date has employed as subjects normal volunteers and staff members who were seeking training. The majority of studies have involved experiments upon the subject. Those yield very little information about therapeutic effectiveness.

Most of the work done with the drug has involved subjects of superior intelligence. It is not known whether the drug can be usefully employed with people in the dull-normal, border-line or defective ranges.

The drug has been used in the main with people ranging in age from the early twenties to the sixties and very little is known about its effect upon younger age groups or upon older people. Hubbard has used the drug with people as young as 14 years of age with successful results. However, this work was restricted to very few cases and a great deal remains to be found out about the drug effect in people in their teens.

Our experience indicates that it is difficult to predict, for any individual, what his response to the drug will be. In general, the greater the degree of insecurity the more difficult it is for the subject to relinquish his defenses and his intellectual control. Failure to do so will lead to tension, illness or paranoid reactions. However, this is not always an easy matter to judge. For this reason only very rough rules of thumb can be suggested as regards indications or contra-indications for the use of the drug on the basis of syndromes or personality types. Much research is needed to clarify this area.

In the development of the method outlined below, the drug has been used, in the main, with people suffering from alcoholism, and with those classified as psychopaths. Less work has been done with subjects classified as neurotics. These groups have been most readily available since other syndromes have proven more responsive to traditional therapeutic efforts. Such treatment methods have, however, been found relatively less rewarding with alcoholics, psychopaths, and to some extent, neurotics. Because treatment time and facilities are generally limited, these groups have tended to be passed over. The results obtained to date, which will be reviewed later in this discussion, indicate that in these difficult cases, LSD can be a particularly useful treatment.

In an area which is not usually considered within the scope of psychiatric practice, Huxley (25) has suggested that people who are in a state of terminal illness could find much comfort in the peace of mind which is frequently developed under LSD.

In terms of contra-indications it appears that the rigid, compulsive, rather suspicious and withdrawn person is unlikely to respond well to the drug, at least during the first session, and the presence of such a personality pattern would seem to indicate the use of a substantial initial dose.

The drug has been used in the treatment of schizophrenia. In this connection we have found that if one takes the drug and interviews a person who is schizophrenic a feeling for the patient much closer than the therapist is ordinarily capable of establishing is built up. Indeed, we would suggest that this procedure should offer much promise in the treatment of acute schizophrenics.

However, our experience suggests that many of the features of the drug reaction are present in schizophrenia. It may be that giving the drug to a schizophrenic patient would have the effect of intensifying existing symptoms and increasing the patient's discomfort. However, in group sessions

it might improve the therapist-subject communication. Until further research has been carried out in this area the use of the drug as a treatment for schizophrenia must remain open to question. We have had occasion to administer LSD to a limited number of recovered schizophrenics. None have reacted in an unusual way or suffered any ill effects from the drug.

It is important that the experience should be explained as fully as possible to the subject and that in the light of this information, he should be willing to accept this treatment voluntarily. Coercion should not be used. When the subject feels that he has been forced into taking LSD he will be most unlikely to be able to gain much from the experience.

## Chapter 9
# THE PREPARATION OF THE SUBJECT

In therapy employing the psychedelic drugs, the establishment of pre-treatment rapport is especially important. This applies both to in-patients and out-patients. Until such a relationship exists between the [therapist and subject], it is not wise to begin treatment. When dealing with hostile subjects the establishment of rapport may be difficult or impossible. In such cases it is likely that several hours of the experience may be disturbed by the subject's attitude. In the end it is likely that the subject will be able to stabilize the experience and will gain from it, but he will probably gain less than would otherwise have been the case. The extremely hostile subject will need maximal help in the initial session if he is to obtain any therapeutic benefit. In a group session a single therapist is likely to find the situation extremely uncomfortable and tiring and it is therefore much better to use two therapists who can support each other and who can demonstrate, by their relationship, the advantages of trust and understanding.

With a particularly apprehensive subject a longer pre-treatment period may be called for. Hubbard's technique of pre-training with a mixture of 30% CO2 and 70% O2 may be useful in teaching the subject not to attempt to fight against the developing symptoms.

In certain cases, where the therapist has reason to expect that the subject will strongly resist the effects of the drug and will cling firmly to a series of rationalizations Hubbard (24) advises that the subject's capacity for this type of resistance be reduced by having him take the drug when he is already fatigued.

It may prove useful in a number of cases to have the individual spend some time a day or two before the session in writing an autobiography. This will incline him to give consideration to the background and nature of his problems. It could also prove a useful basis for discussion with the therapist both in pre-treatment interviews and in the session itself but the therapist should not regard this as a necessary pre-requisite. In some cases his knowledge of the content of such an autobiography may prove unnecessary and quite disturbing to the subject-a fact which may provoke unnecessarily prolonged psychotomimetic aspects in the experience.

The subject is asked to prepare a list of questions dealing with his problems to which he would like to find the answers. This list can be for his own private use or he may wish to discuss them beforehand with the therapist.

The sort of information and reassurance which is imparted to the subject in the pre-treatment interviews will, of course, vary from individual to individual but there are certain facts which all subjects will find useful and comforting. It is essential that the information given be true to the best of the therapist's knowledge and that the therapist himself, or both therapists in the case of group sessions, discuss the impending treatment with the subject.

The following is presented as an example of the kind of material usually dealt with.

## INSTRUCTIONS FOR THE SUBJECT

Try to prepare yourself for this experience by being well rested. It is rather tiring and more enjoyable if you are feeling fresh. The experience will take all day so arrange to be absolutely free of any and all commitments on your time or attention for the entire day. If you are not going to spend the night in hospital, assure anyone who might worry about your being late that you will not be home

early. The closing stages of the experience are often very valuable and you will not likely wish to break up the session until late in the evening.

Between now and the treatment session I would like you to think over what you consider to be your main problems. If there are any questions about these to which you would like to find the answers write the questions down in a list. You will find that during the drug experience it may be very worthwhile to check the list over because then you will likely be able to find the answers.

A day or two after the treatment we will want you to write an account of your experience. This will help you by making it easier to remember later on.

The drug which you are going to take is given in very small quantities. You will be taking only on ten-thousandth of a gram which is almost microscopic so it has been made up in pill (or capsule) form for case of administration. You just take a pill or a drink of water-there are no needles or anything like that.

You will notice certain physical symptoms an rather peculiar feelings particularly at the beginning. How you react to these is important. You can make them either pleasant and enjoyable or, if you let yourself become alarmed by them, you can make them unpleasant and painful.

You can ensure that they are pleasant by simply relaxing and enjoying them. For example, you may feel your body becoming weightless and may feel that you are letting. Accept such changes and enjoy them as novel sensations for they are a part of the treatment and will offer you a chance to explore new areas of experience. If you fight against them you not only make them disturbing to yourself but tend to lessen the benefit you can hope to gain through this treatment.

This is true of all aspects of the experience which you are to have. Accept what happens and how you feel with as little questioning as you can. Later, after the experience, you will have ample time to think about it and you will be able to recall what you felt and thought but during the treatment itself remember to relax and enjoy the feelings, thoughts, images and sensations for themselves. If during the experience you try to make everything fit into your everyday experience you will cheat yourself both of the good effects of the drug and the pleasure you can find.

At times during the experience you may feel much like laughing or crying and you should not try to hold back these expressions of feeling. Nearly everyone who takes the drug finds himself moved to laughter and to tears several times during the experience. Actually these feelings will bother you less if you accept them as a normal part of the experience and do not try to fight against them.

The day will be quite informal and we will listen to music, talk about various things, read, look at pictures and so forth. The drug makes music more enjoyable and increases your appreciation of pictures. If you have records you would particularly like to hear or pictures you would like to look at please bring them along. Photographs are very interesting since one seems to understand the pictured people very well and often becomes aware of new aspects of their personalities.

It is unlikely that you will feel much like eating during the day but we will have plenty of fruit, chocolate and fruit juice on hand.

The physical symptoms tend to fade away after about two hours. However, if you begin to question the reality of the experience or to become dissatisfied with the experience or with yourself or with me or with other people, the experience may become confusing and unpleasant or you may find yourself growing extremely suspicious and afraid. At these times some of the unpleasant physical feelings will be likely to return.

You may too feel at times that I am trying to put ideas into your mind-to make you think various

thoughts. I assure you in advance that this is not so. Most people feel this during the experience from time to time and I mention it to you since when the idea occurs to you it is a sign that you are losing trust in yourself or in me.

This is very important. During the experience we must trust each other because if we don't the experience cannot fail to be unpleasant so long as the mistrust lasts. If you find things becoming unpleasant simply concentrate on the bond of trust and understanding between us and you will find that the unpleasant aspects of the experience will fade away.

About five or six hours after you take the drug you will feel that the drug effects are largely gone and that the experience is over. This is usually not so, rather you have learned how to use the drug and it is in this period that we can exchange ideas with remarkable ease.

It is not wise to begin to worry about getting out of the experience and having it over because this phase is a very useful one if you do not worry or upset yourself. This is why it is best to be well rested to begin with since otherwise you tend to get tired and find the later states of the experience less enjoyable.

After about 7 hours the psychological symptoms will all be gone with the possible exception of a slight difficulty in judging distances which may last into the following day. You will most probably feel as though you had gone for some time without sleep and had arrived at the state in which you were no longer sleepy. You will probably feel physically tired but mentally clear and alert.

At about this time we will have a good meal after which we will discuss matters until we feel we would like to end the session.

I know that you can find this is a very valuable experience. There is really nothing to be concerned about from the point of view of your health or of any bad mental effects of the drug. Thousands of people have taken it without any ill effects while nearly all of them have found its effects remarkable and wonderful.

> The important things to remember are these:
>
> During the experience accept the novel feelings as real and true. You can question them and apply the usual forms of logic to them at your leisure in the days that follow but for the few hours that the drug is operative simply accept and enjoy them.
>
> To the extent that you trust yourself and trust me the experience will be pleasant and our understanding and fellowship very close. To the extent that you are growing suspicious and withdrawing the experience is becoming unpleasant and confusing. In this experience you control your own feelings and you can stop the development of these unpleasant aspects by simply concentrating on the level of trust we can have in each other and the bond of affection and understanding which the experience can generate.

## Chapter 10
# GENERAL CONSIDERATIONS REGARDING PROCEDURE

The following outline of the procedure used is by no means comprehensive. It is an attempt to point out the important stages that seem to occur in the majority of treatment sessions. While only the initial session is discussed, subsequent sessions follow the same general pattern, the main difference being that the subject becomes more comfortable and less likely to become confused or paranoid. The procedure outlined has direct reference only to the method used by the authors in which it is the intent of the therapist to foster and utilize the psychedelic aspects of the experience.

Fasting does not seem to have any effect upon the drug reaction. On the whole, it seems desirable for the subject to have a good breakfast.

The drug should be given early in the day since the symptoms tend to last in some cases up to 12 or 14 hours. Such residual symptoms are much less likely to prove disturbing to the subject when they occur late at night at a time when the subject, if awake, is likely to be awake alone and is apt to become anxious. It should be pointed out to him that he may lie awake for an hour or two before falling asleep and that this time can be usefully employed in reviewing the experience. He should be cautioned that some of the symptoms may seem to recur briefly at this time but that he should try to relax and enjoy these rather than trying to fight against them and abolish them. Fighting against the encroachment of such symptoms tends to intensify rather than diminish them. The subject should also be assured that he can contact the therapist at any time during the night should he feel it necessary to call him.

When the subject is being treated on an out-patient basis it is well to have someone awake in the home until he is asleep. This poses less of a problem with the in-patient although a nurse should be assigned to stay nearby and look in upon the patient every few minutes.

In the case of an out-patient he should be warned not to attempt to drive an automobile until some twenty-four hours after he has taken the drug. One of the residual symptoms often noticed is a difficulty in the judgment of speed and distance. For this reason it is a good policy not to have subjects drive to the session but to have someone pick them up on the morning of the treatment.

# Chapter 11
# DOSAGE

Dosages, in our experience, range between 100 and 1000 micrograms and possibly larger doses may be used in the future. Doses of 1500 micrograms have been used by Hubbard (24) without unfortunate side effects.

The drug is usually administered by giving an initial dose which is believed to be adequate and, where necessary, increments of 200-300 gamma are used at intervals of one and a half to two and a half hours, depending on the reaction.

The initial dose may be as small as 100 micrograms in people whose problem is not too severe or whose frame of reference appears to be flexible. In the majority of cases who came for treatment, however, initial doses of 300 to 600 micrograms seem indicated. The larger doses (more than 300 micrograms) are used mainly in individuals who have previously had LSD treatment but have shown insufficient response.

In cases in which there is evidence of liver damage a large dose is indicated since such states are less responsive. There is no evidence of harmful effect from the use of large doses of LSD in cases of impaired liver function. This may not be true in the case of mescalin. No work appears to have been reported in which mescalin has been used with such cases.

## Chapter 12
# ADMINISTRATION

The drug is available in 25 microgram pills or in 100 microgram ampules. There appears to be little or no difference in reaction time between pills and liquid. The pills have the advantage of permitting an easier flexibility of dosage.

It will seem like belaboring the obvious to stress the need, when using liquid LSD to be exceptionally careful in preparing the dosages to be given-particularly when a group session is undertaken. However, the drug is mixed with water and since both the water and the LSD are colorless and odorless it is impossible to tell by looking at a glass what it contains. When the water is put in the glasses first it is all too easy to make an error. The safest method is to prepare one dose, have the subject take it and then prepare the next dose and so forth.

## Chapter 13
# STAGES IN THE EXPERIENCE: I. PRE-ONSET

In terms of procedure the drug experience can be broken down into a number of stages or phases. In each of these the subject is involved in a different aspect of the experience and in each he requires appropriate guidance and reassurance. Since no two sessions are the same, any handbook can offer only relatively crude guidance, particularly until such time as specific principles and procedures in the use of the drug are widely studied and become firmly established scientifically. It can, however, suggest those areas of experience and those methods which are likely to prove therapeutically profitable at each stage and it can help to eliminate procedures which are likely to be distressing and wasteful. However, such a manual is no substitute for awareness and understanding on the part of the therapist. As has been pointed out, this understanding is markedly increased by the therapist's having taken the drug several times himself. It is maximized when the therapist joins the subject in the experience and it is for this reason that we have dealt with the use of group as well as individual procedures. The group method serves both as a training for the therapist and as a means of being maximally aware of what is happening to the subject.

The onset of symptoms occurs sometimes between 15 minutes and 120 minutes and usually about half an hour after taking the drug. The period of waiting for the drug to have an effect is important since the psychological set which is established at that time can determine much of what follows. The therapist should aim at avoiding the development of certain unfortunate psychological states in the subject. Boredom on the part of either the subject or therapist must be avoided. The therapist should also aim at preventing the development of a pattern in which the subject is waiting intently for any change which might be ascribed to the drug. Finally, the therapist should be particularly careful to prevent the build-up of apprehension in the subject. Each of these points seems worthy of some consideration.

Boredom is destructive of the therapist-subject relationship. It must, therefore, be carefully avoided in the period of waiting for the drug to take effect. It is, of course, most likely to develop when the onset of symptoms is slow to occur. Then anticipation is apt to be followed by slight anxiety and premature feelings of disappointment followed by boredom. The therapist should avoid developing interests which the subject does not share. At this time the close relationship which is to develop between them can be fostered through consideration of mutually interesting material. This is particularly necessary when the therapist has himself taken the drug. He must avoid becoming too intent upon the development of his own symptoms for the slow boiling of the watched pot may engender frustration.

The subject's attention must also be directed from waiting for developing symptoms and frequently this can be done by directing his attention to poetry, paintings or photographic collections. The Family of Man collection, for example, is not only very useful at this time as an interesting diversion but the subject will very likely find that he wants to refer back to many of the pictures later in the experience. Certain of the photographs often seem to symbolize questions or conclusions which arise as the experience develops. In some cases such pictures form a frame of reference within which the subject may be able to work through some of his emotional problems.

Music used at this time as a background may prove relaxing. However, at the onset of symptoms the function of the music changes and the therapist should be aware of the effect the music is having particularly as symptoms begin to develop. This point is further expanded in the section dealing with

the onset of symptoms.

At the time of taking the drug it is helpful for the therapist to suggest to the subject that he will come to notice some very definite changes which the therapist would like to know about. It can be pointed out that when one watches for change one may observe many irrelevant things. Since the effects of the drug do not need to be closely watched for, a quiet relaxation is recommended.

Having suggested this at the outset, the therapist should avoid a mistake which is easily made — that of repeatedly asking the subject, "How do you feel now?," "Have you noticed any changes yet?," etc. If the therapist questions too insistently along these lines it tends to focus the subject's attention almost exclusively upon developing symptoms. These may take on an uncomfortable and unpleasant tone which will tend to have an unfortunate effect upon at least the early stages, if not all, of the ensuing experience.

It is at this point that the subject is most likely to begin to develop a nausea or some other somatic complaint. This can become sufficiently acute, if his interest be centered upon it, to make it impossible for him to concentrate on any other aspect of the experience. Indeed, it seems that here the subject begins to learn one of the fundamental facts of the LSD experience. He learns that concentration upon the self and the use of the self-concept as his exclusive reference point tends to produce difficulties and discomfort in the experience. At this time, it may be well to point this out to him for his subsequent consideration and evaluation.

Despite this need to direct the subject's attention from his symptoms, however, there are, paradoxically, two additional but opposite eventualities which should be avoided. Firstly, it is unwise to so interest the subject in any activity that he becomes unaware of the development of symptoms until they are so far advanced as to shock and frighten him when they suddenly intrude. Secondly, should the subject become so interested in what he is doing as to resent being interrupted, he may well find the developing symptoms a bother and may fight against them to maintain the psychological set which gives him pleasure. This set may also tend to color at least the early stages of the experience and may cause the subject to think along relatively constricted and confined lines by setting up a series of trains of thought which add an unwanted constriction to the situation.

Finally, the production of fear or panic at this stage should be avoided as much as possible. It is likely to prove very destructive as far as the therapeutic use of the later phases of the experience is concerned.

In general the therapist should aim, during this period, at giving the subject such support and assurance as will relieve his anxiety; at making the subject aware of the developing changes induced by the drug and at keeping him from feeling that these changes are threatening, alarming or in any way unusual for people taking the drug. The therapist can call upon his own experiences at this time and use them as a source of reassurance to the subject.

## Chapter 14
# STAGES IN THE EXPERIENCE: II. ONSET OF SYMPTOMS

This phase of the drug reaction usually lasts about an hour after the symptoms become noticeable, although it varies from about half an hour to two hours. It is likely to be the time of maximum discomfort.

The development of symptoms will usually be heralded by the subject's pupils beginning to show a marked dilation. He may appear to shiver from time to time and he is very likely to laugh frequently with little or no apparent reason. If asked to extend his arms and then to bring his index fingers together while his eyes are shut, he will very likely be unable to make his fingers meet on the first attempt. In reporting on what is happening he is likely to remark upon one or several of such changes as a feeling of weightlessness; apparent movement at the periphery of the visual field; alteration in the lightness or darkness of the room; changes in perceived time; changes in temperature; the enhancement of color; changes in the significance of patterns or difficulty in verbalizing ideas because they seem to come more rapidly than they can be verbalized. This may force the subject to withdraw because he simply cannot communicate what is happening. His difficulty in communicating is often intensified by finding that he is thrust into a sudden awareness of startling new aspects of his accustomed thought processes and of rapid rearrangements of old and new concepts which have deeply significant and often shattering implications.

It is at this stage of the experience that subjects who attempt to escape or to fight off the effects of the drug get into difficulties. The types of experience outlined earlier as a flight into ideas and a flight into illness develop at this point. If the subject's thinking will tend to grow confused, and his flight into ideas or illness seems to be an attempt to escape from this confusion which threatens to become overwhelming. The therapist should continue to offer reassurance, should try to prevent the subject from developing idée fixe and should try to keep the subject from becoming pre-occupied with somatic changes.

Music is particularly useful at this time because it serves as a distraction from the physiological effects of the drug. By focusing one's attention upon music one becomes aware of the alterations induced by the drug within a frame of reference in which these alterations can contribute to the beauty of the music. This permits the changes to be welcomed and reduces the anxiety attendant upon their development. Because one tends to float freely in time and space when one is swept up in music, the subject should be encouraged to relax completely and listen. In this way, the disappearance of the body images is often accomplished without particular anxiety or distress.

There is a real danger, in sessions in which the therapist has taken the drug, that he may at this juncture become so remarkably absorbed in music as to lose contact with the subject. This possibility must be recognized and guarded against since this phase of the experience is one in which the subject is likely to need the undivided attention of the therapist.

In group sessions in which the therapist has also taken the drug the subject is often encouraged when he finds him unafraid and apparently enjoying the changes. In any case, the therapist should point out the pleasant aspects of the symptoms. He should, for example, attempt to have the subject realize that the enhancement of his perception, which the drug has induced, should not be frightening. Rather, it should permit a new and startling awareness of beauty.

During this period, the therapist should aim at keeping the subject relaxed and receptive to change.

He must avoid letting the subject get deeply involved in an attempt to escape from the drug effect. When the subject seems to become involved in a flight into ideas, the therapist should avoid entering into any prolonged discussion of irrelevancies. Should the subject continue to report unpleasant somatic symptoms the therapist should assure him that these are fleeting discomforts which will pass off in a short time. It should be brought home to the subject too that pleasure and pain are very closely related and that he can feel these symptoms as pleasurable or painful according to his own desires. He should be urged to recognize and enjoy the pleasurable aspects of the symptoms and should be reminded again that self-concentration is almost certain to aggravate the difficulty.

Actually, the pain which is felt is largely a function of the subject's apprehension. In the main the pain is psychologically induced. It is the alarming strangeness of the physical sensations which makes them feel as though they should be painful. As an example the feeling of melting away is frequently mentioned. This sensation is in no way unpleasant unless one becomes alarmed by it and tries to fight it off in which case the tension engendered becomes uncomfortable. It should be pointed out to the subject also that his feelings are directly related to his perceptions which become alarming only when he is feeling adversely and he can control his perception by controlling his feelings. He can then observe this himself.

Alarm, possibly by increasing the adrenalin output, seems to potentiate the physiological symptoms. For this reason it is inexcusable to try to control a subject by frightening him. Nearly all subjects will encounter periods of pronounced anxiety and much of the therapeutic benefit of the experience depends upon learning how to work through the problem areas productive of fear. The above is not to suggest that the therapist should aim at the subject having an anxiety-free experience but rather that he should seek to prevent anxiety being focused upon physical symptoms at the time of the onset of the drug effect.

## Chapter 15
# STAGES IN THE EXPERIENCE: III. SELF-EXAMINATION

The dividing line between the period of onset of symptoms and the period of self-examination is a difficult one to draw. However, the role of the therapist differs widely between these phases and their differentiation is necessary. The subject at this point should shift his attention from developing changes in his body and in the world about him to a study of himself. To this point, the experience, though somewhat frightening at times, will have proven exciting and beautiful. The imagery is likely to be unbelievably vast and lovely and relatively impersonal. The subject is likely to try to maintain its impersonal nature. Sometimes he may be able to do this for a matter of hours but usually he rapidly becomes involved in his personal problems. In group sessions, the therapist must not let himself become involved in imagery. He must try to maintain a continuous awareness of the subject.

This phase is really the crux of the therapeutic experience. It is upon the basis of the self-acceptance and self-knowledge which he begins to achieve at this stage that the subject can, with the support of the therapist, gradually come to see into and evaluate the motives which have underlain his previous behavior.

Because the LSD experience is, to such a marked extent, a feeling experience the insight gained by the subject is an emotional insight involving an intensity of conviction which implies acceptance, i.e., emotional insight plus acceptance. On the basis of this insight into his own motivation he can begin to learn how to alter his behavior to satisfy the new pattern of values which develops out of self-understanding. This is a learning process which is never completed but the experience can provide a new understanding and initiative which will tend to speed the process and to maintain the necessary motivation for the patient to begin to alter his attitudes and his habitual modes of thinking and acting.

It is in this phase of self-examination that psychotomimetic reactions develop. In these, the subject is trying to explain or rationalize to his own satisfaction the ideas and feelings with which he is involved.

The therapist who has experienced the drug reaction will have a general idea of what the subject is doing. If the therapist has taken the drug with the subject he will be directly cognizant of the subject's psychological state through his intensified awareness of the feelings of the subject who may begin to reflect hostility and suspicion. To an observer the subject will very likely seem to withdraw and will become more thoughtful and preoccupied.

The subject who reaches this stage is engaged, though he tends at first to be unaware of it, in a soul-searching or self-investigation which can lead either to self-acceptance or to the rejection of certain aspects of the self. The subject's lack of awareness is often due to the fact that much of the material of the images he is dealing with are initially symbolic. A problem may be worked out through symbols which become attached to alterations in visual imagery; to changes which seem to occur in photographs or paintings, or to alterations in the emotional valencies of music.

When, either directly or in symbolic terms the self is rejected, the person will most likely become paranoid and may begin to deny that anything is happening. In any case the experience will become very upsetting for him and he will try in one way or another to withdraw from facing himself. He is, however, too deeply committed by the drug to do this, for LSD has disturbed his body image, his sense of self has forced him into an awareness of the feelings of others and has made him feel that his

innermost being is open to the observation of others.

This discomfort is likely to be so intense that he will be forced back into the process of self-examination again and again.

The subject who becomes involved in this process may display intense emotion, perhaps breaking into tears from time to time. Very often too a subject appears remarkably elated and very easily provoked to laughter. He may in fact frequently appear to laugh more or less at random as though he were laughing for no reason at all. This is not the case. His laughter is provoked by his being able to see with a new clarity both the answers to many problems which have weighed heavily upon him, and the inane nature of many of the methods he has been using to cope with these difficulties.

There are steps in the development of self-acceptance which are a direct function of the personality involved and which therefore, we assume, differ remarkably from person to person and cannot be described in any general way. Its achievement is the result of the resolution of the person's own intrapsychic problems. The therapist cannot solve these problems for the subject. What he can do is to offer the subject encouragement or intelligent criticism from time to time.

The therapist, at this stage, should not hesitate, when he is convinced that it will be helpful to the subject, to be insistent that the subject face up to and examine his problems. This does not mean the list of questions the subject has prepared. The subject's problems, at this time, are evident to him without a list. Because of the amazing human propensity for rationalization and because the chief therapeutic value of the level of awareness induced by LSD is that it permits a person to see through his own system of rationalization, the therapist should not accept any attempt on the subject's part to avoid responsibility for his own predicament. Usually the subject will realize unconsciously that he is rationalizing and will seek confirmation and support for his rationalizations form the therapist. Indeed, at this point it is safe to say that he knows he is wrong before he asks a question. However, preferring what he realizes is the wrong answer because it is less painful to the self, he seeks to get outside support and confirmation to bolster his accustomed self-concept.

The patterns of rationalizations may vary but the themes are general. The subject may try to enumerate the ways in which he has done all he could to get along with others. Outside circumstances have been such, he may claim, that a man cannot afford to love or trust his neighbor or indeed deal particularly fairly with him. At times he may feel that the therapist is "putting pressure upon him. He may, too, try to escape self-examination on the basis that it is useless to bother since he is so had that there can be no hope for him.

The therapist should not offer any support for this type of escape. He should refer the problem back to the subject by asking him, "are you certain?" or some such question. The therapist should point out that the subject, and only the subject, can solve the subject's problems. The subject is very likely to find this an excessively painful process but he should be encouraged to go through with it. It is misguided kindness to try to ease the person painlessly through this stage by reassuring him and distracting him from his self-examination. This is much more likely to happen in group sessions, since in that setting it is much easier for the therapist to distract the subject and he is more inclined to do so because the therapist cannot help sharing some of the subject's discomfort.

The therapist must realize that although he senses hostility on the part of the subject, this hostility I only secondarily directed at him. Primarily it is the subject's inwardly directed hostility. The subject, finding aspects of himself of which he is ashamed, attempts to conceal them. This is true in either individual or group session but particularly in the latter. He is aware that the others in the experience can sense his feelings as he can sense theirs and he fears that they will reject and revile him because of what they may discover about him. This comes about through a misinterpretation of feeling as

thought which is so common as to be almost universal during the LSD experience. Its occurrence leads the subject, because of the proximity of feelings he develops, to believe that others can know his thoughts. Under these circumstances, self-condemnation produces a consequent fear of and therefrom a rejection of others. This process rapidly accelerates in uncontrolled fashion and leads to the development of a paranoid psychotic reaction.

Almost without exception, subjects will show some evidence of paranoid thinking or marked confusion or both and it is from observations which have proceeded no further that the concept of LSD as being solely a psychotomimetic agent has arisen.

It is a mistake to let a person who is paranoid wander away from the treatment setting. It is through the realization and acceptance of the trust and understanding of the therapist or other group members that he can overcome his paranoid thought disorder. If he is separated from the group for any length of time this becomes difficult. If necessary, he should be reminded of his agreement to stay with the therapist or the group. He will be particularly sensitive to being "watched" or "followed" by others and such a situation will call for a straightforward and honest presentation of the facts. It is, in part, for this reason that the setting should be one in which washroom and toilet facilities are quite close at hand. It should be pointed out when he has lost faith and trust that only through regaining and maintaining these can he enjoy and profit from the experience.

The therapist, at this stage, must also be cautious not to take too much for granted. It is easy to forget how remarkable the first experience with LSD may be and to assume that the patient has progressed further or more rapidly than is the case. When this error is made it is difficult for the subject to continue his self-analysis since the therapist appears to be hurrying him around that difficult hurdle.

The end of this phase of self-examination is not clear cut. It may come quickly or the person may move in and out of it several times. He may find regardless of how frequently he takes LSD that he is re-engaged in the process upon each occasion. In any particular experience, however, the subject will usually show visible relief and the therapist who is sharing the experience will feel a relief of oppression as the subject begins to become more accepting.

In this stage a mirror is often an aid to the subject in achieving a level of self-acceptance and the therapist should encourage him first in seeking the better aspects of the personality of the man in the mirror and subsequently in realizing and accepting all aspects of the infinite variations.

The subject's self-analysis can end on any of several levels. The person may give up the painful process, continue to reject himself and remain quite paranoid for some time. He may become so distressed as to be almost catatonic and stuporous. He may resolve some of his problems but not be able to face others. He may continue to feel himself extremely unworthy, in which case he is likely to remain rather tense and uncomfortable and to show signs of referential thinking from time to time.

To the extent that the person can achieve insight and self-acceptance he will find the experience becoming pleasant and rewarding. Conversely, to the extent that he cannot accept himself he will find the experience unpleasant and will feel hostility toward others in the experience whom he fears will reject him because of what they sense about him. This fact of pleasantness or discomfort in the experience tends to teach him, directly, the value of self-acceptance. Similar discomfort is attached to the lack of acceptance of other people. At first, more or less by accident and subsequently by deliberate experiment, the subject learns that the correlates of acceptance are pleasant and of rejection are painful. When he accepts himself, he no longer fears what others will think of him.

In actual fact all that the others in the experience can be aware of is how the subject feels. They

know nothing about the thoughts which give rise to his feelings, but before a person can fully trust another there must be nothing within the self about which he remains defensive. To try to conceal any aspect of the self is to mistrust the acceptance of the others in the group. On the other hand when no masking or apology intervenes between people the complete acceptance of each by the others fortifies the self-acceptance of each.

This does not mean to say that the experience is a sort of confessional or that the subject must, in any way, indicate the nature of his problem. He must simply accept himself as he is and trust the others in the experience to do the same.

The therapist must realize that most subjects are frightened and concerned about what effect the drug will have. They may fear that they will behave in some fashion which will disgrace them. This is simply the realization that there are facets of themselves which they find unacceptable. Many subjects fear that they will lose control over their actions. Most are frightened by the idea that the drug is some sort of truth serum and that they will reveal their innermost secrets during the experience. This does not happen. The subject may, and in fact often does, go through this struggle to self-acceptance without saying anything directly related to the nature of the problems which bother him.

The experience is valuable as a self-analysis. The intent of the therapist should not, therefore, be to use the drug simply as a cathartic or as a means of uncovering repressed material. Certainly the drug is useful in this regard, but its full potential cannot be realized when its use is restricted to this purpose. There is room for disagreement regarding the advisability of the therapist having the subject verbalize the material which the drug brings to awareness. Traditional therapeutic methods would lead to a method in which subject and therapist work through these problem areas together. The therapist in this method would find case history material valuable as a means of stimulating the subjects investigation of his own motives and activity. Other therapists may feel that while such information about the subject might have a certain utility in dealing with him it is he himself who must alter his values and indeed, the more specific the therapist's knowledge of the subject's guilt-producing past behavior, the more difficult it is for the subject and the therapist to arrive at that feeling of equality which permits the establishment of a relationship of complete TRUST.

## Chapter 16
# STAGES IN THE EXPERIENCE: IV. THE EMPATHIC BOND

When, in a group experience, the self-scrutiny of the subject has reached a point at which he has found a degree of self-acceptance there develops a very close empathic bond between the participants. Usually this is formed with a certain amount of hesitation. There will be times when the level of trust is lowered and the bond breaks down. Gradually, however, with greater and greater certainty the subject will come to realize that the people in the experience are particularly aware of each other's feelings and that they can not escape from this awareness even when they desire to do so. This can be a disturbing discovery not only because it does not accord with day to day experience, but also because he continues for some time to misinterpret feeling for thought and feels that his thoughts are directly opposed. In the individual experience the same general empathic process develops though it is of course less evident and far less pronounced.

Such a bond calls for a high level of acceptance of one's self and of the others in the experience or in the situation. It requires a willingness on the part of all participants to accept each other to an unusually high degree. In other words each must be willing to be completely open with the others and to give of himself emotionally, without reservation. It is essentially a self surrender. Huxley (26) has termed it "a willingness to be completely implicated." To accomplish this each person must accept himself and trust the others in the group to accept him as he is despite whatever short-comings he may have.

Not every person in his first experience, is capable of achieving the level of self-acceptance and the acceptance of others which will permit him to establish such a relationship. Some people would require a number of sessions before they would be able to do so.

In view of the discussion of self-acceptance and the acceptance of others in which we have been involved it should be pointed out that such acceptance is an acceptance of essence and the recognition that the act is not the essence. That is to say a person accepts himself or another as a person, as a brother and indeed as an additional self. He does not, by this acceptance, automatically endorse either his own acts or those of the people he accepts. His affection for himself and for others is not related to acts any more than a parent's affection for a child is related to the acts of the child. Some of the acts of a child are right and are rewarded, some are wrong and are censured but the love of the parent is unrelated to the rightness or wrongness of specific acts. Indeed, one of the frequently observed changes in a person who has had the LSD experience is that he finds it much easier to point out to other people aspects of their behavior which impinge upon what he considers to be his rights. He finds it easier to do this because his statement of the difficulty is no longer seen or felt by him to be a condemnation of the other person. By the same token, the other person sensing the lack of anger or censure is the more likely to perceive the request as reasonable.

In each person's development to the point at which he finds it easy to accept and deal with the empathic relations which the drug permits, there appear to be two stages. The first, basically a self surrender, is the willingness to give of the self without reservation and to trust oneself completely to the affection and respect of the others in the group.

The second stage frequently seems equally difficult and comes about through the subjects learning to receive as well as to give. In other words it is the final complete acceptance of the other participants. It is to regard what they have to offer—their view of the world, their particular way of feeling

and thinking—as being as valid, as worthwhile and as beautiful as his own. Once this situation has been set up and each individual in the group becomes willing, not only to give of himself without reservation but to accept each other person's point of view and manner of feeling as equally valid, the empathic bond is truly established and the participants are able to feel a unison so complete as to establish a communication verging on the telepathic.

When the subject is unable to complete the bond by accepting the feelings of the others in the group he is likely to revert frequently into self-condemnation or paranoid thinking or in rare cases into grandiosity in which contempt for certain aspects of the others is verbalized or displayed.

About three hours after the drug has been taken most subjects will either have established an empathic bond with the other group members or will have achieved some sort of a stabilization of the experience. At this stage it is possible and valuable to begin a period of discussion.

Unfortunately, this is sometimes impossible, for in some instances the subject remains either violently nauseated or otherwise physically ill and in others the subject continues throughout the experience to be markedly paranoid. In such cases there is little that the therapist can do other than to continue to offer trust, affection and understanding. The therapist must not lose patience and should never try to get the subject to "snap out of it" by directing hostility toward him or by leaving him alone. The therapist can teach only be example. An LSD session spent in being ill or in being psychotic is much less rewarding than one spent constructively but as Gibran (20) has pointed out "Even those who limp go not backwards." Subsequent sessions may lead to much more profitable experiences.

## Chapter 17
# STAGES IN THE EXPERIENCE: V. DISCUSSION

While discussion is an important development in both individual and group experiences, the group experience presents wider scope. The nature of the discussion will depend upon the personalities of the participants. The importance of this period lies in the fact that the subject, having gained a level of self-acceptance and acceptance of others can learn a great deal through the association that this period permits. He is actually learning how to relate to others at a new level—a level based on self-understanding an unashamed trust of his deepest emotions. He is learning about other ways of feeling and of sensing the world. Music is extremely useful in this learning process. Each person tends to hear music in his own way and in a group setting once the empathic bond has been established each person hears the music in a manner which is influenced to some degree by the others in the experience. The subject can learn that by blending his perception of the music with that of the other participants, the enjoyment of all is enhanced. This fusion of points of view or ways of feeling is most readily observable in the perception of music, but having observed the phenomenon in that particular situation, the person can more readily understand the possibility of generalizing this knowledge and capacity to all other aspects of the experience and hence to his [daily] interpersonal relations.

The nature of what is likely to be learned through the experience offers a guide to profitable areas of discussion. The commonly reported areas of experience which Chwelos (13) has enumerated have been mentioned earlier. These include a feeling of being at one with the universe; changes in the perception of time and space; enhancement in the sensory fields, a feeling of profundity of understanding which engenders conviction; increased emotional sensitivity leading to a widening of the range of emotion; an increased tendency to emotional fluctuation; and increased sensitivity to the emotions of others.

These changes are closely related. The alteration in the self-concept and the depersonalization to which it gives rise may be a result of changes in the perception of space and time. In any case, they appear to vary concomitantly. Depersonalization, by altering the self-concept, permits objective self-assessment and when coupled with apparent freedom in space and time brings one to a sense of unity with the infinite. Further, this reduction of the self, which has hitherto been the basic referent for all sensation and ideation permits both a remarkable enhancement in the sensing of the non-self and a new profundity and range in ideation which the self-concept has previously tended to circumscribe and modify. So vast and so intense is the experience that the emotional responses engendered cover the spectrum of affect and appear because of the time distortion to shift with remarkable rapidity.

It is important to realize, with regard to the points which follow, that the feeling of reality which accompanies the experience is often remarkably vivid. Where this is the case, the ideas outlined below, once arrived at, are accepted with an intense conviction.

The person's individuality tends to break down. He begins through the breakdown and synthesis of usual gestalts, to see through the subject upon which he happens to be concentrating, into the microcosm and into the macrocosm. Because his thinking is analogical he can see the same pattern of extension in all things. Each object or person has an infinite number of aspects.

He becomes aware that he too, is part of this pattern of infinity and that the barrier to awareness of this fact has been his accustomed sense of self. This realization renders complete self-acceptance much easier than it otherwise would be.

The objectivity toward the usual self-concept which depersonalization occasions, permits him to examine his relationship to others without any defensive screening. He begins to learn that self concern, implying as it does a feeling of some insufficiency in the self, is synonymous with anxiety and tends not only to isolate him from others but also to make him distinctly uncomfortable.

Complete self-acceptance on the other hand, which implies complete faith in his infinite nature, not only permits him to feel very closely with others and to understand them more completely than he ever has before, but also produces in him feelings of content and well-being.

He comes to the realization that faith and anxiety are mutually exclusive. They cannot be experienced at the same time. Chwelos (13) in discussing this area of experience states of the subject:

"He then sees that lack of faith, or acceptance that he is essentially infinite, is the exact counterpart of anxiety. He also sees that guilt is disrupting in that it is a denial of the infinite self which is the same for everyone. This equalizing tends to remove any form of pride, prejudice, guilt or anxiety. The person then sees that faith, which is the acceptance of himself as infinite, and love, which is the acceptance that everything around him, is equal to him in substance, is the clue to a smooth, pleasant, useful LSD experience. The patient then ceases the tragedy of desiring to be other than he is in essence and realizes that he can only be other than he is in terms of his acts. The energy thus released from attempting to alter his basic nature will now be used to alter his acts in a way which can make his life more peaceful and satisfying and his outlook more compassionate."

Almost certainly the most valuable knowledge which the subject may attain in the experience is the realization that his feelings are very largely under his own control. Generally speaking, our culture accepts the view that one's feelings are determined by circumstance. In the experience, however, the subject learns that his feelings are determined by their direction. Self-concern makes him feel badly, outwardly directed feelings of affection and trust make him feel good. Knowing this, he can feel as he wants to and can realize the wisdom of Lincoln's statement, "a man is just as happy as he makes up his mind to be." The subject should learn too that the ability to control ones feelings comes only with practice. As Chwelos (13) puts it: "He can feel as he pleases but this takes some practice, as one learns to walk by walking, so one learns to love by loving."

It is the role of the therapist during this stage to try to discuss and work through with the subject some of these extremely complex ideas. As a rule, the subject will broach the ideas himself and the therapist can offer another point of view or aspect of the problem involved. At times the therapist may feel it wise to introduce a topic for discussion but he must be careful that he does not attempt to pressure the subject into accepting his point of view. The pressure for acceptance or rejection of ideas must come from the subject himself if the ideas are to carry emotional conviction.

Referring to this phase of the experience as "discussion" may appear to be unwarranted. It is seldom discussion in the ordinary sense of the word since a person outside of the experience would be likely to have much difficulty in following what was transpiring. There are likely to be very prolonged periods of silence, few sentences may be completed as the thoughts seem to break off in the middle. Actually the close nature of the communication permits this sort of discussion to be filled with meaning as far as the participants are concerned.

As has been pointed out previously the LSD reaction is essentially a feeling experience. The translation from intense but undefined non-verbal feelings into structured, delineated ideas, ideas which can be examined, discussed and weighed intellectually, is almost always made with difficulty.

There are certain types of questions which may be helpful to the subject. Through considering them, he gives ideational structure to what he feels.

Questions which lead to an examination of the self-concept are usually interesting and lead to valuable discussion. This would include such questions as:

1. Who are you?
2. How much does your identity determine your behavior?
3. Where are you in space and time?
4. Where do your thoughts come from?
5. How are you different from other people?
6. How are you the same as others?
7. What is the basis of your system of values?

Questions which may stimulate thinking in the area of inter-personal relations are also extremely useful. This area might be approached through such questions as:

1. If all people are the same in essence, what keeps them separate?
2. What is love?
3. What is wisdom?
4. What is trust?
5. If you could have any single wish come true, what would you wish for?
6. Why are some people more pleasant than others?

Other more useful questions will undoubtedly occur to the therapist and such questions often will act as the beginning of discussion. The therapist must, however, continually guard against the tendency to assume that his answers to such questions are the only correct solutions. The subject's answers will represent truth as the subject sees it.

It is of great importance that the subject in dealing with these questions, attempt to verbalize his conclusions. Memory seems less capable of storing and recalling feeling tones than it does of holding verbal symbols representing ideas. If the subject is to be able to recall and use his experience it is important that his feelings be structured into thoughts and the thoughts described in language and if possible written down or otherwise recorded for subsequent reference. Should he wish to make notes of certain points he should be encouraged to do so. He may find it somewhat difficult to co-ordinate his movements and writing may prove difficult. Osmond (41) suggests the use of a chinagraph pencil which calls for less exact finger movements, yet permits the notation of salient ideas.

Sometimes this is extremely difficult and a very useful short cut into the memory files seems to be made if role-playing [is] introduced. In such role-playing any hypothetical setting may be used and the people in the experience may decide to examine the relationships which would exist between them were they executive, politicians, churchmen, soldiers or any other group. The setting may be anywhere under any conditions ranging from disaster to tranquility. The relationship of each to other may be examined under varying emotional settings ranging from situations in which they relate on the basis of hatred and suspicion to those in which they work with each other in an atmosphere of affection, appreciation and trust.

In view of the level of empathy which exists, this procedure will rapidly demonstrate the motivational pattern of each of the participants and show how these patterns can and do relate to each other. The roles need very little enactment as the potentialities of the personality in the hypothesized situation tend to be very readily evident to the participants.

If the subject has been asked to prepare a list of questions, the answers to which he feels will be helpful to him in guiding his future conduct, he should now be encouraged to look at his list. It is

very likely that the self-understanding he has gained will make the answers to the questions seem obvious. Most frequently the questions have arisen from areas in which the subject has been rationalizing to avoid accepting what he already feels to be true. LSD, by removing the need to rationalize, lets him see beyond the question into the underlying motives. He should be encouraged to make certain that he sees the answers clearly and understand how to use this insight. It the subject requests help the therapist should offer any aid he can in discussing such questions.

While this period of discussion actually continues until the experience is terminated, there are other important stages which it overlaps which should be reviewed.

## Chapter 18
# STAGES IN THE EXPERIENCE: VI. DIMINISHMENT OF SYMPTOMS

Usually after about five or six hours the symptoms seem to diminish rather rapidly. The subject will begin to feel that the session is all over. In cases in which the subject has been unable to achieve a high level of experience he may begin to express a desire to end the session. This can be destructive of the relationships which have been built up. If the subject attempts to shake off the remaining symptoms and get rid of them they tend to become more pronounced. The more he fights against them, the more agitated he is likely to become and he may develop a paranoid reaction. His desire to get out of the drug state leads him to feel that that state is undesirable and unreal. This type of thinking, unless diverted, may rapidly lead to suspicion, hostility and withdrawal.

The subject has been warned about this in the instructions given to him prior to the session. A further warning at this time may be useful or may be disregarded. He should be assured that the experience is far from over and much that is interesting lies ahead. It is wise to try to interest him in some aspect of the experience not yet covered or in some area of discussion in which he is particularly interested. It is unwise to leave him alone at this time or to let him leave the group. Any attempt to fight against the residual symptoms is very unlikely to be successful. It should be pointed out to the subject that this apparent diminishment of symptoms is due to his having learned how to adjust to them. They are still present but he is going to put the level of stabilization to something of a test in a short time by going to a restaurant for a good meal.

The discussion may begin to falter at about this time and one way of maintaining interest is by seeing how each person in the group adds to the appreciation of music. Those selections which have the greatest appeal for the subject might be used at this time. The subject will find that when he tries to listen to the music as another person hears it, he will initially find it rather annoying. After a short time he will find his accustomed response to the music altered. Gradually he will see the beauty in this new type of awareness. Subsequently, he can learn to combing his accustomed response pattern with those of the other people present. Whether this actually occurs or could be demonstrated objectively is a moot point. Nevertheless the subject will note a remarkable change in his own perception.

After an hour or two the subject will realize the nature and extent of the symptoms which remain. He will be much more comfortable with these than he was previously because he will have learned how to control them. At this time a discussion may be started about going to a restaurant and about how, in that venture, the remaining symptoms may affect him, or in a group session, each of the people in the group. This discussion will tend to make meeting people en masse much easier.

## Chapter 19
# STAGES IN THE EXPERIENCE: VII. THE MEAL

Where the treatment situation permits, it is often a very useful experience for the subject to get into a situation in which he is observing and dealing with other people while he is still slightly under the influence of the drug. It can be something of a first step in bridging the gap between the LSD experience and his normal day to day living.

Going out for a meal late in the evening when the subject is hungry, provides an easy opportunity for him to learn how to meet and accept people in a way which will accord with what he has learned in the experience. To the extent that he fails he will find the situation growing unpleasant and uncomfortable. What he has learned and the support of the people with him will usually lead him to generalize his learning to this situation and will teach him the advantage of understanding and acceptance in day to day relationships as well as in the LSD experience.

This learning is reinforced by its association with the pleasure of eating after several hours of fasting. As long as the subject remains paranoid or apprehensive, the meal should be postponed. It is extremely distressing for a disturbed subject to have to mingle with a large number of people. If necessary, food should be brought in to the treatment room and the visit to the restaurant omitted. Some subjects, especially among the alcoholic group, may have no desire for food and if they are adamant in their refusal, their wishes should be respected.

## Chapter 20
# STAGES IN THE EXPERIENCE
# VIII. TERMINATION OF THE SESSION

The time of termination should remain flexible. After a meal there is likely to be a revival of energy and further discussion may begin. The important thing is that the end of the session should be determined by the feelings of the participants and not by the pressure of outside circumstances.

Twelve hours would seem to be a minimum time to ensure that the subject would not be anxious when separated from the group. Often, however, the latter stages of the session see the development of extremely interesting discussion and the session may last up to 16 hours, depending upon the interest and the stamina of the participants.

Keep the session going until there is no reason to believe that the subject will be troubled by recurring symptoms and until he seems happily confident that he can sleep untroubled by anxiety.

In subjects who have shown little or no reaction to the drug the session may be terminated in a much shorter time, possibly after 7 or 8 hours. In subjects who have remained paranoid throughout, the session should be carried on as long as possible—at least up to 12 hours. Usually the subject will become less hostile and withdrawn and more comfortable and accepting as time goes by.

Where the subject is being treated on an out-patient basis he should be driven or accompanied home by the therapist. The subject should not attempt to drive an automobile. The therapist should help as much as possible to bridge the difficult period of the subject's meeting his family or his wife. The therapist can answer many of the questions which would otherwise be directed at the subject and he thus becomes not only an ally in the situation but tends still further to weave the LSD experience into the subject's daily life.

## Chapter 21
# AFTER—CONTACT WITH THE SUBJECT

The therapist should arrange to come to see the subject again as soon as possible. With an in-patient the meeting should be early in the following morning, as soon as possible after the subject is up and about. With an out-patient such a meeting should, if possible, take place in the morning, possibly over coffee.

This meeting is an important one. Subjects usually find the experience so fascinating and unusual that they, like the Ancient Mariner, must tell others about it. However, it is a difficult experience to describe and the average listener can in no way comprehend the subject's account. Not only is the subject likely to be frustrated in his attempts to explain, but he is likely to be regarded as odd for having had such a peculiar experience. Also in attempting to recall exactly what happened the previous day, the subject will find his memory vague as to time and incomplete as to fact. Left to himself, he will tend to start trying to rationalize what has happened and may begin to deny the reality of the experience. This tendency will be enhanced by the attitudes of the people around him who tend to regard such experience as bizarre. He may be torn between the desire to accept the experience as valid and the urge to accept the criticism of his friend and to dismiss the whole thing as being something like a dream.

At this time, the therapist, by showing that he accepts the experience as valid, by discussing its various phases and thus filling in the blanks in the subject's memory and by reviewing many of the ideas and conclusions of the day before, tends to further bridge the gap between the experience and day to day activity. Any notes made during the session will prove useful at this time as the basis for discussion. The subject is usually relieved to find that the experience was regarded as valid and useful to those who shared it with him. He cannot, under these conditions, easily dismiss it as dreamlike.

The subject should be reminded that he is to write an account of his experience and the therapist should be rather insistent upon this point. The process of finding words to describe the experience and of thinking it through so that it can be written down helps to fix many aspect of the session in the subject's memory.

Beyond this initial post-treatment meeting it is useful for the therapist to keep in touch with the subject from time to time. If possible informal meetings of those who have undergone the experience should be arranged. This permits an exchange of ideas and occasional re-inforcement of the values developed by each of the people under the influence of the drug.

This procedure is useful in another way. Eisner (16) has reported upon the fact that "depression has been observed to occur when insights acquired under the drug are not translated into the life situation. It almost appears that if the clearly-indicated step forward is not taken, ground may be lost, followed by depression."

Actually, there are in nearly every case periods when the subject feels that he has failed to live up to his new system of values and tends to become depressed. These phases tend to be short and if the subject can meet with an interested person or group much can be done to dispel his depression. Then restatement of what he already has learned—namely that self-concern makes him feel badly and that directing his attention toward the acceptance of others he will enjoy a feeling of well being-will aid him to a less oppressive mood. This technique is closely allied to the group ties utilized so successfully by Alcoholics Anonymous.

At this point we should like to refer to some special points that should be considered when the

experience is being employed as an adjunct to therapy in cases of alcoholism. Here it should be kept in mind that Alcoholics Anonymous provide a unique and often indispensable opportunity for continuing support of the patient who has had LSD, and, in the vast majority of cases, greatly enhances prospects for his long-term sobriety, as well as improved attitudes and way of living.

Even where the subject has previously had negative attitudes towards AA, the LSD experience offers and excellent opportunity to re-examine coping with his problem. In the experience it can be suggested that he examine his feelings about the Alcoholics Anonymous program, that he keep an open mind about the fellowship until he learns more about it, and that he have a chat with some of its members.

An active liaison with some AA members can prove advantageous to the therapist in achieving this sort of interview for the patient.

The subject should be told in advance that the LSD experience does not constitute a cure for alcoholism. It offers an experience which can make the AA program more acceptable and inspiring. It can remove many of his reservations towards the program, and can shorten the period in which doubt and indecision prevent full acceptance. The psychedelic experience can be an extremely useful introduction to a new way of life, such as that offered by Alcoholics Anonymous. It cannot be more than that. But it is remarkable in how many respect the LSD experience and participation in the AA program engender the same sorts of positive attitudes. Self-acceptance and acceptance of others, and the recognition of honesty and humility as essential goals, are developed both in the LSD experience and as a result of acceptance of the AA philosophy.

Following the LSD experience, the alcoholic must himself build a new pattern of adjustment for day to day living. In this program of remotivation he will find the support and inspiration of the AA program invaluable.

# Chapter 22
# ASSESSMENT OF THE LSD EXPERIENCE

## PROBLEMS IN ASSESSMENT

Assessing change effected by treatment is one of the major problems in every branch of psychiatric research. Researchers often use such gross criteria as discharge from hospital and re-hospitalization. In the treatment of alcoholism the criterion often used is complete abstinence for a particular period of time. The alternative to such criteria is the establishment of some variety of rating scale which permits the measurement of less obvious degrees of change. Here the problem becomes that of demonstrating the validity and reliability of the criterion scale.

Such refined measures call for the objective assessment, by adequate judges, of selected, relevant areas of behavior. Their development calls for a high level of knowledge of the changes to be anticipated; for painstaking trial and error selection of items relevant to these areas of change; for a further selection and refinement of items such that ambiguity disappears to the extent that scoring agreement between independent raters is obtained. When this task is completed one has a scale which samples areas of behavior and which can be expected to show a relationship to clinically observed change. In the development of such scales it is a further complicating factor, that the criterion against which the scale must always be assessed is that of clinical judgment, a notoriously unreliable standard.

The assessment of change growing out of the LSD experience is especially difficult. If changes are to be rated by independent, objective raters, then the areas which can be assessed must be either observable physiological phenomena such as blanching, tremor, dilation of pupils, shivering, apparent dizziness, vomiting, micturation, moistness of the palms and so forth or must be the results of psychological tests. Much work has been done in this area principally by Abramson and his co-workers (4), (5), (6).

Unfortunately the presence of observers or the administration of tests almost invariably alters the entire nature of the experience. The probability that a transcendental experience may occur is much reduced if the subject must direct his attention for some time to answering the questions of the M.M.P.I. or if he concentrates his attention for any prolonged period upon problems in arithmetic.

This difficulty has caused a great deal of confusion in drug studies. There are two methods of approach to the determination of the drug effect. The first method aims at cataloguing the alterations in specific areas of behavior which follow upon the ingestion of a given drug. Here the researcher is concerned with alterations in test scores or in observed physiological changes, on the basis of which he can assess the effect of a particular drug or draw comparisons between differing dosages, drugs, or conditions of administration.

The second method seeks to observe differences in the individual's usual functioning which are occasioned by taking the drug. Here the concern is not with special tasks but rather with attitude, feeling, mood, etc. Such information can only be obtained by asking the subject relevant questions.

Where the first type of research has lead, for instance, to the conclusion that arithmetic test scores decline as a result of the ingestion of LSD the conclusions drawn from the second type of research would be that the ingestion of LSD makes a person feel less inclined to work at problems in arithmetic.

While each of these types of research are useful and necessary they cannot be combined in the

same project. One must decide which type of research he intends and must then adopt an appropriate methodology. It is nonsensical to complain that he results of research aimed at measuring drug effected changes in specific test scores yield little information about drug induced personality change. It is equally useless to protest that unless a quantitative score can be assessed it is impossible to discuss any change.

It is our contention that at the present stage of our knowledge research into the effect of LSD should aim at observing differences in the individual's functioning and at detecting changes in the feelings, values and beliefs which underlie these modifications in behavior.

It is unfortunate that much of the present research aimed at quantification of LSD induced change is dealing with extraneous or unimportant variables and is therefore largely irrelevant to any assessment of the therapeutic effect of the drug. In a search for relevant variables we must adopt very specific criteria of validity for in this assessment the establishment of correlation between drug ingestion and variation in a given measure does not offer sufficient grounds for the acceptance of that measure as a valid means of describing the nature of the drug induced changes. To be relevant a variable must be related to the experience described by subjects who have taken LSD. For this reason, we feel that it is extremely unprofitable to use conventional psychological tests to assess the drug effects. The results of these are altered by the fact that under LSD, tests are boring and uninteresting. The administration of such tests completely alters the drug experience and produces a compounding of drug effect and situational effect which cannot be sorted out.

If a person watching a delightful ballet were presented with a series of arithmetic tests at various times throughout the performance, his scores would be lowered by distracting stimuli. It would, however, be unfortunate to conclude that attending the ballet disturbs thought processes. Very likely his experience of the ballet would be remarkably qualified and modified by the testing.

While we may question the aptness of studies using this objective approach, we must realize that the collection and publication of subjective reports on individual experiences offers no basis of quantification of the components of the experience. Such methods, by themselves, will not permit a description of the drug effect which can be scientifically useful. Unfortunately in our search for a quantified measure of the LSD experience we are confronted with the fact that present techniques for measuring changes in feeling and value are so crude that only holistic, subjective data can be drawn from the experience and its sequel.

These difficulties in no way alter the importance of this type of investigation into the phenomenon. They simply indicate that we are ill prepared to describe it or to make specific assessments relating to its therapeutic consequences.

Because of the difficulties in assessment, it would seem useful to attempt the development of a self-rating scale which would require the individual to indicate both any area in which he felt that changes occurred and the extent of any changes which he felt he had undergone as a result of taking the drug. The Nowlis' (38), (39) studies into drug induced mood alteration have demonstrated that quantification through introspection provides a particularly useful methodology for the study of psychological change induced by drugs. This method has been adapted in an attempt to gain some quantitative assessment of the psychedelic experience both in terms of areas of overlap of experience between individuals and between sessions and in terms of individual reaction constellations or typical response patterns.

Any assessment of the validity of such ratings would be difficult. For in behavioral terms the validity of psychotherapeutic change can only be established upon the basis of the ancient but as yet unmodified criterion "by their fruits ye shall know them." We might, however, hope for an approxi-

mate validity check by obtaining corresponding ratings of the subject by people who know him well. Although in this procedure error variation will result from differences between raters in keenness of awareness and observation of change, if the drug be as effective therapeutically as it is claimed, at least some of the changes induced by the experience in the behavior of the subject should be so obvious as to be readily observable.

The development of such a scale will take much time and energy. Abramson and his co-workers (-)[1], Nowlis and Nowlis (38), Wendt (51) and many others have made important contributions toward such a development. There is as yet, however, no scale aimed at the assessment and description of the psychedelic experience and its after-effects. For this reason a tentative scale is presented below in the hope that it may be useful as a basis for further investigation.

## THE ASSESSMENT SCALE

In this attempt to evaluate the psychedelic experience, it was not the intention to cover all areas of drug induced change. A scale which attempted to do so would be very long for practical purposes. For this reason the items of the scale have been selected because they deal with changes commonly reported or observed during and subsequent to the LSD experience.

An examination of a subject's ratings on these selected items will indicate the level of experience which he attained and will provide information regarding his assessment of the therapeutic efficacy of the experience he has undergone. In this regard, it may also be used to study the differential effect of various dosages. By comparing records the frequency of occurrence of the various facets of the experience can be established. Over a series of sessions, consistent individual patterns can be distinguished and when a sufficient number of cases are tested differences brought about through repeated experiences can be studied.

It is hoped that by having both the subject and people who know him well complete Scale 2, some inferences may be drawn as to the social validity of the subject's belief that he has changed.

It is not intended that either scale be administered during the session itself. They can be administered at any time subsequent to the experience, preferably scale 1 should be completed with the next few day. It would be wise to delay obtaining responses to Scale 2 for some weeks or months as it takes some time and he will be unable to assess the degree of change for some time. When other people are asked to rate a subject it is wise to wait a similar period of time to give them ample opportunity to observe any changes which may have taken place.

It should be remembered also that the drug sometimes appears to have a delayed action upon behavior. No change may be noted for two or three months, but the alteration after this period is sometimes sudden and dramatic. While such change can be ascribed to other factors, this behavioral change occurring some months after an LSD session which has apparently been therapeutically unsuccessful, is not uncommon. This would seem to offer a further reason for delaying the completion of the assessment.

# APPENDIX A
## SCALES FOR THE ASSESSMENT OF PSYCHEDELIC REACTIONS

Note: Since the studies reported in Appendix B were completed, the scale has been revised. Initially a three point scale was utilized. The scoring categories were "Very Much," "Little," and "None." These appeared to be too gross and a category seemed to be necessary to indicate moderate response.

One of the major problems encountered in administering the scale is the difficulty of distinguishing, in one's assessment, between duration and intensity. A feeling may be intense but brief or mild but extremely prolonged. The scale in its present form makes no attempt to distinguish between these.

## Scale 1

Below are listed a number of things that have been frequently reported by people who have taken certain drugs. Of course, different people feel the effect of the drug differently and some of the listed things will be felt more strongly or for a longer time than others. Would you please indicate the extent to which you felt each of the listed things by checking one of the letters on the right hand side of the page:

| | Very Much | Moderately | Little | None |
|---|---|---|---|---|
| 1. Did you feel that he drug had any effect? | V | M | L | N |
| 2. Did you feel that anything unusual happened in the experience? | V | M | L | N |
| 3. Did you ever before have a similar experience? | V | M | L | N |
| 4. Did you feel physically different in any way? | V | M | L | N |
| 5. Did you notice a feeling of weightlessness? | V | M | L | N |
| 6. Did you notice a feeling of lack of balance? | V | M | L | N |
| 7. Did you find yourself especially talkative? | V | M | L | N |
| 8. Did you feel particularly tense during most of the experience? | V | M | L | N |
| 9. Did it annoy you more than usual to have others interrupt your thinking an speaking? | V | M | L | N |
| 10. Did you feel that you wanted to fight off what was happening to you? | V | M | L | N |
| 11. Did you feel yourself more impatient than usual with other people? | V | M | L | N |
| 12. Did you concentrate much of the time on just a few ideas? | V | M | L | N |
| 13. Did you find the effects of the drug very unpleasant physically? | V | M | L | N |
| 14. Did you have any outstanding symptom such as nausea, palpitations, headache or other physical pain? | V | M | L | N |
| 15. Did you find yourself too weak to move about much of the time? | V | M | L | N |
| 16. Did physical discomfort distract you from everything else? | V | M | L | N |
| 17. Did you fear that you might die during the experience? | V | M | L | N |
| 18. Did you find yourself confused much of the time? | V | M | L | N |
| 19. Was the experience frightening in terms of the images you saw? | V | M | L | N |

| | | | | |
|---|---|---|---|---|
| 20. Did your thoughts keep shifting too rapidly from one idea to another? | V | M | L | N |
| 21. Did the experience seem too complicated to understand? | V | M | L | N |
| 22. Do you feel that you remember much of the experience clearly? | V | M | L | N |
| 23. Did you feel it difficult to organize yourself to do things? | V | M | L | N |
| 24. Did you feel disinterested in usually interesting topics? | V | M | L | N |
| 25. Did you feel that you were insane at any time? | V | M | L | N |
| 26. Did you feel that you might become insane? | V | M | L | N |
| 27. Did you feel suspicious of other people? | V | M | L | N |
| 28. Did you feel neglected by other people? | V | M | L | N |
| 29. Did you feel easily hurt by others? | V | M | L | N |
| 30. Did you feel that other people seemed hostile toward you? | V | M | L | N |
| 31. Did you wish that other people would leave you to your own thoughts and not bother you by talking to you? | V | M | L | N |
| 32. Did you feel that you could see yourself objectively, as others see you? | V | M | L | N |
| 33. Did you feel that other people might find out more about you than you wanted them to know? | V | M | L | N |
| 34. Did you feel that other people were influencing your thoughts against your will? | V | M | L | N |
| 35. Did you feel at times that you were more than one person? | V | M | L | N |
| 36. Did you feel that you were thinking in terms of opposites or alternatives? | V | M | L | N |
| 37. Did you feel that the experience was very real? | V | M | L | N |
| 38. Did you feel emotionally very close to others in the experience? | V | M | L | N |
| 39. Did you feel that you could share other peoples' feelings? | V | M | L | N |
| 40. Did you feel that you could share other peoples' thoughts? | V | M | L | N |
| 41. Did you feel that you could communicate with others in the experience without words or gestures? | V | M | L | N |
| 42. Did you feel a high level of trust and affection for others in the experience? | V | M | L | N |

| | | | | |
|---|---|---|---|---|
| 43. Did you feel that you were able to give yourself up completely to the experience, (i.e. to relinquish rational control?) | V | M | L | N |
| 44. Did you feel that you became more self-accepting? | V | M | L | N |
| 45. Did you feel that you were aware of new dimensions of thought? | V | M | L | N |
| 46. Did you feel an awareness of several levels of awareness? | V | M | L | N |
| 47. Did you feel that you were able to think on different levels? | V | M | L | N |
| 48. Did you feel that you were aware of the long ago? | V | M | L | N |
| 49. Did you notice much change in your judgment of distance? | V | M | L | N |
| 50. Did you feel that you were separate from your body? | V | M | L | N |
| 51. Did you notice any changes in the way you felt the passage of time? | V | M | L | N |
| 52. Did you notice any change in the significance of things or events? | V | M | L | N |
| 53. Did you notice any added brightness of colors? | V | M | L | N |
| 54. Did you notice any difference in the effect of listening to music? | V | M | L | N |
| 55. Did you notice any mingling of color, sound or feeling or blending of other senses? | V | M | L | N |
| 56. Did you notice any images when you closed your eyes? | V | M | L | N |
| 57. Did you notice any images when your eyes were open? | V | M | L | N |
| 58. Did you feel that you were being moved about in space or time by the music? | V | M | L | N |
| 59. Did you feel in the experience like laughing at many of the ideas you help prior to it? | V | M | L | N |
| 60. Did you feel that the experience was an enrichment of things which you already knew? | V | M | L | N |
| 61. Did you feel a close spiritual bond or unity with others? | V | M | L | N |
| 62. Did you feel that there was a unity of all things? | V | M | L | N |
| 63. Did you feel yourself a part of a larger unity? | V | M | L | N |
| 64. Did you feel a close spiritual bond or unity with God? | V | M | L | N |
| 65. Did you find that you gained a more complete acceptance of others? | V | M | L | N |
| 66. Did you feel that your understanding was enhanced? | V | M | L | N |

## Scale 2

In the time which has elapsed since you had the drug you will have had some opportunity to assess the effect which the experience has had upon you.

| | Very Much | Moderately | Little | None |
|---|---|---|---|---|
| 1. Have you felt that what happened in the experience made any important change in you? | V | M | L | N |
| 2. If any such change occurred do you feel it was a change for the better? | V | M | L | N |
| 3. Have you felt more satisfied with yourself as a person since the experience? | V | M | L | N |
| 4. Have you felt that the experience has helped you to solve your personal problems? | V | M | L | N |
| 5. Have you felt that the experience has brought you better understanding of yourself? | V | M | L | N |
| 6. Have you found yourself less likely to get angry since the experience? | V | M | L | N |
| 7. Have you felt that since the experience you are more forgiving and less inclined to hold grudges? | V | M | L | N |
| 8. Have you felt yourself more inclined to have religious beliefs since the experience? | V | M | L | N |
| 9. Have you felt that your values or attitudes were altered by the experience? | V | M | L | N |
| 10. Have you felt that the experience has made you less anxious than you were previously? | V | M | L | N |
| 11. Have you felt that you are more relaxed since the experience? | V | M | L | N |
| 12. Have you felt that you have become more prone to depression since the experience? | V | M | L | N |
| 13. Have you felt that the experience has led to more peace of mind? | V | M | L | N |
| 14. Have you felt that the experience has made you a happier person? | V | M | L | N |
| 15. Have you felt that since the experience you have been better able to be yourself? | V | M | L | N |
| 16. Have you felt that since the experience you have become more considerate of other people? | V | M | L | N |
| 17. Have you felt that the experience has made you an easier person to get along with? | V | M | L | N |

| | | | | |
|---|---|---|---|---|
| 18. Have you felt more satisfied with life in general since the experience? | V | M | L | N |
| 19. Have you felt that since the experience your relations with people in general have improved? | V | M | L | N |
| 20. Have you felt that since the experience you have found it easier meeting people and making friends? | V | M | L | N |
| 21. Have you felt that since the experience your emotional ties with your family and friends have become clear and warmer? | V | M | L | N |
| 22. Have you felt that the experience has made you an improved, more productive worker in your day to day employment? | V | M | L | N |
| 23. Have you felt since the experience that your work has been more interesting and enjoyable? | V | M | L | N |
| 24. Do you feel that since the experience you are more inclined to seek excuses for your mistakes? | V | M | L | N |
| 25. Do you feel that since the experience you are less inclined to prolonged feelings of remorse over acts which you deem undesirable? | V | M | L | N |
| 26. Do you feel that since the experience you have been more inclined to learn from and correct your misdeed? | V | M | L | N |
| 27. Since the experience have you felt that many of your personal difficulties are brought on by the uncooperativeness of other people? | V | M | L | N |
| 28. Have you felt that the experience has increased your willingness to consider new ideas and to see the other fellow's point of view? | V | M | L | N |
| 29. Have you felt that since the experience you see beauty where you didn't before? | V | M | L | N |
| Do you feel that since the experience you have changed so the following sayings of St. Francis applies to you: | | | | |
| 30. Let me not seek so much to be consoled as to console." | V | M | L | N |
| 31. "…to be understood as to understand." | V | M | L | N |
| 32. "…loved as to love." | V | M | L | N |
| 33. Would you recommend that your friends have the experience? | V | M | L | N |

# APPENDIX B
# RESULTS TO DATE

## GENERAL

There has been a very large number of reports of the results of LSD therapy including such studies as those of Abramson (1), (2), (3), Busch (10), Chwelos (13), Eisner (16), Frederking (18), Hubbard (24), Lewis and Sloane (35), Osmond (40), Sandison (43), and Smith (15). Most of these studies have been used as an aid in overcoming resistances to ventilation. There now seems little doubt that LSD used in this way is a very worthwhile aid in psychotherapy.

However, in seeking to obtain the maximal value of the induced experience, we have based our techniques upon the use of large doses. Our aim has been that of producing an experience in which the overwhelming of the customary frame of reference, permits a general re-appraisal of values.

There are, of course, common elements in the experience regardless of the size of the dose ingested. With smaller doses, however, many of the procedures and precautions outlined in the Handbook may be unnecessary or unprofitable, though the potency of the drug and the frequent lack of behavioral reflections of its psychic impact should incline the therapist to risk erring upon the side of caution.

In citing the results to date we have limited our consideration to results based upon the method outlined in the Handbook. In the main we are concerned with the studies carried out by Hubbard, Smith and Chwelos.

Quantified results are not available on Hubbard's very large series of subjects. His was pioneer work in this field and he found the treatment to be so outstandingly successful as to rule out any questioning of its efficacy.

Smith used the drug with chronic alcoholics. His initial study was done upon 24 patients each of whom had an extremely unfavorable prognosis. Many very different cases were included in his study. All but four of these subjects has tried A.A. but had failed to remain dry despite the help offered by the program. Diagnostically half the group were classified as psychopaths, 8 were classified as character disorders and 4 were classed as borderline or actual psychotics. The average period of uncontrolled drinking was over 12 years.

Of this unpromising group, half showed marked improvement and of these 6 did not drink again. These results were obtained at a time when the method was undergoing improvement and refinement.

Chwelos using the modified method which had been developed out of the work of Hubbard and Smith has treated a number of alcoholics since January, 1958.

In evaluating the results obtained to date it should be born in mind that the assessment is based upon the specific method being used and that negative results may derive primarily from the method rather than from therapeutic inefficacy of the experience. This is particularly important since the method has been developed within the last two years. It remains relatively unrefined and further experience could be expected to render it more effective.

## SUBJECTIVE ASSESSMENT OF RESULTS

We must seek to appraise the nature and extent of any change which the individual feels that the treatment process has affected him. This change appears to take place in the person's motivational

pattern. His attitudes and his value system appear to undergo a change which in turn affects his behavior.

Changes of this kind can be assessed to some extent from reports written by individuals after the experience. This is an extremely inexact method, however, and a great deal of classification and interpretation is necessary to obtain any quantifiable results. No other method was available however, until a few months ago. At least two groups, one in California (-)[2] and the other in Saskatchewan are currently working upon this problem. At present the California assessment method, although similar in principle to the scale presented in the following chapter, is adapted to the use of electronic computers covers a tremendous range of material. The method used by the authors is an attempt to rely more heavily upon an intensive investigation of certain apparently relevant areas of LSD-induced experience in which attitude change is to be anticipated.

The use of such a criterion of change is of course open to the criticisms that the person may be incapable of any insightful self-assessment; that he may deliberately alter his answers to put himself in a good light and finally, that subjective feelings of being "better" need not necessarily bear any relationship to the person's actual behavior.

All these criticisms are valid. By itself, subjective assessment is a poor criterion. However, therapy is an experience about which both therapist and patient hold a rather well defined set of expectations. The therapist seeks to provide an experience which will alter the attitudes—and subsequently the behavior—of his patient. The patient seeks help in learning how to cope with troublesome problems. When these expectations are not met therapy is largely unsuccessful. The measure of subjective validity which we have employed gives a fairly clear picture of the extent to which these expectations have been met.

Assessment Scale 1. was devised for use within a few days of the treatment to determine how the subject has responded and the extent to which the subject feels that the experience engendered new attitudes. Scale 2. was devised to determine, some months after treatment, the extent to which the subject felt that his pre-treatment attitude pattern had been apparently permanently altered. The results obtained from these scales are reported at the end of the section.

## OBJECTIVE ASSESSMENT OF RESULTS

Generally in the assessment of treatment, the therapist notes changes in the patient's behavior and indicates the nature and extent of such alteration on some variety of rating scale. This can vary from a single two point scale of, unimproved—improved, to very complex measures involving hundreds of separate ratings. Generally the question is answered in the final analysis by stating that the patient is or is not improved.

In this report we have made use of this variety of assessment by obtaining ratings on the changes in the people treated by the therapist and by the Bureau of Alcoholism.

One assessment of reliability of treatment effect can be approached by determining the commonalities in the experiences of the subjects treated. Commonalities of experience can rapidly be calculated from the data collected on Scale 1. Consistent changes can be assessed by comparing the results of subjects on Scale 2. Again consistent changes can be assessed by the therapists or by other raters in relatively gross terms by determining the percentage of patients whose condition is regarded as improved subsequent to treatment. These results are reported in tables.

It can be seem from this discussion that the proposed methods have need of much further testing. Some may feel that the presentation of a handbook which draws upon so meager a background is

unwarranted. There are three arguments against this point of view each of which seem to offer sufficient justification for the production of a manual at this time.

Firstly, although only 47 cases are represented in the Smith and Chwelos studies, the work of Hubbard upon which their methods are based is very extensive. The work is continuing and many cases have been treated too recently to be reported. Much has been learned from the administration of the drug to staff members and to volunteers. Some 500 individuals have taken LSD in various settings in research into the nature of the drug effect and its therapeutic implications. The authors have been present as observers at some 200 of these sessions and have each participated as subjects in more than 100 group sessions involving 2 to 6 individuals. Through consultation with other investigators having a wide range of experience in LSD work, the authors have been able to learn much which was of great help to them. It is hoped that the handbook may succeed in relaying some of this information.

Secondly, although the sample is small, the treatment does appear to offer remarkable promise. By whatever clinical yardstick one applies, the results appear most interesting. This is evident not only in view of the poor prognosis of the cases dealt with, but also in regard to the fact that in some 35% of the cases treated, a single therapeutic session led to an apparently permanent relief of symptoms.

Thirdly, it is the view of a considerable number of people who have worked with LSD that the re-discovery of the psychedelic properties of certain substances by modern psycho-pharmacologists marks a most important advance in the field of psychology. Harrison (22), James (27), Kluver (31), and a number of others long ago pointed out the importance to psychology of this area of experience but their work was not followed up. Psychology, in its desire to become scientific, attempted to do so by accepting as sufficient the methods of the other sciences. In adopting these it has been forced to restrict its scope to the measurement of the observed behavior of the individual. This concentration upon behavior has precluded the examination, except through reflection in activity, of the awareness, the feelings, the motives, the values and the beliefs from which behavior arises. In neglecting these areas, psychology has omitted those aspects of human individuality which differentiate man from the other animals.

Much has been learned through the behavioristic approach and much more will be learned in the future. However, the tendency to regard this as the only possible avenue to the understanding of human psychology is currently undergoing a change. The growth of interest in the origin and nature of motives, value systems, beliefs, attitudes, mood, etc., is clearly reflected in the literature.

The discovery of LSD by Hoffman and the early investigations by Stoll have led to extensive trials and there is little doubt that work with psychedelic agents will help to accelerate this change in the climate of scientific thinking.

In this process of broadening the scope of scientific psychological investigation the psychedelic drugs are likely to prove extremely important. They offer great promise in therapeutic procedures. Even more remarkable, however, are their potentialities as research tools in the investigation of personality and social relationships.

During the last 150 years there has been a prodigious acceleration of the rate of advance in the physical sciences and their attending technology. The psychedelic drugs may prove to offer the means of a parallel advance—or indeed revolution—in social understanding and human relations.

For these reasons it would seem that any guide which could hope to widen the use of the drug would be useful. Should the guide contain errors, these can only be corrected as more and more investigators come to understand the use of the drug and to pool their information.

## RESULTS OBTAINED BY THE AUTHORS

Scale 1. for the assessment of LSD experience was devised, in part, to ascertain the extent which the expectation of the therapeutic process, which we have outlined below, are met by the phenomena comprising the LSD experience. The questions to be used to tap these areas are indicated by number in the text and are listed below. Table 1, shows the extent to which the subjects felt that the various phenomena were present in their experience.

Almost universally, therapy is seen as a relationship in which the patient can permit himself to surrender many of his previously held attitudes (Question 43, 59) and can escape from his deeply ingrained perspective into a situation allowing for unhabitual perception (Question 2) with its potentiality for change. By so doing he can get a relatively objective view of his motives and can both discern their etology (Question 47, 48) and scrutinize and re-assess their contribution to the psychological valencies of the various elements of his environment (Question 52).

Enhanced understanding (Question 66) developing from this increased self-knowledge and self-acceptance (Question 44) permits him to participate with greatly reduced emotional reservation in inter-personal relationship (Question 65, 38, 42) to come, in fact to see himself not only as a unique individual but also as an integral part of a larger social unity (Question 63). Requisite to any therapeutic effect, however, is his acceptance of the validity of the treatment and what he experiences must seem real and very convincing (Question 37), if it is to be remembered (Question 22) and incorporated in his day to day behavior.

The question asked to study the extent to which the expectations of the therapeutic process were realized, were as follows:

Question 43. Did you feel that you were able to give yourself up completely to the experience?

Question 59. Did you feel in the experience like laughing at many of the ideas you held prior to it?

Question 48. Did you feel that you were aware of the long ago?

Question 2. Did you feel that anything unusual happened in the experience?

Question 52. Did you notice any change in the significance of things or events?

Question 66. Did you feel that your understanding was enhanced?

Question 44. Did you feel that you became more self-accepting?

Question 42. Did you feel a high level of trust and affection for others in the experience?

Question 65. Did you feel that you gained a more complete acceptance of others?

Question 38. Did you feel emotionally very close to others in the experience?

Question 63. Did you feel yourself a part of a larger unity?

Question 37. Did you feel that the experience was very real?

Question 22. Do you feel that you remember much of the experience clearly?

The answers given to these questions by the various groups are summarized in Table I.

TABLE I

Comparison of Responses, NORMALS and ALCOHOLICS
to Questions Dealing with the Therapeutic Aspects of LSD Experience

| | Percentage of Subjects | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Normals (No. 32) | | | | Alcoholics (No. 20) | | | |
| Question | Very much | Little | None | No answer | Very much | Little | None | No answer |
| 43 | 60 | 25 | 6 | 3 | 50 | 35 | 15 | 0 |
| 48 | 50 | 12 | 37 | 0 | 45 | 30 | 35 | 0 |
| 59 | 34 | 23 | 37 | 0 | 35 | 30 | 35 | 0 |
| 22 | 78 | 22 | 0 | 0 | 65 | 25 | 10 | 0 |
| 2 | 90 | 6 | 3 | 0 | 80 | 10 | 10 | 0 |
| 52 | 72 | 9 | 16 | 3 | 50 | 30 | 15 | 5 |
| 37 | 94 | 0 | 3 | 3 | 85 | 10 | 5 | 0 |
| 66 | 62 | 25 | 12 | 0 | 60 | 40 | 0 | 0 |
| 63 | 62 | 19 | 19 | 0 | 50 | 35 | 15 | 0 |
| 44 | 44 | 31 | 25 | 0 | 50 | 40 | 10 | 0 |
| 65 | 47 | 31 | 22 | 0 | 70 | 30 | 0 | 0 |
| 38 | 72 | 22 | 6 | 0 | 45 | 30 | 25 | 0 |
| 42 | 75 | 16 | 6 | 3 | 60 | 25 | 15 | 0 |
| Average | 65 | 19 | 15 | 1 | 57 | 23 | 14 | 0 |

The negative or non-therapeutic aspects of the LSD experience are also covered by the questionnaire. These include physical discomfort (Question 16), anxiety and tension (Question 19 and 8) or confusion (Question 18, 21, 25) which distract the patient, and mistrust (Question 27, 34) which leads to resistance (Question 33) and counter transference.

Questions asked to elicit information with regard to negative or non-therapeutic aspects of the experience were:

Question 16. Did physical discomfort distract you from everything else?

Question 19. Was the experience frightening?

Question 8. Did you feel particularly tense during most of the experience?

Question 18. Did you find yourself confused much of the time?

Question 21. Did the experience seem too complicated to understand?

Question 25. Did you feel that you were insane at any time?

Question 27. Did you feel suspicious of other people?

Question 34. Did you feel that other people were influencing your thoughts against your will?

Question 33. Did you feel that other people might find out more about you than you wanted them to know?

Data derived from these questions are summarized in Table II.

TABLE II

Comparison of Responses, NORMALS and ALCOHOLICS to Questions Dealing with Non-Therapeutic Aspects of LSD Experience

| | Percentage of Subjects | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Normals (No. 32) | | | | Alcoholics (No. 20) | | | |
| Question | Very much | Little | None | No answer | Very much | Little | None | No answer |
| 16 | 6 | 16 | 78 | 0 | 15 | 25 | 60 | 0 |
| 19 | 6 | 19 | 75 | 0 | 10 | 30 | 60 | 0 |
| 8 | 6 | 50 | 44 | 1 | 10 | 75 | 15 | 0 |
| 18 | 12 | 34 | 53 | 0 | 20 | 55 | 25 | 9 |
| 21 | 22 | 44 | 31 | 3 | 15 | 25 | 60 | 0 |
| 25 | 22 | 44 | 31 | 3 | 15 | 25 | 60 | 0 |
| 27 | 6 | 56 | 37 | 0 | 15 | 40 | 45 | 0 |
| 34 | 3 | 22 | 75 | 0 | 10 | 35 | 55 | 0 |
| 33 | 12 | 22 | 66 | 0 | 15 | 25 | 60 | 0 |
| Average | 9 | 33 | 58 | 0 | 13 | 36 | 51 | 0 |

It can be seem from the date presented in Tables I and II that the LSD experience as we have utilized it includes all of the major requisites of psychotherapeutic processes. Troublesome side effects seem to be minimized and are negligible.

## EFFECTS OF MORE THAN ONE EXPERIENCE

One very clear-cut finding with regard to these aspects of the experience was the marked change reported between the first LSD experience and subsequent ones. Relevant data are presented in Tables III and IV.

### TABLE III

Comparison of Responses After One LSD Experience With Those After More Than One Experience

| | Percentage Of Subjects | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | First experience (No. 60) | | | | Second Experience (No. 20) | | | |
| Question | Very much | Little | None | No answer | Very much | Little | None | No answer |
| 41 | 49 | 34 | 13 | 4 | 80 | 15 | 5 | 0 |
| 59 | 40 | 28 | 32 | 0 | 60 | 30 | 10 | 0 |
| 2 | 83 | 11 | 6 | 0 | 90 | 10 | 0 | 0 |
| 48 | 40 | 25 | 36 | 0 | 60 | 35 | 5 | 0 |
| 22 | 66 | 30 | 2 | 0 | 80 | 10 | 10 | 0 |
| 52 | 59 | 23 | 13 | 6 | 80 | 10 | 10 | 0 |
| 37 | 87 | 6 | 8 | 0 | 90 | 10 | 0 | 0 |
| 66 | 53 | 36 | 9 | 2 | 85 | 5 | 10 | 0 |
| 63 | 51 | 30 | 19 | 0 | 85 | 15 | 0 | 0 |
| 44 | 43 | 37 | 19 | 2 | 85 | 10 | 5 | 0 |
| 65 | 49 | 36 | 15 | 0 | 90 | 5 | 5 | 0 |
| 38 | 60 | 28 | 11 | 0 | 95 | 5 | 0 | 0 |
| 42 | 64 | 26 | 8 | 2 | 85 | 15 | 0 | 0 |
| Average | 57 | 27 | 15 | 1 | 82 | 13 | 5 | 0 |

TABLE IV

Comparison of Negative Responses After One LSD Experience With Those After More Than One Experience

| | Percentage of Subjects | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | First experience (No. 60) | | | | More than One Experience (No. 20) | | | |
| Question | Very much | Little | None | No answer | Very much | Little | None | No answer |
| 16 | 10 | 23 | 65 | 2 | 0 | 10 | 90 | 0 |
| 19 | 8 | 27 | 65 | 0 | 0 | 5 | 55 | 0 |
| 8 | 13 | 57 | 30 | 0 | 0 | 40 | 60 | 0 |
| 18 | 22 | 42 | 37 | 0 | 0 | 35 | 65 | 0 |
| 21 | 23 | 33 | 42 | 2 | 5 | 45 | 50 | 0 |
| 25 | 7 | 27 | 67 | 0 | 0 | 15 | 85 | 0 |
| 27 | 15 | 47 | 38 | 0 | 0 | 30 | 70 | 0 |
| 34 | 5 | 28 | 67 | 0 | 0 | 20 | 80 | 0 |
| 33 | 17 | 23 | 60 | 0 | 0 | 20 | 80 | 0 |
| Average | 13 | 34 | 52 | 0 | 1 | 24 | 75 | 0 |

Although these data are based on only 80 cases, they offer definite evidence in the following areas:

When the method outlined above is employed LSD shows marked therapeutic potential.

When LSD is used in a therapeutic setting as described there is a minimum of the disturbing side effects which have given this drug a reputation for producing psychotic symptoms.

There is a marked enhancement of the positive therapeutic aspects and a marked decrease of the negative therapeutic elements in second experiences.

## COMMUNALITY OF TYPES OF REACTION

As has been pointed out the LSD experience is vast in scope, involving all of the sensory modalities, establishing a remarkably intensified and expanded awareness of the environment, altering the body image and the sense of self and altering the usual reference data of the rational processes. Time, space, color, sound and sensation become fluid and the subject develops a state of unhabitual perception.

To try to establish a taxonomy of reactions to LSD is a necessary first step in any scientific investigation of the phenomena involved. We have proposed a classification based upon the fact that, in general, subjects either try to avoid the unhabitual aspects of their perceptions or to explain them in such familiar terms as to make them fit into the accustomed system of analogical thought. With training, however, subjects learn to accept and eventually to organize the unhabitual into new and expanded frames of reference.

These methods of coping with the drug give rise to six types of reaction, of which two are attempts at escape, two are attempts at using insufficient habitual analogies to delineate the unhabitual and two are the results of accepting the reality of the unhabitual.

Scale 1. was drawn up to investigate the extent to which each of these types of experience occurred in each subject's experience. While such information provides a rather crude description of the experience of any given individual, it does permit a comparison of groups and allows for an investigation of the degree of communality of various areas of the LSD experience.

Prior to item analysis and a revision of the Scale, scoring remains inexact. However, the results can be expected to reflect any outstanding differences in the types of experience of the groups involved. The results of this analysis are summarized in Table V.

TABLE V

Percentages of Cases in Each of the Groups
Reporting the Types of Reaction Experienced

| | | Percentage of Cases | | |
|---|---|---|---|---|
| | | First Experience | | More than one experience |
| | | Normals (No. 32) | Alcoholics (No. 20) | (all cases 20) |
| Escape | 1. Flight into ideas | 55 | 55 | 15 |
| | 2. Flight into illness | 25 | 30 | 10 |
| Psychotomimetic | 3. Confusion | 65 | 80 | 20 |
| | 4. Paranoidal | 40 | 40 | 15 |
| Psychedelic | 5. Dual-reality | 95 | 95 | 95 |
| | 6. Synthesized | 75 | 90 | 95 |

In the alcoholic group, when psychotomimetic features develop, they are usually of a confusional quality. In the psychedelic area of experience the alcoholics seem better able to organize the unhabitual aspects of the experience, which could probably be a reflection of their A. A. training.

## OBJECTIVE RESULTS

In the case of the alcoholics we have a recent objective assessment of their condition since treatment. The total number of alcoholics who have been treated will be assessed here except for those who are not available for follow-up for reasons of having become deceased or whereabouts unknown.

In all, 59 alcoholics have received LSD in this province, of these follow-up is presently available in 47. The results of this group of 47 are reported in Table VI. The first group consists of those treated by Smith and Hoffer and the second group was treated by Blewett and Chwelos. The method used underwent considerable modification between these series, Blewett and Chwelos using the method laid out in this Handbook.

The criteria for assessment is based on objective observation of the patient's behavior, drinking, social and work habits, and were obtained largely from the Bureau of Alcoholism and to a lesser degree from A.A. members, the family of the Alcoholic and the therapists own follow-up of the patients progress when available. The classification includes:

### MUCH IMPROVED

This category includes those considered to be recovered, i.e. one year's sobriety. Because in a large percentage of the group there has not been a year's follow-up, included in this group are those who appear to be on the road to recovery, i.e. have not drunk alcohol but follow-up less than a year, drinking markedly reduced to rate of one to two years and in which patient is obviously gaining marked control over his desire to drink. As well as the criteria of not drinking, there is marked improvement in work and social history as reported by objective observers.

### MODERATELY IMPROVED

Included marked reduction in alcohol intake and improvement in work and social history but still relapsing sufficiently frequently that they do not appear close to complete recovery.

### SLIGHTLY IMPROVED

This category includes mainly patients who appear to be attempting a pattern towards recovery, but their overall pattern is not too markedly changed from that before treatment.

### UNCHANGED

No notable change in drinking, work or social habits as reported by objective observers.

TABLE VI

Objective Assessment of LSD Treatment of Alcoholism

| Reported by | No. Cases | Much improved | Moderately improved | Slightly improved | Unchanged |
|---|---|---|---|---|---|
| Smith and Hoffer | 24 | 9 | 1 | 2 | 12 |
| Blewett and Chwelos | 23 | 10 | 5 | 3 | 5 |

The subjects in this table had an average period of uncontrolled drinking of approximately eleven years. Most had more than one complication of drinking such as tremors, D.T.'s, blackouts, peripheral neuritis, arrests for drunkenness, cirrhosis of the liver, and addiction to sedative drugs. Most cases suffered marital disharmony, poor work history and a large number had been separated or divorced while drinking. In the opinion of the Bureau of Alcoholism this group represents a worse than average cross-section of alcoholics and the cases they considered most difficult are mainly in the much improved category. Eighty percent of the cases had tried A.A. and failed in the program.

Another small group not belonging to the previous category have also been treated. This is a total group of nine patients including neurotics, psychopaths and character disorder and there is insufficient number in any category for an assessment. To date, however, all nine cases have been reported as showing definite signs of improvement from the treatment so that there appears to be definite therapeutic possibilities with LSD in this group which certainly warrants more intensive study.

A considerable number of staff members have received the treatment and although no attempt has been made to assess and categorize the effects, the vast majority have reported psychological improvement and an enhanced understanding of themselves and others.

To date then, the drug appears to offer very substantial therapeutic potential to all patients but the psychotic group. However, other workers in this field, particularly Sandison (43), have used the drug with appreciable results in psychoses. This is of course another are where the drug's effects should be explored.

## APPENDIX C
# PROPOSALS FOR PSYCHEDELIC RESEARCH

This appendix constitutes an outline of various areas of the psychedelic experience. Observations are cited which give rise to a number of hypotheses. It is not intended that his outline should be considered as exhaustive.

The outline is offered in the hope that it may, more clearly than other methods, point up the value of research into an area of experience which can throw light upon many basic problems in psychological theory.

Much discussion in the Handbook has dealt with the degree of self-understanding and understanding of others which grows out of the drug experience. As a consequence the reader may feel some concern that the research suggested in this appendix deals extensively with the investigation of various areas of perception and thought process but appears relatively restricted in the area of self-understanding and acceptance. Though these latter areas may well be of remarkably greater importance than much of the work below, it would seem that heir investigation must lag until new and appropriate techniques of measurement and appraisal are forthcoming, for objective accuracy of assessment has, to date, been limited to the measurement of observable behavior. However, as new techniques develop—and the psychedelic experience promises to be remarkably useful in this regard—we may begin to learn how to open to direct scientific inquiry and to shareable objective measurement, the areas of motivation, belief and value and the inclusive subjective complex of the self.

## 1. PERCEPTUAL STUDIES

**Observations:**

a) There appears to be a marked sensory enhancement—color, sound, smell, taste, touch.

b) There appears to be an extension of the time sense.

c) There appears to be a disruption of distance perception.

d) There appears to be a disruption of perception of body image.

e) There appears to be a tendency toward an instability of perception of gestalts.

f) There appears to be a disruption of balance.

g) There appears to be a disruption of temperature sensing.

h) There appears to be a decrease in sensitivity to pain.

i) There appears to be an overlapping of sensory modalities.

These observations would lead one to hypothesize enhanced performance in certain areas.

**Hypothesis**

a) As a result of sensory enhancement

i) There will be an increased capacity for fine discrimination between colors and

an enhanced ability to match colors.

ii) There will be a finer discrimination between differing smells.

iii) There will be a finer discrimination between tones and sound.

iv) There will be a finer discrimination between degrees of loudness of sounds and an enhanced ability to match sounds of equal loudness.

v) There will be a finer discrimination between differing tastes.

vi) There will be an enhancement of touch discrimination (e.g. determining what is written on one's hand, two touch discrimination or the identification of objects by touch.

vii) There will be an extension of limens in the perception of light on the basis of intensity.

viii) There will be an extension of limens in the perception of color into the areas of infrared and ultraviolet.

ix) There will be an extension of limens in the perception of color.

x) There will be an extension of limens in the range of perception of pitch.

xi) There will be an extension of limens on the basis of intensity of sound.

b) As a result of extended time sense

i) There will be higher speed of recognition of tachisticopically presented material.

ii) There will be finer discrimination between very short periods of time.

iii) There will be increased speed of autokimetic movement.

iv) There will be a shorter period of after effect (e.g. Archimedes Spiral).

v) There will be a higher frequence required to produce flicker fusion.

c) As a result of disruption of distance perception

i) There will be less sensitivity to size illusions.

d) As a result of the disruption of body image

i) There will be better mirror drawing performance.

ii) There will be an increased ability to perform dissociative physical tasks such as circling one hand while moving the other up and down.

e) As a result of the instability of perceptual gestalts

i) There will be an increased ability to find hidden or imbedded pictures.

ii) There will be an increased ability to break down gestalts in such tasks as letter finding.

iii) There will be an enhanced ability of gestalt completion tests.

iv) There will be an enhanced performance of tasks calling for the restructuring of presented gestalts (e.g. anagrams, scrambled or reversed words or sentences).

v) There will be a swifter shift to alternate concept in concept bridging series.

f) As a disruption of the sense of balance

i) There will be less proneness to dizziness.

ii) There will be less directional disorientation as a result of spinning while blindfolded.

iii) There will be less proneness to motion sickness.

iv) There will be an enhancement of body sway and static ataxia.

g) As a result of disruption of sense of temperature

i) There will be greater tolerance of heat and cold.

h) As a result of decreased sensitivity to pain

i) There will be a greater tolerance of painful stimuli.

i) As a result of overlapping of sensory modalities

The observations would lead one to hypothesize a decrement in performance in the following areas:

**Hypothesis**

a) There will be a decreased ability to discriminate between longer periods of time (i.e. intervals in excess of five seconds.)

b) There will be decreased performance on size-distance tests.

c) There will be a decreased ability to estimate distance.

d) There will be a decreased ability to make fine discrete motor responses.

e) There will be a decreased ability to discriminate between fine differences in weight.

f) There will be a decreased ability to discriminate between fine differences in temperature.

g) There will be a decreased ability in tasks calling for a sense of balance.

h) There will be a decrement in performance on tests of persistence.

## 2. STUDIES OF THOUGHT PROCESSES

**Observations**

a) Associations appear to be made a higher speed.

b) Associations appear to cover a wider range.

c) There appears to be an enhanced ability to see alternatives.

d) There appears to be an enhanced ability to relate ideas across usual boundaries in thinking (frames of reference).

e) There appears to be an enhanced ability to reason by analogy.

f) Time appears to be more readily transcended in thinking.

g) There appears to be an enhancement in deductive ability.

h) There appears to be an enhanced ability to draw inferences from given date.

i) There appears to be a tendency to think more abstractly.

j) There appears to be a decreased ability to limit associations.

k) There appears to be a decreased span of attention.

l) There appears to be a decreased ability to attend selectively.

m) There appears to be a decreased ability to select from among a series of possible alternatives.

In some areas one would hypothesize enhanced performance.

**Hypotheses**

a) As a result of higher speed of association

i) Greater fluency of timed tasks of association.

ii) Increased ability to suggest criteria for classification.

iii) Increased ability to determine the basis upon which presented classifications have been made.

iv) Increased capacity for symbolic communication. (e.g. in such tasks as identifying caricatures, playing Botticelli, charades, etc.)

b) As a result of a wider range of association

i) More inclusive concepts will be used on classification or sorting tests.

ii) There will be an enhanced capacity to see "missing links" in a series of concepts.

c) As a result of increased capacity to see alternatives

i) Given data for which alternative solutions are possible there will be a more rapid identification of these.

ii) Given a series of alternatives the basic data will be more rapidly determined.

iii) There will be an increase in the speed of reversal of ambiguous perception.

iv) There will be an enhanced ability to determine missing steps in a series.

d) As a result of enhanced ability to relate ideas across accustomed frames of reference.

i) Enhanced capacity on tasks calling for a shift of context (e.g. Zen koans).

ii) Enhanced ability to solve riddles or to predict the endings for jokes which rely upon a sudden change of frame of reference.

iii) Faster learning of paired nonsense syllables or unrelated concepts.

e) As a result of an enhanced ability to reason by analogy

i) Increased performance on tests based on analogical thinking.

f) As a result of an enhanced ability to transcend time

i) There will be an enhanced ability to see similarities in historically discreet events.

ii) There will be an enhanced pre-cognitive capacity.

iii) There will be an increased tendency to think in terms of process rather than in terms of discreet events

iv) There will be an enhanced capacity for the recall of specific instances in one's past.

g) As a result of entrancement of deductive ability

i) Increased performance on tests based on analogical thinking.

h) As a result of enhanced ability to draw inferences from given data

i) As a result of the tendency to think more abstractly

i) More abstract answers will be given in such tests as proverbs, similarities, etc.

In some areas one would hypothesize a decrement in performance.

**Hypotheses**

a) There will be a decreased capacity for the selection of "sight" answers from a series of possible related alternatives.

b) There will be a decreased capacity to limit associations in accordance with various restrictive instructions or frames of reference.

c) There will be a decrement in performance in tasks calling for trial-and-error learning.

d) There will be a decrement in performance in tasks calling for prolonged selective attention.

e) There will be a decrease in zarganic effect.

**Observations**

a) There appears to be an enhancement of emotional sensitivity to the moods and feelings of others.

b) In group experiences there appears to be a direct non-verbal communication of feeling.

c) In group experiences there may be non-verbal communication of ideas.

**Hypotheses**

a) As a result of enhancement of emotional sensitivity

i) There will be an increased ability to identify emotion from photographs.

ii) There will be an increased ability to determine when another person is lying and when he is telling the truth.

b) As a result of enhanced communication of feeling in group experiences.

i) There will be an increased capacity in determining how others have responded, are responding or will respond, to various stimuli, (e.g. Dymond type empathy tests).

ii) Capacities for such activities as psychodrama and role playing or for such activities as charades will be very much enhanced.

iii) Agreement should be found between ratings by group members, (e.g. adjective check tests scored to indicate how each group member in turn responds to stimuli such as music, paintings, etc.).

c) As a result of non-verbal communication of ideas

i) Using a group in which one subject knows the answer to a series of problems, the performance of the other group members should be enhanced.

- This situation should be studied under several conditions.

  a) When the subjects are face to face.

  b) When the subjects are in the same room but cannot see each other.

  c)When the subjects are at a distance.

- It should also be studied in various qualities of settings ranging from the friendly and accepting to the cold and hostile.

- This situation should also be studied using various types of content for communication ranging from such abstract material as Zeno cards to highly effective material.

- The situation should also be studied using various doses.

## 4. STUDIES IN THE AREA OF AESTHETICS, VALUES, AND BELIEFS

**Observations**

a) There appears to be a tendency toward an enhancement of appreciation and enjoyment of various art forms, particularly music.

b) This appreciation appears to be colored and qualified by each participant in a group experience.

c) There appears to be a tendency for belief to shift toward:

i) Greater self-acceptance and self-understanding

ii) Greater acceptance, appreciation and respect for other people.

d) There appears to be a tendency for belief to shift toward the acceptance of prime cause.

**Hypotheses**

a) As a result of enhanced enjoyment and appreciation of music and other art forms.

b) As a result of qualification of appreciation by other group members

c) i) As a result of the tendency for values to shift toward greater self-acceptance and self-understanding

a) The subject will report the above on self rating scales.

b) The behavior of the subject will become less defensive.

ii) As a result of the tendency for values to shift toward greater acceptance of others.

a) Persons who know the subject will indicate that such a change has taken place.

b) The behavior of the subject will become less hostile.

c) Scores obtained on attitude, adjustment, personality or interest inventories will reflect better adjustment.

d) Lowered scores on scales of Authoritarianism and on such scales as Eysenek's scale of Tough-mindedness.

## 5. STUDIES IN GROUP PROCESSES

**Observations**

a) In group experiences, within group communication is improved.

**Hypotheses**

a) i) Group decisions will be arrived at more rapidly.

ii) Limitations imposed on communication will have less effect.

iii) There will be less expression of annoyance and hostility.

Studies should be conducted to try to determine the effects of varying group size in terms of:

i) Group efficiency

ii) Levels of empathic relation between members.

iii) Group solidarity or unity.

## 6. STUDIES RELATING TO DOSAGE

Using double blind techniques and subjects familiar with the general drug reaction, objective and subjective data should be gathered on the effects of doses ranging from 50–1000 gamma.

Relevant variables accounting for differences in the psychological effect of varying dosage, should be sought out.

Scales should then be developed to obtain some objective measure of change on these variables.

Studies could then be carried out, again using double blind techniques to determine the effect upon members of a four group in which dosage in three cases is constant and that in the fourth member varies.

## NOTES

*1. (pg 50) The original manuscript has these empty brackets, and does not specify which of the Abramson references are supposed to be referenced here.*

*2. (pg 58) These empty parentheses appear in the original, which does not specify any groups.*

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