

LSD - The Problem-Solving Psychedelic

P.G. Stafford and B.H. Golightly

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Preface by Dr. Humphrey Osmond

THIS IS A GOOD and interesting account of some positive uses of psychedelics written mainly for the non-technical reader. In some details it can be faulted, but it is a stimulating work, full of information, much of it gleaned patiently from the journals and some obtained directly by the writers in the course of their enquiries. However, this does not, I think, constitute its main importance, and its significance would be completely misunderstood if it is seen only in this light. It will certainly be read widely by the psychedelic generation and their successors; but in my opinion, it should receive the closest attention from those who consider themselves older, wiser, and more in touch with sober reality than these adventurous people. I hope that my contemporaries and colleagues will read this book and give it their careful consideration, because if we do not grasp clearly what its authors are saying, we can easily make some serious errors of judgment.

Unless I have completely misunderstood the message, this book must be looked upon as a manifesto from one generation to another—from the young to their elders. As I see it, the younger generation is telling us that it proposes to use psychedelics because it considers them appropriate instruments for living in the hurricane's eye of accelerating change. These young people consider that it is neither possible nor desirable to prevent them from employing these substances in this way, and in fact they are challenging lawmakers, law givers and law enforcers to stop them.

If I am correct in this assumption, there is already a serious source of disagreement between people of different ages. It may well be that the authors have over estimated the extent to which interest in these remarkable substances exists today, and to which it will be maintained in the future. Some of my colleagues hope and indeed believe that this is just a fad which will soon die out. This is possible, but I would not bet on it.

Supposing they are correct, what then? If psychedelics are indeed agents both for adapting to and producing social change, then clearly we may expect to see their effects in the fairly near future, if we are not seeing them already. Those who dominate the administrative structure, many of whom seem to be very ignorant about psychedelics and inclined to even doubt their existence, have only two courses of action open to them—they can either suppress psychedelics and punish those who make, distribute and use them, or they can seek ways of incorporating these innovations in the main stream of our society. Since there is reason to suppose that the psychedelic experience can be produced without drugs and while some of these non-drug methods are safe, others are more dangerous to health than chemicals, it is by no means certain that suppressing the chemicals, even if possible, would solve the psycho-social problem.

This book gives us many accounts of experiences which will undoubtedly liven and enrich, but also at times, endanger us. One is forced to ask oneself, supposing it were possible to suppress both the chemicals and the experience, would we still be wise to attempt this? The authors and many of their readers will not, I think, allow us to avoid this issue with learned platitudes.

The elderly of whatever chronological age have always resisted and feared innovation, and when they have been unable to prevent it, have usually urged that innovators should desist until the matter had been mulled over for a few centuries. Innovators, however, are impatient creatures and do not wish to hasten slowly.

Even when innovation has been successfully repressed, such success has often had bitter consequences. The elimination of the Albigensians by fire and sword is not now seen as a particularly creditable episode in European Church history, even though it was considered to be a crusade at the time. Galileo's forced recantation is now seen as being an unnecessary blunder by Pope Urban VII and his advisors. It did not achieve its goal; however, even the Vatican did not attempt to prevent people from grinding telescope and other lenses, and astronomers continued to look at the stars. Today it is possible to make reasonably efficient and not very dangerous psychedelics more easily and more inconspicuously than it was to grind even moderately efficient lenses in the seventeenth century. All the evidence is that it is becoming steadily easier. Knowledge about the use and abuse of psychedelics is, as this book shows, widespread and easily available. Curiosity and love of adventure alone would encourage people to seek and find these substances even where there are not a number of very serious reasons for doing so. These facts must be recognized if those in authority plan to prevent the growing use of psychedelics.

Of course, if we decide that we cannot prevent them being made and used, then it would be folly to pretend that we can, and wholly different policies must be devised to ensure that safer substances and methods are developed, combined with suitable customs and traditions for preventing harm to society and its members. The worst possible solution would be to prohibit these substances with a ban that did not work.

As one might have predicted, things have moved more quickly than my old friend, Aldous Huxley, and my many professional colleagues expected a decade or so ago. Nevertheless, he and we have warned repeatedly that official unwillingness to face what was likely to happen must lead to muddle and unnecessary misfortune. At present, hastily passed laws have much restricted the professional use of these powerful and extraordinary tools to the chagrin of many long-established investigators. No such inhibitions deter the psychedelic generation who are continuing their explorations, learning, sometimes painfully from their mistakes, and seeming determined to continue to follow up the many remarkable possibilities which the authors of this book have vividly discussed.

As we grow older many of us become unwilling to believe that we live in a strange and dangerous world in which the very air which we breathe becomes lethal at times. We long for something safer, more predictable, and cosier. Dr. Roger Revelle, Director of the Harvard Center for Population Studies, said recently, "Once men start down the technological road, they cannot turn back, once having bitten into the fruit of the tree of knowledge, there can be no return to the Eden of innocence and ignorance." This certainly applies to psychedelics, and some of the shrill denunciations of these substances and those who employ them are likely to encourage defiance and rasher use, rather than to foster caution and good sense. It seems that there are many of us who wish to applaud the young for being adventurous, non-conformist and tackling the great problems of our era, but we expect them always and only to adopt means for solving these problems which are congenial to us and of which we approve. Yet the very existence of some of our greater social conundrums is evidence of a need for wholly new approaches. It is asking too much that we should expect people to be original and creative, yet conformist and unable to dispense with our prejudices and preconceptions.

I do not doubt that this book will be widely read, but I hope that its readers will not be confined to those who already believe in its authors' opinions. The "nay-

sayers," the critics, the cynics, the uncommitted and the undecided have a duty to consider the propositions put forward here, for one way or another they are likely to affect our lives and those of our children and grandchildren after them. The consequences of an extra-legal psychedelic movement, a maquis, employing these psycho-pharmacological weapons, would be wholly different from the same substances used within the social and legal framework. We must take these matters seriously because this book shows, if it shows nothing else, that members of the psychedelic movement are in earnest and are unlikely to be permanently deterred by either threats or blandishments. It is not even certain that they will "think differently when they are older and more mature." Such evidence as we have does not support this reassuring platitude.

There are rarely simple answers to great social problems. This book gives one an opportunity to ponder possible answers to this one and to seek wise and feasible conclusions upon which decisions can be reached for taking actions which do as little harm as possible. Such modest goals are not dramatic and do not appeal greatly to those who are already for or against the psychedelic movement. Nevertheless, the history of great differences of opinion shows that very often when the dust of conflict is settled, the damage assessed and the dead and wounded counted, there are far fewer complete victories or utter defeats in the realm of new ideas than is commonly supposed.

As passions rise, those who stand "hat-a-hand" between the contenders seem to be lacking in zeal, integrity, and courage, for compromise, one of the most biological of human virtues, is like nature itself, curiously incomplete. With only a little imagination, some common sense, much patience and a great deal of sustained good will, these instruments can be put to many uses for the general benefit of mankind, provided only that those who are using them and intend to use them in the future, and those who wish to limit and restrict their use respect each other's sincerity and negotiate as equals. We do not know whether this will happen. Those who are already convinced of the rightness of their cause rarely stop to think. I hope that on this occasion at least some of them will remember that those who will not learn from history are often fated to repeat it.

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Introduction by Dr. Duncan B. Blewett

IN THIS VOLUME the authors have performed a service which has long been badly needed. They have collected and presented all of the important evidence to date on the use and effectiveness of LSD. It is a tribute to their ability that the material is presented in a clear and straightforward fashion and in a style which does not lapse into either the vague other-worldliness of mysticism or the sterile irrelevancy of scientism.

This comprehensive presentation of evidence regarding the psychedelics has become imperative because the power of these compounds has forced them upon the notice of the public. Agencies of government, reflecting a widespread resentment at this intrusion, without bothering to investigate the evidence have begun attempts to prohibit the use and eliminate the spreading influence of the psychedelics. It has long been evident to those working with the psychedelics that suppression will not be successful and that governments should, both in wisdom and in prudent regard for potential excise revenue, aim at education, which would be relatively easy, instead of attempting prohibition, which would be costly and unavailing. Stafford and Golightly highlight, illustrate and underline this point. In this volume they present the reading public with so clear an intimation of the potential utility and humanizing influence of the psychedelics that the reader will come to question the humanity, the wisdom and the ethics of legislation which effectively withholds relief from those whose suffering could be ended or eased by the use of the psychedelics—the autistic child; the person suffering the otherwise uncontrollable pain of terminal cancer; the neurotic; the alcoholic; the sexually maladjusted; the psychopath; or the dying individual who finds death the ultimate terror.

It is inevitable that time, human need and the search for self-understanding and self-actualization will force upon those in control a closer, more serious and honest appraisal of the psychedelics. When this situation develops—and it will not be many years in coming—this book will serve as a resource work of major importance. It will serve too to stimulate other writers to follow the authors' lead and to produce further objective and useful volumes. One can but hope that many of them will approach the standard which Stafford and Golightly have established.

The discovery of LSD marked one of the three major scientific breakthroughs of the twentieth century. In physics the splitting of the atom provided access to undreamed-of energy. The biologists are upon the threshold of learning how to manipulate genetic structures and bringing the process of evolution under human control. In psychology the psychedelics have provided the key to the unimaginable vastness of the unconscious mind for, as Suzuki stated, "Our consciousness is nothing but an insignificant floating piece of island in the Oceanus encircling the earth. But it is through this little fragment of land that we can look out to the immense expanse of the unconscious itself."

In the last of these discoveries lies the key to survival. For if man is to cope with his new-found physical and biological power and responsibility, there must be an abrupt and decisive revision of human psychology. The motives which have made human history a chronology of bloodshed and brutality will otherwise certainly and shortly lead to the annihilation of the species.

The psychedelics offer the hope that we are on the threshold of a new renaissance in which man's view of himself will undergo dramatic change. Alienated and encapsulated, he has become trapped by his history in outmoded institutions

which disfigure him with the creed of original sin; corrupt him with fear of economic insecurity; dement him with the delusion that mass murder is an inevitable outcome of his nature; debase him to believe that butchery in the name of the state is a sacred duty, and leave him so crippled that he is afraid to seek self-understanding or to love and trust himself, his neighbor or his God.

Only the psychedelics offer the hope that man *can* grow rapidly and fully enough to meet the challenge mounted by his technical accomplishments.

The models of man and the frames of reference involved in our technologically centered society are proving increasingly inadequate in the face of the profound, revolutionary transformation of the times in which the dividing walls of social, political and economic structures are rapidly being eroded. A new morality is called for in a world in which conception is becoming voluntary; genetic structures are becoming open to deliberate manipulation; socialization can be controlled to fit a "Brave New World" and traditional sex roles are proving unacceptable. New political institutions are required in the face of the power to exterminate the race, the immediacy of communication, the emergence of political awareness among all the peoples of the world, and the need to protect democracy against the consequences of specialization. New economic structures are demanded to balance supply with actual demand rather than with purchasing power; to permit the distribution of constructive, nutritive, helpful things with the same level of organization and skill with which we are able to distribute deadly and noxious things in time of war, and to permit men to find a sense of dignity, worth and accomplishment in an automated world.

Already in the arts we have seen old forms shattered. In the social sciences, and particularly in psychology, we are being forced to re-examine those aspects of man's nature which cultural and scientific specialization have neglected. But this age of transformation is also one of crisis and intense anxiety. Dread confronts mankind and, in its shadow, fundamental questions which have long been neglected grow imperatively urgent.

Every man has asked himself, "Who am I?"; "What is this thing I call myself?"; "What is its purpose?" and "How can I fulfill that purpose?". These are basic questions which each individual must answer. The quality of his life depends upon the nature of his answers. They lie at the foundation of self-knowledge and self-understanding, without which all other knowledge is useless.

But how is self-knowledge to be attained? Our vision, and consequently our comprehension of our selves, is blocked out in many areas by repression. Even where the aspects of the self are open to our scrutiny, our past experience keeps our observations and interpretations bound in the ruts of conditioned response.

The creative potential of the psychedelics lies in the fact that they change one's relation to one's self. When this change induces fear and attempts at escape, it is known as depersonalization, but when it evokes pleasure, it is called self-transcendence. In either case, one stands outside one's defensive structures in such a manner that they are seen clearly for what they are—methods of effacing or distorting uncomfortable features of reality. Having seen through them, one can no longer hide behind them for they have become transparent. This opens to conscious awareness a wider, clearer, more complete view of the world—an unhabitual, unified and undistorted "new look" which is the basis of the creative

capacity and the problem-solving ability which the authors have clearly described and carefully documented.

The transcendent process also lies at the core of the therapeutic use of the psychedelics. When the defense mechanisms are obviated, one sees one's self objectively. One is, as it were, emotionally naked to one's own gaze. This is the confrontation of the self with no means left to defend against one's own scrutiny and one's own enmity. This is the crux of the process which transforms the value system and hence the man. In this defenseless and indefensible state one cannot fight, and surrender alone is possible. In this case it is self-surrender—a process which leads to being "born again" or of "finding" one's self. It is the final and ultimate acceptance of reality, including the self, as it is in essence. In this way one learns to accept the self; to be content to be one's self and to find one's self an object of his own compassion. The importance of this process is evidenced in that our self-concept conditions our thinking. It makes us respond with trust, understanding, love and affection or, conversely, with suspicion, prejudice and hostility toward ourselves and toward others. Because the feelings are the wellsprings of behavior, they color—indeed determine—all of our relationships.

However, the importance of the psychedelic or transcended levels of consciousness extends far beyond their effectiveness in problem solving or in more directly psychotherapeutic activity. The paramount importance of these states of mind lies in the field of basic research into the nature of man. The psychedelics, by inducing these levels of consciousness which are vast extensions and enlargements of normal experience, provide a microscope for the psychologist through which the details of structure and function of personality can be clearly observed.

Science requires the objective observation of the elements which comprise the field of study. Among the sciences the study of the human mind encounters the unique problem that the mind itself is simultaneously the observer and the observed. From within normality its very homogeneity prevents the recognition of much of its nature. Freud's remarkable contribution to the field of psychology lay in his inspiration to compare and contrast normal and abnormal states of consciousness. Thus he used abnormality as an outside reference point a mirror in which some of the lineaments of normality could be discerned.

The psychedelics provide us with another external reference point from which to view the normal mind. The mirror of the abnormal is constricted, distorted and devitalized. In using it, the investigator must interpret from minimal data, since he must infer the nature and scope of repression; and he must, to obtain information, overcome the resistance of maximal defense in painfully fearful, withdrawn and hostile individuals. The mirror of the psychedelics, however, suffers from no such distortion. It reflects a clearer, larger, more complete image than that of normal observation. As a cinematic film, when projected upon a screen, is enlarged until each detail can be clearly seen, so is the personality projected and enlarged through the enhanced awareness and extended consciousness of the transcendent experience. In this state the problems of constriction, enervation and distress are obviated. The individual is more open, less defended, easier of access, friendlier, more competent and open-minded in observation and better able to report.

The psychedelics give warrant of being man's most valuable resource to date in solving problems and in treating emotional disorders. Readers will find themselves puzzled by the paucity of psychedelic research in the light of the findings which have been made, and they are likely to be even further perplexed by the

regrettable restrictions even now being placed in the road of further intelligent investigation. Perhaps the chief barrier to extensive research is the fact that the scope and power of the psychedelics render them a fundamental "novelty," to use an expression of Whitehead's:

The universe is vast. Nothing is more curious than the self-satisfied dogmatism with which mankind at each period of its history cherishes the delusion of the finality of its existing modes of knowledge. Sceptics and believers are all alike. At this moment scientific sceptics are the leading dogmatists. Advance in detail is admitted; fundamental novelty is barred This dogmatic common sense is the death of philosophic adventure. The universe is vast.

This book offers the promise that the expressed concern of an informed public and an open-minded scientific community may overcome the fear and dogmatism which characterize present official attitudes toward the psychedelics. It pioneers the way for a wide-scale scientific and philosophic adventure into the vastness of the universe of the mind.

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Chapter I. The LSD Crisis

POLICE RAIDED a Flatbush apartment and found \$15,000 worth of LSD—"Enough," a police official declared, "to get the whole city high."... A five-year-old girl swallowed a sugar cube treated with LSD, became hysterical and was on the critical list at Bellevue Hospital for two days... A fifty-seven-year-old schoolteacher was brutally murdered, her body beaten and slashed. When police confronted her alleged killer, he said, "What happened? Man, I've been flying for three days on LSD. Did I kill my wife? Did I rape anybody?"

This was the beginning.

These news stories, with over-sized and shocking headlines, appeared in reputable newspapers across the country. Special interviews with district attorneys, college presidents, Narcotics Bureau agents, doctors, biochemists and others who might be considered authorities in what seemed a national emergency, pre-empted prime radio and television time to issue warnings, give advice and explain these events to the public. The chairman of the New York County Medical Society's Subcommittee on Narcotics Addiction said that LSD was more dangerous than heroin." The FIA and Federal Narcotics Bureau launched full-scale "drug education" programs; three Senate subcommittees investigated LSD use; and bills that made possession of LSD or other hallucinogenic drugs a felony were introduced into state legislatures throughout the nation. New York State Assembly Speaker Anthony J. Travia, when attempting to push through hurry-up legislation calling for a minimum sentence of seven years, declared that the problem was so urgent that he would defer public hearings on the law until after it passed.

Before the month was out, even wilder stories and headlines were appearing. *The Los Angeles Free Press* ran a story called "LSD: Like Swift Death." In one of Walter Winchell's columns there was an item reading, "Warning to LSD Users: You may go blind." And Bill Trent, writing in the Canadian *Evening Telegram* about an architect's serious and successful attempt to solve a design problem by taking LSD, titled his story "The Demented World of Kyo Izumi."

Others were quick to link LSD to sex. Thus *The Confidential Flash* asserted in a full-page headline, "LSD KILLS SEX DRIVE FOREVER" although the story itself in no way bore out this claim. And, interestingly enough, the *Police Gazette*, in its August, 1966, issue, reprinted an article from *The Journal of the American Medical Association* which they retitled "LSD and Sex Madness."

Quite understandably the public responded with horror, seeing LSD as a grave threat to the general safety, especially of the young—for the impression given by the news media was that the nation's youth was the most imperiled.

Actually, although this period was the true beginning of all the violent noise and hysteria about LSD, there had been a leakage of articles from the academic journals to the public press for several years. However, the fuse of the news bomb, lit a month earlier, was a series of articles in *Time* magazine. Here is what was to be found in the "Psychiatry" section of its March 11, 1966 issue under the subtitle, "An Epidemic of 'Acid Heads'":

The *disease is striking* in beachside *beatnik* pads and in the dormitories of expensive prep schools—it has grown into *an alarming problem* at U.C.L.A. and on the U.C. campus at Berkeley. And *everywhere the diagnosis is the same: psychotic illness resulting from unauthorized, nonmedical use of the drug LSD-25...*

By best estimates, 10,000 students in the University of California system have tried LSD (*though not all have suffered detectable ill effects*). No one can even guess how many more *self-styled "acid heads"* there are among *oddball cult groups*....

What LSD *actually has done*... is to produce "*florid psychoses with terrifying visual and auditory hallucinations, marked depression, often with serious suicide attempts, and anxiety bordering on panic*.... The symptoms *may* recur in their original intensity long after the last dose of the drug...."

Even junior acid heads boast of taking walloping *overdoses*. "I've taken as much as 500 micrograms," says one youthful user. "At least that's what I paid for."

Happily, *addiction is* not a problem. Although repeat users need *bigger doses* to get an effect, they can "*kick it cold*" and suffer no *withdrawal symptoms*. It has no physiologic effect.... (Italics added.)

Irresistible incitement to riot.

The pulp press, television and radio, having had first fling, household news magazines then began to examine the LSD situation. Some of them, *Newsweek* and *The New Republic*, for example, quietly suggested—after going along with the general trend of wide-eyed fright—that perhaps the drug might not be such a menace after all; and perhaps it was deserving of a serious examination *Business Week*, in an article entitled "More Light, Less Heat Over LSD," pierced through some of the fog of notoriety that swirled around this and other hallucinogenic drugs by informing its readers that "an imposing roster of medical opinion was found to credit the hallucinogens with a solid list of potential medical and psychiatric benefits to match their oft-trumpeted dangers to the unwary." Some of the major television and radio networks began to feel this way, too, and CBS actually put on a special program, "The Spring Grove Experiment," that had scarcely a harsh word to say about LSD, used under proper circumstances. In fact, for most reviewers it may have acted as a major propaganda piece for the drug.[1]

After the way was paved by these serious re-evaluations, *Time* itself decided to do some backtracking, stating ". . . no responsible authority wants to stop research into the potentially vast possibilities of LSD and other 'mind drugs.'" In this same "Time Essay" (June 17, 1966), the editors would have it appear that *Time* itself was impartial and had always been: "Since the recent flood of publicity about LSD has let up somewhat, it is possible to assess the phenomenon more calmly...."

But the drug's reputation was already so tarnished that no one could predict its future. One thing was certain: legislation against LSD had been passed by a number of states[2] and, as a result, LSD research had come to a standstill. And there were tragic footnotes: key individuals, such as Dr. Timothy Leary and the novelist Ken Kesey, received what was generally considered outrageously unjust and discriminatory treatment at the hands of the law. Even *Time* had some doubts about the anti-LSD legislation (although they believed, in their words, that Leary "finally got his comeuppance"), as did the authorities. Thus Joseph D. Lohman, the man in charge of training Food and Drug Administration agents assigned to LSD control, and Dean of the University of California criminology school in Berkeley, criticized hastily enacted LSD laws as "short-sighted and misdirected." Speaking of the California LSD legislation, he went on to say, "I question very seriously that this law would have the deterrent effect some people think it will have."

The spate of publicity regarding LSD was by no means limited to the popular media or to technical journals. Over 2500 books and articles were already in existence when the controversy was at its height. The majority of these were serious inquiries into the effects of the drugs, though few were impartial, however "scientific." This material constitutes a vast literature on the subject, to be sure. It should be the source of enlightenment.

The reasons why it is not are somewhat bewildering. In the first place, although the body of literature is large, it is at the same time narrow in scope, and upon initial examination this flaw is not apparent. Initially one is overwhelmed by the prolific writing and its vitality, and inundated by the diversity of the reports. But these reports themselves tend to be of only two types (which primarily accounts for their narrowness): first-person narratives of LSD experiences, and clinical findings. Neither offers completely satisfactory explanations for the drug's action.

LSD easily lends itself to misinterpretation. Even if the extremely difficult problem of communication—frustrating to every experimenter—were overcome, clear and plausible explanations of the drug's action still would not result. The phenomenon is too complex and too foreign to our culture to be handled in simplistic fashion. Curiously, however, running like a small strain of precious ore through this deposit of prose are specific and impressive proofs for LSD's revolutionary powers. Unfortunately, most of this information seems to have been put down almost incidentally, sometimes almost apologetically, or even as an afterthought.

In the present work the primary interest is in mining the existing material and trying to locate a mother lode. Thus, rather than just another comprehensive examination of LSD, this book is unique in its limited aims. To date, no other book or article has concentrated its explorations in this area.

No LSD investigator, whether from the establishment or the underground, will deny that this chemical can, has and does solve some problems. But what are these problems? They are to be found in all areas of human activity: business, pleasure, sickness, health, birth, death, ad infinitum. Somewhere you will find in the vast body of LSD literature specific reference to the drug's ability to aid in the alleviation of those countless problems by which man is beset.

But before undertaking a rigorous presentation of the evidence for LSD's problem-solving capabilities, some basic principles of the drug's action must be understood.

Footnotes

1. Following this show, sponsored by IBM, hundreds of letters from viewers were received at Spring Grove State Hospital, Catonsville, Maryland. Many asked how they could arrange an LSD session and went into some detail about the problems they felt such a session would solve. Hollywood Hospital in Canada is frequently confronted with the same question, as are many other hospitals (and private doctors) which have received publicity about their LSD programs.

2. Nevada, California, New Jersey, Michigan, Massachusetts.

Chapter II. What the Drug Does

IN APRIL, 1943, Dr. Albert Hofmann, a research chemist at Sandoz Laboratories in Basle, Switzerland, accidentally inhaled or ingested a minute quantity of a tasteless, colorless and odorless compound he had synthesized five years earlier from the rye fungus, ergot. This synthesized substance was called *d-lysergic acid diethylamide tartrate*, and it was known in the lab as LSD-25 because it had been discovered during the twenty-fifth experiment of a series of tests with ergot.

After Dr. Hofmann's "accident," unnoticed at the time it happened, he began to feel strangely lightheaded and restless, and he decided to leave work. "I experienced fantastic images," Dr. Hofmann later stated, "of an extraordinary plasticity. They were associated with an intense kaleidoscopic play of colors. After two hours this condition disappeared." Hofmann puzzled about this experience for several days and then decided to swallow 250 micrograms of the substance to see if this had been what had caused his peculiar sensations. The experience which followed confirmed the potency of LSD, and thus Dr. Hofmann became the first of at least a million people to know firsthand the bizarre effects of the most powerful drug yet known to man.

When Dr. Hofmann's account of this incident was published, it stirred great interest in scientific and medical circles. Early researchers who worked with LSD believed that it could temporarily reproduce an exact facsimile of schizophrenia, and they undertook hundreds of studies. This was due to the fact that the drug did much more than produce "fantastic images." It seemed to create madness, disassociation and other radical mental disturbances, and the effect from a standard dose lasted for eight to twelve hours—long enough to thoroughly explore the result. Although the hypothesis that LSD mimicked madness has—with a few exceptions—since been discarded, academic interest had been stimulated and continued.

In the fifties, investigators from a great number of scientific disciplines began to use LSD as a research tool in other areas. Some psychologists began to report that LSD could greatly facilitate the processes of psychotherapy, while others declared that it was of no positive use whatsoever and was, in fact, dangerous. The controversy raged, but the teapot was small and most of the general public never heard about it.

All of this changed in 1963, and by 1966 the teapot had become a cauldron, of preposterous dimensions. The runaway growth of interest in the subject of LSD came about when Harvard University dismissed two faculty members on charges which thinly disguised its deep concern and dismay over experiments the pair were conducting with LSD. "LSD is more important than Harvard," one of them said, and both began proselytizing for widespread LSD use. Thus began the highly publicized adventures of Dr. Timothy Leary and, to a lesser extent, those of Dr. Richard Alpert.

In March of 1966, Dr. Leary's fortunes took on even more color and serious complexity: he received a thirty-year sentence for carrying less than half an ounce of marijuana while going through customs at the Mexican border. This brought him to national attention, on an even larger scale than previously, due to three things. his former association with Harvard; his outspoken advocacy of LSD; and the extraordinarily harsh sentence imposed on him for a rather common felony.

It was at this point that the public became aware of the remarkable enthusiasm for LSD in countless "underground" circles. The indiscriminate use of LSD immediately became the subject of thousands of newspaper and magazine articles all over the Western world but, curiously, the true properties of the chemical and its effects are as little understood now as then, both in the academic world and among the public.

General Effects of LSD:

It is impossible to describe what a typical experience is, for the experience depends upon a large number of variables. This explains why psychiatrists who have worked a great deal with LSD seem unable to comprehend each other's work.

This statement was made by Dr. Abram Hoffer, a Canadian expert in the use of LSD in the treatment of alcoholism, and it sums up what researchers in general have found to be true. Anyone who proposes to describe the over-all effects of LSD faces a sizable semantic predicament.

One way to penetrate the density of this dilemma is to describe the accepted "usual" effects the chemical produces in a "normal" session. The LSD subject, for example, will find that all of his senses are simultaneously "more sensitive." His mental and emotional processes will feel retarded and dulled, but at the same time heightened and accelerated. He will feel child-like, trusting, simple and literal-minded—yet his thoughts will often seem enormously complex and of untold depth. Tears and laughter, loneliness and great intimacy, clarity and confusion, love and hate, delicacy and grossness, ecstasy and despair—all these may co-exist, throbbing and weaving back and forth, all engaged upon some cryptic but definite process.

The above states are considered typical, but because they come rolling out, seemingly all bound together, some sorting may be useful. To break it down, the following describes major characteristic reactions:

Physical Sensations and Changes: Anywhere from twenty minutes to an hour after taking LSD, the chemical may cause one, a few or all of the following physical sensations: slight chill; dilation of the pupils; vague physical unease concentrated in the muscles or throat; tenseness; queasy stomach; tingling in the extremities; drowsiness. When the person who is experiencing the drug is asked, "How do you feel?" his initial answer is likely to be, "I don't know," or, "Different." If asked if he feels all right, he will probably say that he is not sure, for the physical sensations which accompany LSD, although minor, are indescribably intricate. While they may bear a similarity to previous physical feelings, they are unique to the psychedelic drug experience and cannot accurately be likened to any collective sensations ever felt previously. This is true of all physical reactions experienced under the influence of LSD. As time passes, many of these early sensations may disappear, although in some instances they persist.

What Happens to the Five Major Senses: The hearing, seeing, smelling, touching and tasting senses begin to "slip" out of their normal confines and to wander. They range into infinity; they diminish into the microcosmic. They ascend and scale peaks of untold height; they fall into silent and void crevasses. Thus objects and stimuli are greatly transformed, so that at times they are even unrecognizable. This elemental unleashing of the senses may seem unbelievable, but the intense

reality experienced by the person under LSD is often overwhelming. Here, for example, is the way Aldous Huxley reacted to an everyday object:

Confronted by a chair which looked like the Last Judgment—or, to be more accurate, by a Last Judgment which, after a long time and with considerable difficulty, I recognized as a chair—I found myself all at once on the brink of panic. This, I suddenly felt, was going too far. Too far, even though the going was into intenser beauty, deeper significance.

The LSD literature is richly textured by such firsthand accounts of sensory reactions, usually coupled, as in Huxley's case, with events or people or objects remembered from history or personal life.

One LSD subject "heard" mathematics while listening to a recording of Mozart's *Requiem*; another smelled the fire and brimstone of the Apocalypse (a pet cat had defecated in the room at the time); a man "tasted" the agonies felt when the lamb, from which he was eating an otherwise delicious chop, was slaughtered; the touching of a cold metal object, such as a silver bowl, can seem like touching dry ice.

The sensory changes which occur are so dynamic and vivid that were they to remain static throughout the session, they would probably become as commonplace and acceptable as "normal" reality. But the transformations shift, both of their own accord and with the application of some concentrated thought or will power. Huxley's chair can give up its Biblical and/or artistic connotation and go back to being a mere piece of furniture, or perhaps become something else; the *Requiem* can resume its form as music, or turn into a fireplace; the Apocalyptic odors can be accepted for what they are, or become a flower garden; the death of the lamb and the taste sensations can change into more or less appetizing channels; the fire-cold of the silver bowl can feel warm to the touch, and the heaviness of the object can inexplicably seem airily light.

The Thought Processes. The changes induced in the mind per se, in the conscious-thinking apparatus, are the most diverse, radical and remarkable of all. It is in this area of the chemical's effect that most serious research interest lies. The mind and the emotions rather than physical and sensory feelings—inextricably though they are entwined—promise the greatest potential for LSD's beneficial use and have so far rendered the most rewarding results, as well as the most confusing.

Time Sense. As with the sensory reactions, the sense of time slides about and up and down, reverses and sometimes disappears—very rarely does it retain its normal properties to the person who is under the influence of LSD. Centuries can go by which, measured by the clock, were seconds; time can stand as still as eternity. However, time's distortion, whether fast, slow, reversed or non-existent, seldom holds more importance for the LSD subject than the time sense of his dreams in sleep.

Speed of the Mind. One of the most striking effects of LSD is its ability to activate the leisurely pace of conventional consciousness. Thoughts seem to race, carelessly tossing off extraordinary by-products of subsidiary thoughts. In LSD terminology, this aspect of the mental process is sometimes referred to as 'Sights of thought.'

Suggestibility, Vulnerability. In the kaleidoscopic whirling of sensations,

thoughts and emotions, to which the LSD subject is hyper-attuned, he feels himself completely fragmented, totally helpless, yet masterfully in control. He reacts to literally everything that comes within his range of senses. He is highly suggestible and responds in some way to all stimuli, whether it is through auto-suggestion, by some movement or remark made by his guide,* or by what is going on in the room. Because he is so "opened up," he is indeed vulnerable.

Therefore, it is extremely important that disruptive and disturbing factors be avoided as much as possible and that the guide be on the *qui vive* and keenly receptive. If conditions are not harmonious, smooth, and at the same time "natural," the person under the influence of the drug can easily have paranoid reactions to all—and everyone—around him and this can lead to untold terror. Normally, however, he will be more at ease and freer with others and his surroundings than he has ever before found himself to be in his everyday associations.

Memory and the Sense of the Self. The "flight of thoughts" quite often flushes a large covey of personal memories from the deep recesses of the subject's mind. They may be trivial, joyous, painful, ludicrous—anything—but they will probably be more alive than any recalled previously, except perhaps in dreams; and, as in the dream state, they will seem to be happening in the "now," with the subject violently participating at one moment and standing aside in the next. It is as if he has a second self superimposed on the one he brought to the session. He may find himself examining the "selves" he has conjured and react with guilt, pride, pleasure, regret or a multitude of other emotions.

Insight, Judgment, Concentration. Unburied memories often produce the conviction that the subject is seeing himself for the first time as he really is—with all mental blocks and defenses down. His findings will strike him as absolutely astounding; his insights so sharp, his judgments so valid, that only a miracle could have occurred to change him into such a genius.

His excitement over this transformation may make him want to laugh and cry at the same time, for he may feel he has at last hit upon the way to know everything to its fullest: ecstasy, sorrow, radiance, serenity, happiness, poignancy, wisdom, patience. He will want—and be able—to concentrate on any "staggering discovery" of his choice. He may find that all life and its secrets, all mankind and himself, are concentrated in the ear of corn he is holding in his hand, and he may contemplate it and stare at it for long moments, even hours.

Philosophic, Religious, Mystical Sense. The subject will want to employ his new abilities in exploration. During this time, he may have a deep and moving religious experience in which he understands the pattern of all life and with awe, gratitude and total understanding, accepts the "Divine Being" responsible for it all. He may also reach philosophic conclusions of rare profundity and of "absolute truth," perhaps in areas completely foreign or little known to him previously. Since he feels he has been metamorphosed into an incredible being with gigantic gifts, it will probably not surprise him at all that he can see into the future and the past with equal ease, make predictions and exhume long-interred historical secrets. Also, he may find it no trouble at all to "read minds" of people present or elsewhere.

Sense of the Past. As said before, almost anything from staring at a painting to a fleeting thought can trigger the so-called "sense of the past," with seeming total

historical recall. Archetypal memories from the vast mass unconscious, in the Jungian sense, would appear to be aroused and activated. For an observer sitting in on a session, this portion of the experience can be the most interesting if the subject is communicative and reasonably articulate.

Comments: Eight to ten hours—perhaps longer—after all this strenuous activity, the LSD subject "comes down," the apex of the experience probably having been reached in the fourth hour. The coming down is usually a thoughtful, sober-minded, reflective process without the explosions of mirth, joy, surprise, and intense pain that accompanied the "going up." The subject will realize with equanimity and sensible acceptance that some of his insights and conclusions were absurd and ridiculously funny; he will wonder about others. In any case, once down, he will find himself restored intact to "normal" reality, just as he left it, if the session has been a successful one. However, the chances are that he himself will feel unaccountably changed—wiser, more tolerant and more aware of the world around him. One LSD experimenter has called the drug a "psychic broom"; for indeed it does seem to sweep out the cobwebs and bring alive those senses so little used that they are all but atrophied.

But the judgments formed and the long-term results of the drug's action, and how it all happens, are matters which have caused endless scientific controversy and heated debate among private individuals. As yet, nobody fully knows.

Several investigators have come up with theories about the drug's efficacy and believe that the progress of its effects can be mapped in some detail. One such theory says that there are five phases, or stages—distinct plateaus—that occur in the experience of LSD subjects who have normal sessions. In this scheme, such stages are listed as 1) sensory changes, 2) personal memories, 3) "transformation of figures," 4) spatial changes and 5) cosmic experience. (A number of researchers who hold with such theories in general nonetheless disagree on specific points, such as the order of stages or whether all of them are reached.)

In some circles of serious research into the drug's effect, it is thought that LSD is possibly the clue that will lead to the discovery and disclosure of man's unconscious, its meaning and function. Whether LSD can serve this purpose and put the unconscious to surface use for the first time in over two million years of human experience remains to be seen. However, the drug has already proved itself to have vital purpose in related areas: LSD has had phenomenal success in helping individuals attain long-sought solutions to specific creative and technical problems.

Footnote

* Under the influence of LSD, the subject turns inward and explores vast areas which are hardly mapped. Thus, though he may not leave the room in which he takes the drug, he is far removed from the external world and needs the assistance of someone who can provide him with "soundings" and act more or less as a lifebuoy. Securing a guide who can be trusted is an essential prerequisite for an LSD session. (See Chapter VIII for a detailed account of the function of a guide.)

Chapter III. Creative Problem Solving

OF ALL the strange permutations which occur with LSD use, two of signal importance for researchers have been found to be heightened *sensitivity* and *vulnerability*. Unlike the hypnotic trance, this "defenselessness" is coupled with consciousness and will power. Therefore, the subject, if he has a problem to solve, can put his altered responses to this task. Solutions can emerge if proper attention has been paid to the "set" (the user's expectations, his emotional make-up and motivations) and "setting" (the surroundings and circumstances under which the drug is taken).

Among the endless variety of problems which LSD can help solve, the most clear-cut and spectacular—for which there is unequivocal proof—are creative and technical problems. Hopefully, as more and more technical and creative problem solving is done with LSD and word of it comes to light, valid non-medical uses of the drug will be publicly recognized and understood. If and when this happens, unrealistic and fantastic claims about LSD's powers and dangers will be recognized for what they are.

Before citing cases of LSD problem solving, it is necessary to consider some aspects of the creative process, as it is the means by which solutions are reached. Carl Rogers, in *Creativity and Its Cultivation*, defines it this way: "the emergence in action of a novel relational product, growing out of the uniqueness of the individual on the one hand, and the materials, events, people or circumstances of his life on the other... I am assuming that there is no fundamental difference in the creative process as it is evidenced in painting a picture, composing a symphony, devising new instruments of killing, developing a scientific theory, discovering new procedures in human relationships, or creating new formings of one's own personality as in psychotherapy."

But what is known of this extraordinary process that can produce the ingenious invention, the earth-shaking discovery which revolutionizes human thought and life? How does the suddenly "lighted mind" become illuminated? Are we all actually capable of being innovators?

Herbert Read, speaking of artists in the large sense, has said that all children are artists, as are some adults. As people grow older, they are thought to lose their creative ability, and such loss is widely accepted with unquestioning resignation. The readiness with which we accept this deprivation is puzzling, but the apathy, inhibitions, diminished faith and hope, weariness, and a "lack of time" that disfigure life—all these are certainly prominent culprits. Yet the significance of creativity to human beings is of untold depth and magnitude. The world as we know it is the result of the creative thoughts and discoveries of relatively few men; usually we recognize this by recognizing them.

Considering the number of people who have inhabited the earth, and do so now, the small body of invention and discovery is amazing. Why do we so easily fall victim to the forces which destroy creativity? Perhaps it is because the creative impulse is lodged in such a remote and inaccessible place:

It is a highly significant, though generally neglected fact that those creations of the human mind which have borne pre-eminently the stamp of originality and greatness, have not come from within the region of consciousness. They have come from beyond consciousness, knocking at its door for admittance: they have flowed

into it, sometimes slowly as if by seepage, but often with a burst of overwhelming power.[1]

How can the gap between creative potential and its realization be narrowed? And what drives the relatively few to try to narrow it? Rogers states: "The individual creates primarily because it is satisfying to him, because this behavior is felt to be self-actualizing, and we get nowhere by trying to differentiate 'good' and 'bad' purposes in the creative process... *It has been found that when the individual is 'open' to all of his experience... then his behavior will be creative*, and his creativity may be trusted to be essentially constructive... To the extent that the individual is denying to awareness (or repressing, if you prefer that term) large areas of his experience, then his creative formings may be pathological or socially evil, or both." (Italics added.)

In examining the creative drive, Rogers lists some factors that are hospitable to it:[2]

Inner Conditions:

a) Low degree of psychological defensiveness; lack of rigidity and permeability of boundaries in concepts, beliefs, perceptions and hypotheses; tolerance for ambiguity where it exists, ability to receive and integrate apparently conflicting information; sensitive awareness of feelings and openness to all phases of experience.

b) Evaluative judgment based primarily, not on outside standards or prejudices, but on one's own feelings, intuition, aesthetic sensibility, sense of satisfaction in self-expression, etc.

c) The ability to "toy" with ideas, colors, shapes, hypotheses; to translate from one form to another; to think in terms of analogues and metaphors.

External Conditions:

a) An atmosphere of psychological safety, in which the individual feels accepted as of unconditional worth; in which he feels he can be spontaneous without fear that his actions or creations will be prematurely evaluated by rigid external standards; in which he feels empathetic understanding.

b) An atmosphere of psychological freedom; of permissiveness to think, to feel, to be whatever is discovered within oneself.

Other commentators on the creative process have stressed a few additional characteristics which they feel appear to a pronounced degree: Poetic economy (getting the most out of the complex in a direct, singular manner, what the mathematician would know as "elegance"); seeing things in a larger or more meaningful context; a powerful feeling of commitment and an enduring desire to leave behind a testament, and if possible a proof of the validity of the conviction; finally, a fluid sense of humor, one which enables the creative individual to view his work lightly as well as seriously.

A comparison of the above states of mind, which are conducive to creative work, with those states of mind induced by LSD shows that there are remarkable resemblances. This would suggest that if some of the above factors could be maximized, *directed* use of LSD might result in a tremendous impetus to creative thought—both for the artist and the ordinary individual who gets very few "flashes of insight" in his lifetime. Such has proved to be the case, as indeed has the obverse. The crucial difference is now believed to be in the object of the session, the setting and the guide.

Early studies have clearly established that LSD does not enhance the ability of most subjects for answering psychological test questions while under the influence of the drug. Frequently, to the subject, the questions or demands of the investigators seem irrelevant to what is going on in the subject's experience, so he will often respond to a request on the part of the investigator with, "That's silly as hell," or something similar. When asked the "Fire in the Theater" question on the Wechsler-Bellevue test, one LSD subject said she wished the observer would not talk about it. Others have found it difficult to repeat nonsense syllables, given in order to find out how LSD affected their memory span, and very few are able to perform adequately with a simple numerical subtraction test, such as repeatedly subtracting seven from a hundred. Here is how one of Dr. Sidney Cohen's subjects reacted to the Rorschach test:

When I took the Rorschach there-was just nothing there. I tried very hard to find something to say, but there was just very little there to be said. Only Card VIII was definitely something. I wanted to say "Squirrels," and I tried a long time but I couldn't get the word out. Finally, I gave up and decided to try "Animals." Before I had worked on that word very long, I figured out vaguely that "Animals" wouldn't do because then the psychologist would ask me what kind, and I would have to say "Squirrels," and I just couldn't. So I said "Bears." They didn't look like bears but it was better to say "Bears" than not say "Squirrels."

Some researchers have used such evidence to dismiss the possibility that LSD might facilitate creativity. But this is to misunderstand the importance of the way in which the experience can be controlled, for a great many counter-examples have cropped up regularly in the psychiatric literature. Thus, Dr. Harold A. Abramson, another early LSD researcher, cites two instances in which marked improvement in performance occurred, somewhat to his surprise:

One of our engineers, who was a subject, could get 100 per cent under LSD in certain of the tests we used, which he never did without LSD... There was another subject, a young woman, who was a technician working at Columbia, who was determined to get all her mathematics examples correct, and practiced at home. Although she was very disturbed [over other matters]... under 100 mcg. of LSD, she got 100 per cent on her mathematics test.

When under LSD the universe seems to be exploding, when one has suddenly made the first intuitive breakthrough in years, when the world seems sublimely pure and cleansed of the corruption of the ages, it is no time to be repeating a long run of numbers, as called for in the Stanford-Binet I.Q. test. As Dr. Hoffer observed in this regard, "I would suspect that learning in tasks which are trivial for the subject would be impaired, e.g., psychological learning tests, whereas matters of great importance to the subject might be learned even more quickly. Memory after the event is usually extremely good and insights learned are never forgotten even if they are not always used."^[3]

But before going deeper into the way LSD can be used to harness creativity and put it to use in problem-solving, it is appropriate to note that numerous instances have indicated that a "flash of insight" has been the thunderbolt that cracked open major discoveries. Darwin, while riding one day in his surrey, suddenly saw the whole scheme of evolution; Newton, doing something equally prosaic (daydreaming under an apple tree), had an apple drop on his head and at the same moment understood what came to be known as the law of gravity; Archimedes, soaking in his bath, suddenly realized that a body displaces its weight in water. Shouting, "Eureka!" he jumped out of the tub and soon thereafter shared his insight with the world.

Repeatedly major discoveries have come from the fall of "the apple on the head." But how many apples have fallen when the head beneath was not receptive?

Some geniuses seemed to have their reception faculties turned up full volume for most of their lifetimes, ready to catch and make use of any wave-lengths that came their way. Mozart, at the age of twenty-nine, had hundreds of compositions to his credit, and in the space of less than three months composed his last three symphonies. (These are held to be among his masterpieces, despite the short time he spent on them.) It is well known that Shakespeare wrote at fever pitch and did little or no revision of his dramas. The research material for his historical plays seems skimpy to a modern researcher with the libraries of the world to work with, but he was so successful in deriving what he wanted from Holinshed's *Chronicles*, Plutarch's *Lives* and a few other sources at hand that it seemed impossible for early students of Shakespeare's work to believe that he had not had a wide number of occupations, traveled broadly and been a man of deep, worldly experience and scholarly learning. Others too, have shown great versatility. Freud, for example, started his career with interests which led him to write a paper on "The Recondite Testes of the Eel"—a rather far cry from his subsequent amazing insights into dreams.

All of this simply shows that we know relatively little about the creative spark, only slightly more than we do about the unconscious from whence it springs. We know that it is there and that it sometimes catches fire, and that under certain conditions it can be stimulated to emerge.

A glance at the preceding chapter will indicate that LSD provides excellent fuel once the fire is lit, and may even provide the flint. Properly administered, LSD lowers the subject's psychological blocks and fences without making him feel deprived of their protection; it frees and encourages him to let his emotions and imagination range; it even provides (or seems to) "ideas, colors, shapes, hypotheses" with which to become engaged. The drug creates the proper atmosphere in which the subject can appreciate his own worth; and his sense of harmony with others and his sensitive awareness often mimic, if they do not produce, extrasensory perception. Even the sobersides subject usually finds he has a great inclination to laugh at life's absurdities—drolleries which may have once seemed threatening and ugly. Everything seems "so simple." Therefore, it is not inaccurate to say that creativity and a positive reaction to the drug can be in complete rapport and reinforce each other.

To this end some researchers of LSD, interested in various fields of problem solving, have directed their attention. Since the solution of technical and artistic problems lies mainly in keeping channels of thought free and letting ideas flow,

LSD has been found to be of incalculable assistance if problem solving is the point of the-session and if a few fundamental directive techniques are used.

There a number of factors, though, which tend to hinder creativity in the LSD experience, and these should be borne in mind. Again, in most instances the subject, left on his own, is so overwhelmed with perceptual changes or with personal preoccupations that he may have little interest in directing his thoughts toward a specific problem, even though that may have been his intent Influenced by the drug, he may feel incapacitated for taking any initiative, although by doing so he will probably be astonished at his own capabilities. All too frequently the inexperienced guide will feel as helpless to lead his subject into the proper channels for creative and/or technical problem solving as the subject himself. One way to avoid this bemusing mishap is to plan in advance to take up the "programmed" problem at a particular point in the session, after the subject has had a chance to experience some of the typical beginning reactions and to do a little "sight-seeing."

In order to take advantage of those factors in the psychedelic experience which support creativity, it is important to reassure the subject that he will not be greatly distracted by any psychic disturbances and that, in fact, it will be easy for him to concentrate on the problem he has brought to the session. (Such suggestions may be similar to hypnotic method in that their effectiveness is the result of the profound suggestibility of the LSD experience, but the subject is not held helpless under an externally imposed control.) The subject should also be told that even though his thought processes may not be logical during his LSD session, he will be searching for some sort of insight, some immediate, intuitive feeling and solution for his specific problem, and that these may come with surprising ease. Once this happens, if it does, he will be able to "fix" the solution and record it either immediately or shortly after the drug effects have worn off. Given a genuine problem—one which has been thoroughly considered beforehand—and this minimal preparation, the results of an LSD experience may prove highly different than those test studies cited earlier.

For any problem solving session, the guide should have mapped out a course of procedure, along with his subject, although it is not necessary for the guide to know precisely what the problem is, or even what it is about Large drawing tablets, writing paper and a tape recorder should be on hand, and the setting should be relaxing, pleasant, private and conducive to concentration. The subject should bring with him any materials he feels will be useful—i.e., manuscript, notes, drawings, books, recordings, etc. but the most important equipment the subject can have is a salient problem and high incentive for its solution.

As mentioned elsewhere, one of the most provocative studies of creative problem solving via the use of LSD was conducted by The Institute for Psychedelic Research at San Francisco State College. Believing that "through carefully structured regimen, a learning experience with lingering creative increases could result," this group called together twenty-two participants who were asked to bring with them professional or technical problems which they had been unable to solve. By the time the report of this investigation was issued, November, 1965, at least six of those who had participated had seen concrete results in their professional or industrial work.

Comments made by some of the subjects on this project indicate the manner in which LSD affected their creative thinking:

Looking at the same problem with (psychedelic) materials, I was able to consider it in a much more basic way, because I could form and keep in mind a much broader picture. I had great visual (mental) perceptibility; I could imagine what was wanted, needed, or not possible with almost no effort. Ideas came up with a speed that was breathtaking. I dismissed the original idea entirely, and started to approach the graphic problem in a radically different way. That was when things began to happen. All kinds of different possibilities came to mind.

Diminished fear of making mistakes or being embarrassed.

I was impressed with the intensity of concentration, the forcefulness and exuberance with which I could proceed toward the problem. In what seemed like 10 minutes, I had completed the problem, having what I considered (and still consider) a classic solution.... brought about almost total recall of a course that I had had in thermodynamics; something that I had never given any thought about in years.

Such impressions are predictable when LSD is used in creative/technical problem solving. But how does the basic, on-the-spot action happen? Here are a few examples which illustrate the wide range of applications:

Technical Problems: For over five years one man engaged in Naval Research, worked with a team under his direction on the design of an anti-submarine detection device, without success. Hearing about a small research foundation investigating LSD, this man got in touch with its directors and mentioned that he had been told that the drug had been used successfully in problem solving. Subsequently he was given the drug under their supervision. He had informed them in advance that he could not divulge the nature of the problem because it was classified information. Nevertheless, the LSD session bore fruit. After a few exercises to allow him to control the fluidity of the LSD state—how to stop it, how to start it, how to turn it around—he directed his attention to the problem, and within ten minutes he had the solution he had been searching for during all of those years. Since then, the device has been patented by the U.S. Navy and Naval personnel working in this area have been trained in its use.

Creative Design Problems: A furniture designer who was given the drug by the Institute for Psychedelic Research recounts the following:

I had two specific problems, both in furniture design. The primary problem was to find a method for making an integral drawer pull design which complemented an existing group of furniture that I had designed a few years ago. This group was successful both in design and in sales. I needed a solution that combined the same kind of good looks with economy in production.

Case goods, that is, cabinets and chests of drawers, are basically boxes distinguished primarily by surface and edge treatments. Case goods always seem to look best when the design seems to be a natural outgrowth of the materials used. I try to avoid "applied" design elements. I'd already designed a line or series of case goods that embodied these elements but it seemed to lack a certain spark which both I and the manufacturer felt was needed. I had gone over and over this problem trying new tacks but nothing seemed to come of it. I really didn't expect to be able to do anything new since my feeling was that all possibilities were exhausted. What actually happened was a complete surprise.

I found that as soon as I began to visualize the problem one possibility immediately occurred. A few problems with that concept occurred which seemed to solve themselves rather quickly. This was quickly followed by another idea based on this first thought but with a variation that gave it another look. Visualizing the required cross section was instantaneous.

The most useful idea for this designer came to him while he was listening to music by Wagner and indulging in fantasies which the music evoked. He felt there was "a classic quality" in some of the shapes which he saw, and so put down the line that seemed to embody its characteristic. This evolved in a series of rapid sketches and became a completed drawer pull, which had "exactly the quality that I've been looking for." He then went on to tackle a headboard problem for another manufacturer, which was also quickly solved. And after that he turned his attention to the design of a chair:

I then decided to do something that always takes a lot of time. Doing a good dining chair that is both elegant and inexpensive is very difficult. Chairs are always seen as sculpture and seldom in pure profile. Chairs also require a discipline in shape and structure unnecessary in other furniture. Discipline in shape because of the human anatomy, and structure because of the hard usage it gets. I had not been able to do an original design for some time. I very rapidly ascertained what the basic structure should be and the basic details also quickly followed. I did no refining, because this kind of thing is best done in three dimensions though I could visualize the finished product. I decided that I had the chair and then went on to think of a type that I'd never done before. This one too seemed to present no difficulty. Even when I look at this today it all seems so obvious.

One of the chair designs was modeled satisfactorily on the second try, with no radical changes from the original concept. Previously chair designs had required on the order of two months and ten trial modelings for completion.

That such results are by no means exceptional is shown by what happened to one architect's powers of "visualization" when he took LSD while faced with the problem of designing an arts-and-crafts shopping center for a resort-university community:

I looked at the paper I was to draw on. I was completely blank. I knew that I would work with a property 300' square. I drew the property lines (at a scale of 1" = 40') and I looked at the outlines. I was blank.

Suddenly I saw the finished project. I did some quick calculations ... it would fit on the property and not only that... it would meet the cost and income requirements. It was contemporary architecture with the richness of a cultural heritage... it used history and experience but did not copy it.

I began to draw... my senses could not keep up with my images ... my hand was not fast enough... I was impatient to record the picture (it had not faded one particle). I worked at a pace I would not have thought I was capable of.

I completed four sheets of fairly comprehensive sketches. I was not tired but I was satisfied that I had caught the essence of the image. I stopped working I ate fruit... I drank coffee ... it was a magnificent day.

While making drawings two weeks later, the architect found that his image of the shopping center remained sharp and that he was able to complete his drawings without referring to his original sketches. He also discovered he could view the project from different directions and examine minute construction details. His design was accepted, and since then he has been able to design other projects in the same way. He hopes that his faster, sharper and clearer procedures for "imaging" projects still remain with him.[4]

"Dynamiting" Creative "Log Jams": At the Josiah Macy LSD Conference in 1959, which brought together twenty-six prominent psychiatrists and researchers who had worked with LSD, one of the most exciting matters to arise was the evidence that a number of patients in psychotherapy could begin to paint after having been given the drug. Most of them had not previously done any painting at all, and yet the quality of the work was far above average for the ordinary beginning art student.

One of the most singular cases of artistic achievement was that of a girl who had actually had art training but, in the words of her therapist, Dr. R. A. Sandison, "couldn't paint properly." After LSD her style changed entirely and she found meaning in things that previously had had none to her. She had never been able to express herself through painting, but after the drug, "she began to paint in the style she wanted to, which was imaginative, something like John Piper's work."

There are any number of such cases which have reached the LSD annals, some relating purely to unjamming the block and others to the acceleration of the artistic facility. As an instance of the latter, a teacher at the Massachusetts College of Art comments that, previous to taking LSD, he used to spend a great deal of time in his studio before he felt he was really working, and he had to spend five to eight hours before he felt he accomplished anything. "Now all I have to do is go into my studio and start working and I'm right up there.... It's a matter of having better control over your sensibilities.... Things that you knew before, you now understand." Asked whether he thought that LSD would become a commonly used adjunct to artistic performance among others, he said, "I suspect that anyone who's interested in seeing more, hearing more, thinking more is going to try it."

LSD has also proved to be a superior agent for ending the notorious "writer's block." The following account is from a well-known European writer whose major work, written after LSD therapy, has been translated into twelve languages and has a wide audience among Americans and the English. Prior to taking LSD, he had had a "burning desire" to write but had been unable to finish a manuscript. Initially in his LSD session, he felt he was able to turn away from "the turmoil of the world" and had "time to meander in my mind about things that were more important than the outer world." But before long, he felt he was dying:

I felt I could really die, not just as an illusion, not just in the drama of other people, but my own life would have a very normal end. I know now I never wanted to face this but realize there is such a thing as really living....

With this horror of death realized, I started to experience a most fantastic happiness with the realization that after all I do not have to die now. I felt I was no

longer with my neck under the guillotine. This was the very feeling I have been living under all my life.

From this experience, the subject entered into a re-experiencing of his past, which led to an extreme emotional and intellectual involvement:

My mind was suddenly dragged into the situation and I think the cure, from someone who did not write successfully, to someone who does write successfully, came this very moment when I felt that this mind of mine was part of me. It has become harmonized with the rest of my feelings....

I am no longer afraid of putting one letter after the other to say what I want and this is linked with an enormous number of things, such as speechlessness and inarticulateness. The feeling of being dumb, not being able to express myself was probably one of my most unpleasant inner feelings....

After his LSD sessions (which are recounted in detail in Drs. Ling and Buckman's *Lysergic Acid (LSD25) and Ritalin in the Treatment of Neurosis*), this would-be writer has gone on to become one of the leading authors writing in German today. Here, in a brief statement, he summarizes some of the changes which occurred within him as a result of his insights under LSD:

I seem capable of expressing what many people would love to express but for which they cannot find the words. I did not find the words before because I tried to avoid saying the essential things.

These accounts may seem like isolated instances. It is true at the present time that the bulk of LSD literature is only sprinkled with them, but it has become increasingly apparent that these breakthroughs are by no means uncommon. They have come about both in planned sessions and by happy accident. There is abundant word-of-mouth testimony which eventually will appear in print with proper documentation. Even though investigation into this aspect of LSD's effects has so far been rather timid, this does not mean that such responses are not strong and valid—and on the increase as sophisticated use of the drug becomes more and more prevalent.

Because such reactions do occur, and undeniably so, there are many advocates who are anxious to tell the world what LSD has done for them, so that meetings and seminars on the subject often sound like an evening with Alcoholics Anonymous or the Salvation Army.

Especially is this true when an audience airs its views at the close of a lecture on LSD. As an instance of this, consider what happened when Dr. John Beresford, an early researcher on the effects of LSD, turned such a session over to questions and statements from the audience.

At the time of this particular lecture, the agitation and legislation against LSD was well under way, and there seemed to be little promise for continued study of the drug—certainly private use and experimentation was legally out of the question. Most of those who came to this lecture were dedicated to the future of the drug for serious, scientific reasons, and ABC-TV was on hand to record the proceedings. The lecture was a little like a televised wake, with the audience as depressed yet keyed-up as survivors of a shipwreck.

Dr. Beresford that night spoke very briefly, candidly admitting that although there was well-founded reason to believe in LSD's efficacy in creative and technical problem solving, so far only scattered evidence had appeared in scientific journals. He then threw the discussion open to the floor.

The audience reaction was electric. Everyone wanted to talk at once, to testify as to how LSD had helped solve individual problems. It was difficult to sort it all out.

A designer who specialized in Orientalia said that under the drug, without any prior knowledge, he had worked out Einstein's theory of relativity. A friend of his, an M.I.T. faculty member, had pointed out this remarkable "discovery" to the designer, upon being told of the latter's LSD adventure. The designer has since given up his former field and gone into scientific work. Similarly, a former architect told of how he had gone into the field of drama as a result of new insight gained about his true interests and abilities while under LSD. Another audience member averred that because of LSD therapy, his eyesight, I.Q. and imaginative abilities—all essential to his career—had increased in keenness, his I.Q. by a measured and recorded twenty per cent.

A woman who described herself as a former "impassioned, constantly angry warmonger" said that she had learned tolerance and "love for my fellow man" and had become an active pacifist. A student told of how he had taught himself French in the week that followed his having taken LSD. There was even a palmist who explained remarkable predictions he had made under the influence of the drug, all of which he said subsequently proved accurate.

Although few of these "revelations" could be divined as formal problem solving, problems unquestionably had been solved. From the comments, it is evident that while not many had taken the drug with the specific intention of achieving a creative breakthrough, by fortunate coincidence this had happened. If they had been aware of their problems previously and had deliberately planned their LSD sessions to maximize problem solving, it is possible that the results would have been even more impressive.

A session structured for problem solving usually results in the subject's emotional identification with and understanding of his problem, and gives him a deep and lasting commitment to it. Physicists and mathematicians report that after using LSD they have developed "a feeling" for such concepts as the photon, the hypercube or imaginary numbers. Similarly, philosophers have reported they have "understood" the meaning of existentialism, and theologians report having "experienced" that which they had been preaching for years.

A final point about the creative process: it does not seem to have too much to do with conventional I.Q., as measured by existing tests for the purpose. Dr. Frank Barron, Research Psychologist at the University of California Institute of Personality Assessment, has compared more than 5,000 productive and creative individuals with others in their field of similar I.Q. but of limited productivity, and says:

The thing that was important was something that might be called a cosmological commitment. It was a powerful motive to create meaning and to leave a testament of the meaning which that individual found in the world, and in himself in relation to the world. This motive emerged in many ways, but we came across it over and

over again when we compared highly creative individuals with those of equal intellectual ability as measured by the IQ tests but of less actual creative ability. The intense motivation having to do with this making of meaning—or finding meaning and communicating it in one form or another—was the most important difference between our criterion and control groups...

I think that as a result of the psychedelic experience there's a heightened sense of the drama of life, including its brevity, and a realization both of the importance of one's individual life and of the fact that a sacred task has been given to the individual in the development of the self...

Footnotes

1. G. N. M. Tyrrell.
2. Taken from "Use of Psychedelic Agents to Facilitate Creative Problem Solving," published by The Institute for Psychedelic Research of San Francisco State College. This group, headed by James Fadiman, Willis W. Harman, Robert H. McKim, Robert P Mogar, and Myron J. Stolaroff, was outstanding in this particular area of LSD research, but was recently disbanded at the request of the Federal authorities.
3. Arthur Kleps, a psychologist and Chief of the Neo-American Church, Cranberry Lake, N.Y., appearing before the Special senate Judiciary Subcommittee on Narcotics, Wednesday, May 25 1966: "If I were to give you an I.Q. test and during the administration one of the walls of the room opened up giving you a vision of the blazing glories of the central galactic suns, and at the same time your childhood began to unroll before your inner eye like a three-dimensional color movie, you would not do well on the test."
4. Architect Eric Clough has since been interviewed about his work on this project, which is near the University of California campus at Santa Cruz, in the August, 1966, issue of *Progressive Architecture*. His hope that his LSD experience would carry over and aid him with future work has been realized. He believes that LSD can "facilitate focusing on anything" and that "All architects ought to have this experience."

Chapter IV. Everyday Problems (part 1)

EVERY PERSON has everyday problems, just as every person has an everyday life, with mounds and hills of pleasure, and ruts and pitfalls of trouble.

What are these "everyday" problems? They are usually related to any situation common to the human condition. Nail-biting; hostility toward one's family; awkwardness; an uncontrollable temper; timidity; lethargy; unpopularity—all are familiar and rather general manifestations of "everyday problems." Such manifestations, of course, can sometimes be cured with aspirin or mouthwash or some other product from the neighborhood drugstore. On the other hand, everyday problems can be seeds that grow into "serious" problems—marital or sexual dissatisfactions that daily worsen, drinking much more than "too much," for instance—problems which may send the sufferer to his minister begging for advice, or to the psychiatrist's couch, or to a hospital bed.

LSD, that quixotic giant, has been of service here, too. The drug has found its way into countless "everyday lives" and has solved countless "everyday problems." The publications on LSD—both clinical and popular—abound with accounts of "small" lives that have been made larger, richer, smoother, as a result of the LSD experience. Many such endorsements have been given by those who would be terrified to take "drugs" (dope), and who will readily swear that they take no drugs (alcohol, tea, coffee and tobacco do not count) except upon the doctor's orders when they are "sick." "Sickness," therefore, has accounted for much of the first-hand information we have about everyday problem solving. Numerous medical practitioners as well as psychologists and psychoanalysts, have used LSD to help patients over various impasses. And, of course, there are thousands of private individuals who, through their own experiments, have found many of their problems dissolved. The reason for this is that LSD usually acts as a "true mirror," and in a large number of cases that true mirror is an inescapable one, revealing oneself to oneself with awesome and sometimes painful accuracy. Since most people are braver than they think themselves to be, they often profit significantly from this honesty.

While there exist many independent and spontaneous accounts of such experiences, those bearing the "official" seal are unquestionably more creditable. For this reason, the individualistic, first-hand reports, which are often brilliantly stated and filled with sharp, persuasive detail, must bow out, or at least for the time being take a seat in the rear.

Referring directly to one of the most authoritative works in the field, any number of applicable examples of everyday problem solving can be found in *The Use of LSD in Psychotherapy*.^[1] The case of one seriously disturbed child is cited in this work as having been effectively solved, or aided, through LSD therapy:

Dr. T. T. Peck.^[2] The 5-year-old girl was a real behavior problem, completely rebellious about everything. Knowing her background, I couldn't blame her. We gave her about 40 mcg over a 1 and 1/2 hour period. and she became completely uninhibited. It was a typically schizophrenic reaction. Afterward, she was very happy. The only untoward reaction was a very slight tremor and an over-elation, to some extent. But, for 2 weeks, she was just a perfect child. Of course, she went back into the same environment and continued much the same pattern. But then we showed the parents where they were really planting the seeds of her difficulties in her. By changing the environment, we solved the problem.

This example is deliberately cited, in spite of its negative aspects, to show that the drug is only as good as the subject is, and that a bad environment acts as a magnetic field and can draw back the best LSD recipient, unless the subject has maturity and/or some control over his circumstances. In this case at least some of the proper environmental corrections were made. Another account of a "problem child" had clearer, more patently satisfactory results, although the case was more expressly difficult:

Murphy:[3] One 8-year-old made a very good recovery. That was completed 3 years ago, and I hear from the family quite often. She had a long-standing extremely chronic, and extremely restive, character disorder. She was an enuretic child with deep sexual conflicts, whom I had had in unsuccessful psychotherapy for a year before she started LSD. I was getting absolutely nowhere with her. In treatment, she worked up to 300 mcg (of LSD) and took them regularly, once a week.

Asked if the parents had had LSD too, Dr. Murphy replied that there was no father, and that although the mother had talked of taking the drug, she never did. However, the mother was a "very intelligent, cooperative, and resourceful person," and there was a "very thoroughgoing change in the child."

Dr. Murphy went on to explain the child's satisfactory recovery:

Her enuresis, which had been with her every day for several years, stopped after the second session, a very violent one, in which she became disoriented and called continually for her mother. But then she went on to a great deal of characterological change. She had been a thoroughly dull and boring person, a narrowly moralistic, unimaginative child. She stank of urine most of the time. She was a "straight A" student in school. During treatment she changed so that everyone, relatives and friends, as well as her mother and herself, noticed it. It wasn't so much "spectacular" as it was profound and convincing. She was by no means free of problems, but became so free and creative and so much more outgoing and generous, that it was clear her behavior was springing from something spontaneous within herself.

Passing for the moment from the reports on the clinical level to those from other qualified and serious investigators lacking medical/psychiatric credentials but highly respected, there is the case of "S," who was in the grips of an odd but troublesome behavior disorder concerning "spilled" liquids. This is recounted in *The Varieties of Psychedelic Experience* by R. E. L. Masters and Jean Houston.[4]

Before "S" [5] took LSD, he was by habit a rather sloppy person who kept his office in "a mess," was oblivious to clothes strewn about the house, dirty dishes and so forth. But one thing he could not abide was liquid spilled on any surface. Seeing such unsightliness threw him into unaccountable rage and set him immediately to cleaning it up.

About an hour into his session, S was led into a dining room where he immediately noticed that some rather slimy looking soup had been spilled on the table top and left there, seemingly by accident. His initial reaction was the usual one, and at once he began to search for something with which he might wipe up the spilled soup. Finding nothing, he pulled out his handkerchief and debated whether he ought to use that. Then, however, he became aware that what he was experiencing was much less anger... than fear. He looked closely at the droplets

and turned noticeably pale. Before his eyes, as he subsequently related, those few tiny drops began to expand, rise up, bubble and seethe, take on a "horribly slimy and gelatinous" appearance, and then surge like a miniature but rapidly growing tidal wave toward the edge of the table. At the same time, he recognized as a cause of his anxiety the fear not only that the room would be flooded with liquid but also that it would infect whatever it touched.... He leaped back in horror, wiped away the drops with his handkerchief, and appeared almost ready to faint. But then he approached the table again, picked up the soup bowl, and deliberately poured a good bit of its contents on the table top. He became increasingly calm and described to the guides the visual distortions he had perceived.

S now was urged to "go deeper," to go down into the depths of his own psyche and try to find there some explanation for what he had seen. He fell silent for a minute, then spoke in a voice that sounded as if, in fact, it were coming up from the depths. The phenomenon he had just witnessed, S said, was one that occurred on a level below consciousness whenever he was confronted with spilled liquid. He could tap, from "some deep source," many memories of having repeatedly had such experiences before, although they never had emerged into consciousness.

In working through this strange insight, S finally realized that the "viscous putrefaction so corrosive as to 'rot [anything] upon contact'... was 'bound up with... a wet, slimy and corrupt sexuality,' which simultaneously attracted and repelled, setting him in 'painful conflict with moral values.' "

The LSD experience for S was like sailing in a glass-bottomed boat. As he continued to peer into the opaque depths, he discovered still other facets of himself that eventually led to his "recovery" and his saying—and his wife agreeing with him—that his relationships with his family were much better, "mainly as a result of 'the loosening of a rigid puritanism.' "

This absorbing if small "everyday" problem is notable not only for the subject's keen perception, but because it is a prime example of an "everyday" problem—nothing disastrous but an unhappy condition that could, and did, create untold hours of anxiety for its owner. Just as a thorn in the heel torments the bear unable to communicate his trouble, so the inarticulate human being who has a small, out-of-the-way, but constantly troublesome problem can be made miserable by the most trifling of "thorns."

The lonely widow is, in a way, luckier. At least she has a historical precedent, an accumulated warehouse of human sympathy to draw on, when she has lost her spouse and cannot accept her loss. Masters and Houston present the case of a widow who had turned to the bottle for solace shortly after her husband's death six years before. In consequence, she had lost her friends and herself, but adamantly remained maudlin and inconsolable over her loss of her husband.

During her session she reminisced about her happy life before her husband died. He had been all things to her, and had protected her in every way. Though he had left her well provided for economically, she felt she had no emotional resources to live on and was too old to find any. Drink, and acting as custodian of mementoes from the past—her husband's clothing, his toothbrush and other possessions—were her only interests, aside from speaking of him as often as possible, almost as if he were alive.

S brought with her to her session a pipe that had been her husband's favorite and which she often looked at and held when she wanted to feel especially close to

him.... Finally, she closed her eyes and reported that the pipe was "getting warm—and then that she had the feeling of holding not the pipe but instead her husband's hand. She now experienced the first of many vivid memory sequences during which she "relived" with intense emotion a great many past events.... Her husband seemed "real as life" and she wept with joy at his "return from the grave."

S then began to talk to her husband, telling him how much she had missed him since his death, how difficult life had been for her, and how their friends had abandoned her since she had started to drink. To the guide's inquiry, she explained that the sense of her husband's presence was "completely real" and that he listened "very seriously" to her discourse and sympathized with her plight, but managed nonetheless to convey the idea that he "didn't really approve" of the way she had been behaving. She fell silent, and finally reported that the pipe was only a pipe again, that it was growing cold, and the sense of her husband's presence was becoming very faint. Then, however, it returned once again—a presence so powerfully felt that she thought she could "reach out and touch him." She felt her husband smiled at her lovingly, conveying "whole worlds of encouragement and strength," then slowly turned his back and walked away. Then the sense of presence was extinguished and somehow she knew that he would "come no more." The pipe now was "cold and lifeless" in her hands and had "nothing more to do" with her husband.... "At long last," she said, he was "gone. Dead. Really dead. He has made me understand that and I have got to accept it. That is what he would want me to do. That is the meaning of what I just went through."

S, from that time on, was gradually able to make adjustments, to "grow up, create a new life" for herself; and she discontinued her drinking immediately and did not revert to it.

That environment is a stern dictator, co-ruling man's fate with chance, is clearly true in the case of another "victim" of himself, an amateur gambler who might more realistically be termed an amateur loser. The subject, a clerk in a small English bank, was deep in debt and in constant friction with his wife and children because he was a regular and compulsive gambler at the dog races. LSD and ritalin treatments, under direction of Drs. Ling and Buckman, were suggested when it became apparent that betting at the dog races was the dominant activity of his life. (This patient also had an immature dependency on his mother, a characteristic which did not help his marital situation.) Even at the outset of treatment, however, he realized his own weaknesses to a certain extent and acknowledged that he really gambled in order to lose. He "obtained a strange satisfaction in the misery that followed losing, and the humiliations that followed on the financial crisis," as he himself put it after his second LSD-ritalin session.

In time this man came to understand that he was not behaving like an adult in calling on his mother for emotional reassurance and that some of his problems were sexual. He was successful early in the series of his twelve sessions in giving up his deliberate losing at the races and, upon occasion, he won some money. His relationships with his family, including sexual relations with his wife, were markedly improved, and his trips to the dog races became infrequent. Still, although he was more content, in better financial condition and no longer in the grip of his compulsion, he found himself unable to settle down. At the end of the ninth session it was decided that he should take a rest from treatment for a time, to see what would happen.

He did not have a genuine relapse, but again he got along badly with his wife and children, and he had to make a conscious effort to resist urges that he return

to his former preoccupations. His wife, a pragmatic type of person, lost patience with him. Finally he went on a gambling spree, and afterward he felt "purged" because he had lost all his money. He also made a full confession to the bank that he had done this, as he had on a previous occasion when his employers had been paternally understanding about his difficulties. At that point he returned to treatment.

By the end of the final session, the former gambler had a subtle but telling insight into his difficulties: he had not made the proper adjustment prior to his gambling spree because, having been relieved of his compulsions, he had found no interests or outside occupations to replace them. When he learned that he would have to "learn to live without it" (gambling), he then settled down to doing so, and quite successfully. Six months after dismissal he was still living a satisfactory life, free from his previous problems.

Had this man not been capable of learning to live without his destructive and immature preoccupation, his story might not have had its successful conclusion. All too often "relapses" occur when the individual, freed from his problems, feels not his loss so much as he does an inner void. Failure to find a constructive substitute, or to "fill in the hole," may engender a state of anxiety and be as detrimental as returning to the same environment, unchanged in atmosphere or reality; and makes full non-backsliding recovery virtually impossible.

Even more vivid than the gambler's case is this solution of a "life problem," presented by Dr. Donald D. Jackson at an LSD symposium held at Napa State Hospital, Imola, California:

The patient was a 35-year-old accountant who had been in intensive psychotherapy for five years because of chronic depression and crippling obsessive traits. He had had a brief psychotic reaction and had made an abortive attempt at self-castration. His oldest sister was a semi-invalid; he was placed in a position of great responsibility for her; yet he had always to be deferential and to accept continuous criticism. He had no pleasant experiences of adolescence, and no dating. At the beginning of therapy he complained of intense loneliness. Both patient and therapist were frustrated by his meager progress. His solid intellectual defenses were refractory to interpretation. Occasionally he made efforts to improve his isolated social position; each time he neatly sabotaged the effort.

The patient was given 100 mcg. of LSD at this point. Although he was eased somewhat, he was still blocked and the doctor was unable to instigate any fantasy on the part of the patient that might point toward the cause.

Upon speculating about the kind of fantasy a boy might entertain about a father he had hated, the doctor finally produced an image that suited the patient. He suggested that if the patient—

—reverentially mowed the grass over his father's grave, and if each passage of the blades over his father's grave cut a little deeper, there might be a gradual diminution, or shearing off of the parental authority, a trimming of the father imago. I shared this fantasy with the patient and suggested that he might well have had such a one. The effect was electric. He exploded with laughter. The feelings and fantasies about father came pouring out, as though Moses had smote the rock. For the balance of the afternoon we reveled in an exchange of fantasies about his father.

From that day he was a changed man. Previously he had been a Milquetoast at work, whom everyone pushed around. Now he became self-assertive and positive. He no longer let advantage be taken of him. He was poised and comfortable. It occurred to him he might do better working by himself. During the next LSD session (150 micrograms) he was able to continue the work of the preceding session. With the dread father laid to rest, he could relive his adolescent days with the therapist, not as they had been, but as they might have been. He expressed for the first time the desire for a girl. In the month following, astounding changes developed. He developed a sense of humor; he became efficient; he began to date; he made plans to leave his job and set up his own business, and this he actually accomplished. He enjoyed dating and experienced intense sexual feelings. In therapy he expressed the desire for marriage and children. He struck up a friendship with another man, with whom he discussed topics formerly tabu: sex and women.

Following LSD he began to have intense dreams, sometimes pleasurable, often in color, which he had not had before.

In seventeen (now nineteen) years of practicing psychotherapy, I have never seen as much change in an individual with a rigid obsessional character. The change has been permanent. While it has leveled off, there has been no backsliding since our first Encounter using LSD.

One of the reasons why LSD had met with limited public acceptance—aside from the adverse publicity it has received and the fact that the drug is acknowledged even by enthusiasts to be fraught with considerable dangers unless expertly used—is that today the public, in general, is quite accustomed to claims made for "miracle" cures. Every unusual advance is suspect to the majority which, with some amusement, sits by and watches hopeful converts practice Spectro-chrome Therapy, Dianetics, Grapho-Therapeutics or whatever else is in vogue that season.

This is not at all surprising. Well-attested claims for cures burgeon for almost every remedy ever recommended, and cure claims for primitive and unusual nostrums will probably always have a following. (Some of them, oddly enough, have even proved to have scientific validity.)

But prior to Hofmann's accidental discovery of LSD, there was never any miracle cure that claimed revolutionary benefits in the alleviation of mankind's mental and emotional imbalances. Not until LSD has there been a therapy, a drug or any other problem-solving means that reached so many different levels.

The nineteenth-century medicine show and its medicine man must have given hope and therefore aid, as well as entertainment, to the audiences which bought patent medicines. The purveyors were not all charlatans, whether or not they had personal faith in, or experience with, the product they peddled. The claims they made for their goods always had any number of honest adherents to back them up. The endorsers believed that the medicine did them good, and quite often it did, if only because they thought it would.

To ignore the power of suggestion, with or without drugs, is perhaps to become fallacious. Even scrupulous investigators who would like to think of themselves as unprejudiced are constantly being surprised by unacknowledged errors. This is why most seasoned researchers accept all findings with caution and attempt rigorous self-examination to rout out their hidden biases.

Some reports made by members of the Josiah Macy Foundation's LSD conference, relating to experiments made with LSD and placebos, revealed how great the powers of suggestion can be:

Abramson: "I have also seen rather violent reactions when tap water was administered. One subject became so upset from a tap water 'dose' of zero LSD administered in the morning that I had to be with him until 11 o'clock that night, and he was upset for a week thereafter. One young girl became paralyzed in both legs after tap water. Possibly the more violent reactions are due more to the underlying personality than to the drug itself."

Dr. Abramson was asked if the placebo subjects were integrated with the group which had actually received the drug; the answer was in the affirmative. He went on to say that extreme reactions on the part of the tap-water subjects invariably occurred in a group setting and were typical. Another member of the conference, Dr. Betty G. Eisner, related that one of her placebo patients in an experiment had had a violent skin reaction that persisted for some months later. And Dr. Keith S. Ditman spoke of an unusual situation that came up in his work:

One of our subjects showed a reaction indicating he did not believe the physician had given him LSD. This is a reverse situation; that is, the drug reaction was affected by the knowledge that placebos were sometimes given.

This rather startling incident would seem to indicate that if there is one thing that is superior to LSD in its power to alter the human psyche, it is the human psyche itself! There are few cases on record, however, of the subject's successfully resisting LSD. Indeed, most people who take the drug do so because they want to, or are advised to. Most LSD subjects look forward to the prismatic, climactic, revealing experience which LSD promises and usually fulfills. They are prepared to be persuaded.

In the matter of marital relations or sexual experience while under LSD, the elements of extrasensory perception and suggestion play a crucial part. If the drug is taken in an impersonal group setting, or with a guide whose interest in the subject is purely clinical, sexual arousal seldom occurs. LSD is not a "sex drug," although in sexual matters it can act as a strong stimulus if the setting and the people involved have sexual participation in mind. LSD can influence every area of human activity, and when sex and LSD do converge, the experience is said to be indescribably ecstatic.

Marital Problems:

As novelists, psychologists, and sociologists continue to observe, people today generally do not have good relationships with each other—relationships that are healthy, joyous and open. Nor are many modern marriages sound. Marriage may begin with a great deal that favors success and yet there is an appalling rate at which the relationship deteriorates.

Rates of divorce, annulment and separation are almost at a par with marriage figures, and in countless situations a married couple only remains together for "the

children," or for "old time's sake." In our society, loneliness, alienation and incompatibility are increasingly familiar conditions.

One of the most revealing studies made of marital mores and attitudes—a survey of 624 housewives who had been married for an average of ten years—was reported by Marya Mannes in *The New York Times*, November 15, 1965. Most of these women thought of themselves first as "a mother," then as "a wife." Asked about the role of the man in the family, some 63 per cent thought of him primarily as "a breadwinner" (only 14 per cent considered him first of all "a husband"). Despite this emphasis on the "breadwinner" aspect, however, "most of the wives felt that their husbands' work was something entirely outside of their lives, and they commented on it only in terms such as 'My husband is a good provider' or 'He has a good job.'" As an explanation of the remarkable "evasive tactics" engaged in by husbands in our society—television, the papers, long working-hours, golf, drink, "outside sex," girlie magazines, Marya Mannes says:

Throughout their responses, the conclusion was inescapable that the wives cared far more about what their husbands did than about what they *were*, as persons. About one-third of the women not only put their own role as mothers first, but indicated that the husband was essentially outside the basic family unit of herself and her children.

In such a situation, LSD has a remarkable ability to help people overcome problems of alienation. Sometimes this comes about simply from bettering sexual relations:

Before I started taking LSD, I had all but lost interest in sex. As you know, I'm married—have been for three years—but it hasn't turned out too well. To be frank, it hasn't worked at all, not even in the beginning when we were still very much in love.[6]

This husband then goes on to say that after experiencing LSD he went to bed with his wife and found "It was like discovering her all over again. Her body, and I know it as well as I know my own, suddenly became new and fresh and exciting. Imagine all that... and I was barely speaking to her a month ago."

In certain popular magazines, LSD has been presented as a powerful sex drug. To a greater extent than with presumed "sex drugs," which are not really effective, the claims are justified, for experiments are repeatable and LSD's sexual reputation is deserved. This is not to say that it is in any way an aphrodisiac, but since LSD heightens all sensory perceptions, it follows quite logically that, used during sexual activity, fresh sexual values are garnered.

Since sex, even in an age of enlightenment, is still a veiled subject, few serious investigators have publicly revealed the value of LSD in melding sexual relations, the cornerstone of any good marriage. An established authority on sexual behavior recently decided against the publication of a paper he had written on the sexual aspects of psychedelic experience—on the grounds that such publication might jeopardize his career. Such attitudes have left honest reporting of what occurs when LSD is introduced into the sexual experience to the maverick writer, or the reckless.

When the LSD session is directed toward problem solving in the psycho-sexual area, the drug can help to uncover one's "essential self," and may transform the

image of a loved one from a person fallen from favor due to his nagging and irritating traits, to someone far more human and attractive. The drug is able to change the pessimist, who sees nothing but the half empty glass, into an optimist delighted that the glass is half full. This value rearrangement, shifting from being petty and faultfinding, to being impressed by the fundamental unity of life, is an opening to maturity.

In April, 1963, novelist Alan Harrington was getting along rather badly with his wife. They were "frequently at odds, and just not connecting," at the time when he had his first LSD experience. As he wrote later, "I know that the vision revealed by psycho-chemicals can help overcome feelings of alienation and loneliness":

[In] the next few hours... I loved and desperately wanted my wife. This was a surprise to everyone, including ourselves, because as I said we had been through a bad time together. But under LSD it is impossible to fake anything: she was my connection with life.

Someone commented later: "Well, what's so surprising about two people who have been together for twelve years having a bond between them?"

Nothing, I suppose, except that the bond can be buried in the details of everyday living; it can be forgotten; the bond can be taken for granted and become boring if you let it, but just the same over the years it may still be the main cable attaching you to life. During the parts of the LSD torment when an ego is being shredded, you know who your friends are.

LSD seems to strip away ordinarily superficial motivations and interests. Under the influence of this drug, material accumulations come to mean very little; of importance are relationships that are honest and meaningful, and the ability of the senses to derive the most from experience.

The drug is able to effect these alterations in thought process because it short-circuits old techniques for self-deception. During the LSD experience, the subject loses his accustomed habits of thinking and feeling (much of the literature refers to this as "depersonalization"), and goes "outside" of himself, away from the old grooves of normal defenses. From this new perspective, he sees through the ways in which he avoids intimacy and spontaneity, participation and openness—what may lead to being "an utter fake," and what Eric Berne has discussed in terms of "evasions" in his book *Games People Play*. There is a grim reality and embarrassing humor to such "games" as *Harried*, *Kick Me*, *Stupid*, *Wooden Leg*, *Rapo*, *Look How Hard I Am Trying*, *Sweetheart*, and *Uproar* (to name a few on Berne's list).

LSD has very little patience with fraudulent defenses or with artificial environments or with status, and it rips away the facade that keeps us from understanding how preoccupied we may have become with the trivial. The drug also seems to shorten the gaps between events that are, or prove to be, meaningful, and thus it forestalls deliberate "forgetfulness," or blockage. In consequence, a more realistic appraisal of oneself and one's behavior patterns seems possible. A 49-year-old married man explained it this way after having undergone a series of LSD treatments at Marlborough Day Hospital in London:

I am able to talk to my wife more freely and frankly than I ever used to be. I am not so afraid of saying what I really think even if I know she will not agree. Apart from the restoration of intercourse we really get on much better than before. That is because there was a time, which was very difficult while it lasted but which has

borne fruit, when we were both quite open in our talking about the breach that had come between us. When one pretends that all is well and is afraid of speaking about how one really feels there is no hope that things will get any better. When, as happened in our case, one has the courage to be honest then there is a very good chance that all will be well.

An improved grasp of the problem does not guarantee, of course, that a couple will be brought closer together. Often an attraction is little more than a matter of both partners having needs which may be somewhat satisfied through living together. There are many persons who are living with partners they do not really like, or who are continuing a relationship just to be continuing something. Under the influence of LSD, such situations can become very clear; it may emerge that the alliance is essentially sick, or at best unsatisfactory. Many an LSD user has claimed to realize that, for him, the time has come to "move on" and that the "marital game has ended." A few, aware of the uprooting effect in their life arrangement, have stopped LSD sessions because, as one woman put it, "I just can't permit that much honesty in my life."

Although risks like learning more than one cares to know do exist, the "advice" given by LSD is for the most part benevolent. Instead of encouraging disparagement of a mate for shortcomings, as may result from greater intellectual clarity, the drug generally activates emotional tolerance, if not empathy, and highlights hidden or forgotten attractive qualities.

In one of Masters' and Houston's sessions where this development occurred, a man in his early thirties, while looking in a mirror, saw an image of himself as the source of great circular loops of neon that entirely surrounded him. Hundreds of thousands of such "loops" appeared. He felt they were made up of all of his self-attachments and pertained to every point of his life:

"... memory loops, love loops, hate loops, eating loops, mental block loops." Upon re-entering the living room he saw his wife and immediately became absorbed in studying her since she, too, appeared to him to be surrounded by her loops. He had always thought of her as being "a rather simple person" and was "altogether amazed to discover that she is every bit as complicated as I am."

Afterwards the subject felt that he had been able to recapture a view of his wife that he had held at the time of their marriage and that he understood her better. Similarly, through the "loops" important things about the characters of other people seemed to be revealed to him.

Reports of successful marital adjustments with LSD increasingly give evidence of restored appreciation for the partner and the partnership. It seems not unreasonable, therefore, that one day LSD may be regarded as a strong asset to marriage counselors. As a forerunner of this possibility, Dr. Richard Alpert, an expert on psychedelics, has included in his book, *LSD*, co-authored by Dr. Sidney Cohen, a section entitled "A Manual for Making the Marriage New."

Along these lines, others have suggested that, in the future, LSD sessions might include the play-back of previously taped events, specifically a family quarrel. Some of the precipitating factors might dissolve into trivia under the light of fresh insight.

Frigidity, Impotence, Homosexuality and Perversion.

In 1962, when screen-writer, novelist-actress "Constance Newland" (a pseudonym) published her book, *My Self and I*, frigidity in women was an accepted, but relatively unexplored, problem. At the same time, LSD was an enigmatic drug, also relatively unexplored. Since *My Self and I* appeared, joining the two topics in major context, LSD and the cure of frigidity have been linked in the public mind.

In *My Self and I*, the author explains that for a number of years she had been undergoing psychotherapy, without progress, for several problems, chief of which was frigidity. Regarding this, she was perfectly prepared to live with it, because: I knew from friends (and from Dr. Kinsey, who reports that approximately one third of American women suffer similarly) that frigidity among women is almost as prevalent as the common cold—and just about as incurable.

Even so, she was a healthy, functioning member of society. As Dr. Harold Greenwald says in his foreword to the book, "To me it seems quite clear that most people meeting her even before her experience in self-discovery would probably have considered her well balanced, adjusted or emotionally mature."

However gracefully she was able to accept her disorder, Constance Newland was agreeable when LSD was suggested as an aid for her basic problem, frigidity. She found the results of her twenty-three sessions with the drug so rewarding that she felt obliged to publicly share her achievements with others.

Constance Newland's husband had died just after her second child was born, and her feeling of emptiness, which she had thought could only be filled with her career, was to be expected. That her career failed to gratify her emotional needs was also to be expected. Her long, detailed account, with pronounced Freudian overtones, shows the two predominant effects of LSD when used to treat sexual repressions. First, the drug is incisive in that it brings to the patient a conscious image of his condition. Second, it returns him to childhood memories and events, which he relives, thus enabling him to come to new terms with them and to slough them off selectively.

In her first session, Constance Newland had several clear indications of her frigidity. Almost at once she felt cold and her teeth chattered as her body trembled. She felt herself sucked down to the bottom of a dark ocean, alone on the ocean floor, a closed-up clam. Then she saw a "white marble statue of a nude woman with two gaping holes where her breasts should be." This she recognized as a statue, which had actually been erected after the second world war, in the center of a German city, christened, "The City Without a Heart."

In later sessions indications of her frigidity were again revealed, but in other images: she saw herself on one occasion as a fragile glass vase, about to break. Then it occurred to her that she thought of herself as being "Inviolable," and that it was no accident that "violet" was her favorite color and that she often dressed in it.

The second major effect of the drug was to return her to repressed traumatic incidents of childhood from which she had never been emotionally released. Reliving these experiences, with all their original pain, she was freed from the sexual blockage which had made her frigid:

As a baby, I had seen the act of intercourse which looked to be an act of violence in which father "choked" mother. That scene had so alarmed and sickened me that, as a protection, I had determined "never to feel anything so that I would not be hurt."

At long long last, I had uncovered the classic Freudian "trauma" responsible for my sexual difficulty: one too-strong, too-hot enema, received when I was two and a half years old. It was preposterous. But undeniable.... My ego would have been able to manage a too-strong enema with the "utmost ease" had it occurred later in life. But at the age of two and a half, my ego was "helpless" and could only fend off the problem—by repression, which later turned out to be ineffective and involved the "permanent hindrance to further development"—of frigidity....

Thus LSD took Constance Newland to the base of her problem and released her from her deep-seated fears. Much to her amazement, she discovered that there is indeed an "unconscious" and that her own had unknowingly served her as an emotional catch-all. Because so much that was buried there was repellent to her, she had rejected the concept of the unconscious. But as her LSD treatment gradually opened mental and emotional horizons for her conscious inspection, she recognized the unpleasant elements for what they were, deflated them and dismissed them from her life. With their disappearance went the desperate emptiness which her unconscious symptoms had brought about—the unrealistic quest for something to fill the void within her. As a result of her thorough and courageous exploration of self, she gained understanding, adjustment and cure. As she says, "My life has new savor, new meaning—and new mystery."

Life is repetitive in its processes and similar results were achieved in sixteen other cases of frigidity treated by Drs. Thomas A. Ling and John Buckman of Marlborough Day Hospital in London. They report the case of a twenty-six-year-old Indian girl, for example, who feared she could never marry or have sexual relations, although she consciously wanted to. After treatment with LSD and Ritalin, she uncovered early memories which she came to understand were the sources of her adult sexual fears. Re-experiencing birth, she felt she had been "created for creation."

This to me was orgasm and this joy was what I ought to look for ... This was also unity with the "absolute."... I had my first practical lesson in how to have and enjoy intercourse. I learnt to lie back relaxed and offer myself....

As a result of therapy, her tensions disappeared and she gained emotional freedom. At the time the account was written up, she was maintaining a successful relationship and was "able to get full satisfaction out of sexual intercourse and always achieved full orgasm."

Another interesting LSD treatment by these doctors, as reported in the *Psychedelic Review*, was that of a married woman who had never obtained satisfaction from sex and reacted to it with distaste. It was soon discovered that because she had had a "baby love affair" with her father, who nonetheless had no affection for her, she had rejected all sexuality. In her third session she wanted to remember her first awareness of sexual feeling, and returned to infancy:

I was a tiny baby about six months old, lying on my back with my legs in the air, with no clothes on and my father was looking at me. He was looking at my private parts and I expected him to react in an approving way, but he did not. It was a

shattering blow to my self-esteem. I felt that here was the very essence of my femaleness and the one male I most wanted to show approval did not do so.

Following this insightful LSD experience, the patient felt "enormously released." She found that she began to enjoy male relationships which previously had resulted in feelings of shame and which afterwards she preferred not to think about. After treatment she "felt a wonderful outpouring of love" and wanted to have a second child, though previously she had thought another pregnancy would be "disastrous." In later sessions she summoned other childhood sexual detail that made even further progress possible, and at the close of treatment she had her first full internal orgasm during intercourse. Six months later she reported to her doctors:

I am completely free of all the feelings of distaste and guilt that I had, and am able to enjoy [sex] in a "down to earth" and healthy way. I know my husband finds me much better company and I have a much more positive approach to him and life in general, and I have much more patience with my children.

It is true that in many cases of frigidity women have sublimated their sexual drives by turning to careers, and the indications are that such women seek treatment only when the career (or other substitute) becomes disrupted or unsuccessful. One of the reasons frigidity has been virtually untreatable in the past is that the sufferer could retain her sex substitute and persuade herself that it was "fulfilling." LSD, however, reaches to the bottom of the disorder and the subject cannot take refuge from the truth she finds, whether her career is "fulfilling" or not.

Recognition of the problem is an important first step, but this in itself solves nothing. In frigidity cases, LSD seems to first define the problem, then dissolve it, thus freeing the patient to make a suitable adjustment.[7]

The history of LSD is marked by important accidental discoveries. The first, of course, was the unexpected and stunning discovery of the powers of the drug itself. It was then only by chance that two investigators happened upon LSD's usefulness in the treatment of chronic alcoholism. Another discovery several years later was made when a few researchers noticed that the drug enhanced the evocation of "religious" or "mystical" experience. Still others, looking for a new pain-killer, found that LSD could help the terminal patient to a greater serenity in acceptance of death. And much to the surprise of many homosexuals who had been given the drug for other disorders, LSD coincidentally was found to help their homosexual adjustment as well. This is evidenced again and again (almost as an aside) in case histories dealing primarily with other matters, but to date such information has remained obscure and has seldom drawn comment.

Individual clinicians, however, have reported improvement in homosexual adjustments—almost as a by-product of other treatment. Homosexual alcoholics, for example, have not only been able to solve their alcohol problems as a result of using LSD, but have resolved sexual guilt to the point where they could accept their homosexuality without shame or overemphasis of its importance to their lives, or they have become more involved in heterosexual behavior. Dr. Ruth Fox and Dr. Jack Ward are two experts on alcoholism who have had several such cases in which homosexual symptoms have disappeared or been alleviated, although specific treatment was not intended for this condition. Non-clinical investigators have also noted this result. Masters and Houston, in giving LSD to college-educated subjects simply to study their reactions—with no intention of "curing" anything—

reported a number of subjects in whom there was a change in homosexual behavior patterns:

Like most (twelve out of fourteen) of the limited number of overt male homosexuals who have been psychedelic volunteers, there is to be found here a distorted body image.... Certainly, the normalizing of the distorted body image produced a marked trend towards heterosexualization.... In the streets, he consistently saw what he had "never seen before": He noticed the "beasts and bottoms" of women and found them attractive. This was a source of much astonishment to him, since before he always had passed women by without seeing them at all, or noticing them only as if they were objects, "like lampposts or fire hydrants."

... all of the homosexual subjects have had a rather passive demeanor.... A frequent post-session effect is then a heightened aggressiveness, an impression of greater self-confidence and probably better self-esteem, with a noticeable deepening of the voice in some cases. Also, gestures may become more vigorous, posture more erect, and movements generally more decisive and, in some cases, more "masculine."

Coincidental homosexuality adjustments have occurred with sufficient frequency that at lectures and conferences on LSD, the question has been raised as to why LSD has not been put to direct use more often for treating the condition. The answer lies in the fact that so far there has been no systematic attempt to measure the significance of LSD in this specific treatment.

It would appear, however, that LSD is successful in homosexual problems because it can reveal early traumas which underlie the condition. Further, it can bring about, through insight, a lessening of morbid dependency on parents. As mentioned in the foregoing quotation, it can alter an individual's inappropriate and/or pejorative total self image and lead to self acceptance.

There are many therapists who believe that it is not possible to work through problems of a sexual nature, whether they be narcissism, over-dependency, blockage or a variety of perversions, without abreaction—that is, the patient must first return to the early periods of his life when his attitudes and values were originally damaged and the construction of "mental dams" was begun. In conventional psychotherapy, which consists mainly of "talking it out," some part of the dam usually remains. This is why "dynamiting" it with Psychodrama, Marathons, and Vegetotherapy and other methods based on "shock reactions" have a growing appeal. But compared to these methods, the potentials in LSD therapy seem vastly superior.

Several techniques have been developed for combining certain shock processes with LSD. One far-sighted team of English doctors reported on their system (used in sixty cases over the last three years) at the Second International Conference on the Use of LSD in Psychotherapy at Amityville, Long Island. They had an impressive number of successful cases to their credit, with only two treatment failures and one relapse.

An example of their treatment, as applied to homosexuality, was presented by Dr. Joyce Martin, Senior Hospital Medical Officer at Marlborough Day Hospital, and indicates the delicacy, patience, and discernment required on the part of the therapist:

... active participation of the therapist is needed, since the drug regresses the patients to the earliest experiences so dynamically that they literally feel as a baby and are unable to cope or fend for themselves; but this is no longer frightening if their present mother, that is the therapist, is warm and understanding and can supply their needs at that level in some practical way, such as giving warm milk, holding their hand or putting an arm round them, and also talking to them at a conscious level, since consciousness is always maintained in the treatment, and reassuring them that it is good and normal to want these things, which all babies need and want, but do not always get.

... we can enable him to face up to all the painful factors in his life and upbringing, which originally the ego was not strong enough to accept; but now with the transference to the therapist, these things can be accepted. And it is, in fact, the therapist's job to point them out, so that they are accepted, however unpleasant, which is possible when the therapist, unlike mother, does not criticize or reject.

Freud maintained that, in certain types of neuroses, called the narcissistic neuroses, the transference relationship did not develop. This made psychoanalytic treatment very difficult and lengthy, and was the cause of much criticism. We have, however, had many narcissistic neuroses to deal with under LSD, and find that, if we know the right role to play, then they gradually respond and develop a transference, develop and integrate. For example, a man of forty-nine, obsessional schizoid, suffering from extreme sexual frustration causing tenseness, irritability, inability to communicate with others and depression, was eventually able, through the right attitude of the therapist, to communicate freely with her and eventually to have sexual feelings and show his penis to her, which was the first time in his life that he had done such a thing, but he felt pleased and not ashamed of it...

The... case I wish to describe... is that of a man of twenty-five, a dentist.... His father died when the patient was one or two years old....

He remembered having a bicycle accident at 12 years of age and being treated in a hospital and then having to stay in bed at home. He felt something horrible and frightening had happened to him during this time.... The therapist had an intuitive feeling that there had been some sexual incident, and so she lay beside him. He remembered feeling cold and miserable after the accident and asking mother if he could get into her bed, which he did. She offered him her breast and later put her hand on his genitals. The therapist-intentionally put her hand on his thigh and the patient said he felt a weight on top of him, which she interpreted as someone lying on him, so she got on top of him. This then brought back the memory that his mother had sucked his penis and made it erect and then pushed it into her vagina. He said he felt like a horse being ridden by a cowboy and that his mother was very masculine.

Later... he went through an extremely suicidal depression. He sat in front of the fire holding out his handkerchief and saying that he saw patterns of a tombstone on it and this was his tombstone. He then remembered feeling mad after the incident with his mother; and when she left him to go off to work, he crawled back to his own bed and masturbated for the first time. The whole horror of the experience came over him and he tried to forget it. He then began to see his mother as wicked and evil and ugly and he determined never to let her touch him again. He locked his door at night and hardly spoke to her for weeks. Eventually the whole incident became repressed and he never looked at her or touched her again.

The suicidal depression continued for some time, and the patient would drive his car at 60 miles an hour up one-way streets, etc. He projected his hate against his mother on to the therapist at times, seeing her as ugly and evil, but with her interpretation about it he was able to accept that it was only his feelings about his mother, and he continued to come for treatment.

His next memory was of having been picked up by an older boy in the park, when he was fourteen years old, and allowing the boy to touch his penis and later seduce him, which he admitted enjoying and said it made him feel like a woman. Later on, he also had successful sexual relations with virgins, and realized that he was getting his own back on his mother in doing this, but that he did not have such a good orgasm as when playing the female role. He now remembered doing this with his brother.

The transference to the therapist was now fully developed and therefore, in order to get him out of the homosexual stage of development, she praised a mutual acquaintance as being a fine virile man, and this made the patient very jealous, so that the next week he told her that he had made two conquests with virgins during the week. He then asked the therapist to lie on the bed with him, which she did, and he put his arms across her shoulders and said he felt merged with her as one person and they were going into a tunnel together, which was identification with his mother. Later on, he said he didn't want to be a woman any more, as he felt she wanted him to be a man, and she agreed she did want this, since he had been born a boy. He said his aim now was to become a man and possess her.

The insights which some homosexuals have had from LSD therapy have enabled them to marry happily, adjust to an existing marriage, or decide that they are essentially homosexual and want to stay that way. Other patients who feared homosexuality and had decided to have no sexual relations at all have found the courage to experiment, and some are leading fulfilling heterosexual lives.

Since the causes of homosexuality are diffuse and not well understood, a continuance of homosexuality after LSD is not necessarily a treatment failure and should not be thought of as relapse. It may represent the establishment of a positive nature of the self.

As a group of Canadian psychotherapists put it,... "many [homosexuals] have derived marked benefit in terms of insight, acceptance of role, reduction of guilt and associated psychosexual liabilities." This is an estimable development, for as Eric Berne points out in his book about symbolic game-playing, an understanding of the sundry homosexual dodges and reassuring apologies indulged in by insecure homosexuals can lead to a more highly integrated life:

[In] "Cops and Robbers," "Why Does This Always Happen to Us," "It's the Society We Live In," "All Great Men Were" and so forth, the "professional homosexual" wastes a large amount of time and energy which could be applied to other ends. Analysis of his games may help him establish a quiet menage which will leave him free to enjoy the benefits that bourgeois society offers, instead of devoting himself to playing his own variation of "Ain't It Awful"

Because homosexuality has been considered an endemic and deep-rooted condition since times of antiquity, hopes for its alleviation, until very recent times, have been faint. But lately, since other resistant mental aberrations have been overcome by new methods, somewhat drastic treatments are being used and

advocated for the homosexual in some quarters. In one current technique the homosexual patient is shown a picture of an attractive male and is simultaneously given an electric shock. Such a method, perhaps of some use, nevertheless may have deleterious effects—which is why most thoughtful therapists are opposed to such "reconditioning."

Unbelievable as it may seem to the conservative therapist, however, LSD not only works better in the treatment of the homosexual problem, but it does not seem to require the substitution of a surrogate symptom. Here is how one analyst,[8] familiar with the LSD studies, states it:

I went to the International Congress on Psychotherapy in London last year. There were quite a large number of papers on LSD therapy. The different approaches were really quite astonishing; people seemed to claim, at any rate, that they get almost equally good results from different viewpoints. Some people, indeed, seemed to think that one would get a result, in some cases, entirely from the effect of the drug, with very little in the way of psychotherapy. When one goes to the A.P.A. meeting, one hears the enthusiasm of the behavior therapists and their claims, with much conviction, that by deconditioning and getting rid of patients' symptoms, you can get patients better, and they do not relapse, and they do not produce other symptoms! Contrary to the expectations of the analysts, who have all said that if you get rid of these symptoms, you will only produce other ones.

In the layman's mind, homosexuality is often confused with other inversions—transvestism, fetishism, sadomasochism, etc. While this confusion may cause concern among homosexuals and sexologists, there is a grain of truth in this misidentification in that a wide range of sexual disorders spring from the same general source, and to a certain extent they are interchangeable. Because this is the case, a number of uncommon and bizarre aberrations, also engendered early in life, can be treated with therapy similar to that for homosexuality.

Although seldom classed as perversion, sexual promiscuity is closely related. As therapists know, patterns of promiscuity can be altered by an emotional recall of certain past events on the part of the patient. This may be the explanation for the reports, which have puzzled some authorities, that LSD not only can help the asexual person to "normality," but also can moderate wanton behavior and create the capacity for more lasting relationships.

It is known that homosexuality and the other perversions are dependent upon fantasy for their maintenance. Most of this fantasy stems from childhood daydreams and is unsatisfactory for transition to adult life. The grown-up daydreamer does not recognize this because he has updated and embellished his fantasies with images and impressions he has found suitable along the way. But he builds of necessity on shaky ground: infantile vision, inexperience and immature understanding. In consequence, the fantasy, though it may be firmly established as ritual and heavily depended upon, can never reward and comfort as it did when first conceived. When the fabric of the fantasy wears thin, as it must occasionally because of environmental change, the daydreamer is in trouble.

In contrast, the LSD fantasy that the patient experiences in treatment usually is a means of redressing old grievances, but it contains elements appropriate to maturity. Characteristically it reinterprets happenings of the past (for which the subject was unprepared) from the perspectives of deeper maturity and this entails a re-examination of the meaning of one's personal existence and a symbolic

passage into a new order. The LSD fantasies seem particularly directed toward the rebalancing of maladaptive functioning, in much the same way as Jung saw the purpose for dreams. This can lead to growth and transformation. In a society that lacks formal initiation rites, a factor which consequently leaves uncertain the termination of childhood and adolescence, LSD fantasies seem to facilitate entry of the chronologically grown-up but emotionally infantile adult into a mature world. This applies to the whole gamut of perversion: sadomasochism, bestiality, chronic masturbation, flagellation, nymphomania and so forth.

This growth—like all significant change—can be frightening to the patient and may seriously disrupt the life condition. It can also bring about undesirable changes in family life unless precautions have been taken and an expectancy has been established. As those familiar with domestic relations know, improvement in one partner can bring about deterioration in the other. With LSD therapy there is the additional problem that any marked gain may be dismissed on the grounds that "a drug can't do such things." This attitude is sometimes disastrous.

In one case, a woman who had become withdrawn, gloomy and listless because she felt that her successful husband had "outgrown" her and should divorce her, was restored after LSD therapy to the amiable, outgoing person she had once been. The husband had been completely loyal to her during her travails, but he lost all interest in her when it became clear that her recovery and renewed interest in life were genuine. He found as time passed that he could not accept her as an equal, his childhood asthma attacks gradually returned, his business no longer prospered and eventually divorce did occur.

As a final comment on LSD's role in sexual and domestic matters, it is fitting to reiterate a plea made by R.E.L. Masters when he published for the first time a series of case histories about the use of psychedelics as they affect sexual behavior:

... problems connected with sex relations have plagued humanity for a long while, as they certainly do today. And I do not see how there could be any legitimate objection to the development and marketing of drugs aimed at helping people generally to enrich their sexual relations when they do have them, and which would assist in relieving the anguish and misery of persons whose sexual problems are so severe that they are either driven into very bizarre perversions or forced to get along without any sex lives at all.

Since most of humanity's present day sexual problems, including impotence and frigidity, are psychological in origin, drugs which merely work upon the genitals, producing engorgement, are often of little value; and it is likely that the drugs capable of solving or helping with these problems will have to be drugs powerfully affecting the mind. That is why [psychedelic drugs are] so interesting and promising and why [they] should be thoroughly explored in this connection.

Footnotes

1. This volume, edited by Dr. Abramson, is a record of the Josiah Macy, Jr., Foundation's LSD conference held in April, 1959. 1,099 case histories of patients formed the basis of the report.

2. Of the Psychiatric and Public Health Departments, San Jacinto Memorial Hospital, Baytown, Texas.

3. Dr. Robert C. Murphy, Jr., Waverly, Penn.

4. "Psychedelic," a word coined by Dr. Humphry Osmond, comes from Greek roots and means "mind-manifesting." It was expressly invented to describe the growing list of "mind" drugs which have effects similar to LSD. There are at present about eighty such drugs aside from LSD; the most commonly known are psilocybin, mescaline and DMT (dimethyltryptamine).

5. Masters and Houston refer to all of their subjects as "S."

6. From an interview in *Dude* magazine, September, 1966.

7. While the published case histories of frigidity cures with LSD have been emphasized, LSD has similar effects and results in the treatment of male impotence. Men are by and large more successful than women in diverting sexual energies into their careers when confronted with their problem, and the incidence is less in any case. Consequently, less attention has been paid to the causes and treatment of this condition. Since here again the disabling agents that lead to impotence are anxiety, unconscious blocks, fear and inhibition, LSD can bring about an effective cure.

8. Dr. Donald Blair of St Bernard's Hospital, London.

Chapter IV. Everyday Problems (part 2)

Alcoholism and Other Addictions:

The valuation of personality change is, at best, difficult, not only in terms of semantics but in those of measurement. Use of LSD in alcoholism, however, has shown that the effects of LSD can be quantified. Recovery rates have risen and are still on the increase. In Canada, the Saskatchewan Department of Public Health considers LSD the most promising known treatment for alcoholism and has directed that for critical cases the single, large-dose LSD treatment is to be considered "no longer as experimental" but rather "to be used where indicated." In their particular program ("The Businessman's Special"), the drug is used only once—yet over half of the alcoholics who undergo the treatment seem to gain control of their drinking problem even after long and tragic histories of chronic alcoholism.

"In the course of history," Aldous Huxley has remarked, "many more people have died for their drink and their dope than have died for their religion or their country." The arithmetical record of the misuse of alcohol is staggering:

In the United States alone, some eight hundred million gallons of wine and distilled spirits and one hundred million barrels of beer are produced legally each year.... The alcoholic beverage industry in the United States grosses \$12,000,000,000 a year with expenditures of nearly \$200,000,000 a year for advertisement.... Out of some eighty million consumers, there are, perhaps, six million people in America alone and more than twenty-five million in the world with drug dependency on alcohol.

Some of the consequences of this consumption are:

Around fifteen thousand deaths and two hundred thousand injuries associated with drunken driving occur yearly in the United States. Alcoholic cirrhosis of the liver is one of the major causes of death; vast absenteeism, accidents, and job loss in business and industry occur, with an annual estimated loss of \$500,000,000; many, if not most, divorces and broken homes occur in connection with excessive drinking; one-third to one-half of all traffic arrests are for drunkenness, far outnumbering any other category of arrest; 60 per cent of all arrests are for offenses directly related to use of alcoholic beverages, and 50 per cent of those in prison committed their crimes after alcohol consumption, and an unknown but significant amount of decreased productivity, welfare costs, and so on must be considered.^[9]

Attempts to bring under control and regulate the consumption of alcohol by the "problem drinker" and alcoholic have been largely unsuccessful. Although it is against the law for bars and liquor stores to sell to persons who are intoxicated, it is not against the law to sell liquor to habitual drinkers and/or known alcoholics.

Further, most heavy drinkers and alcoholics are not prone to stop drinking even when they are fully aware of the eroding effects their addiction has upon their lives. They casually accept or ignore the fact that alcohol is pharmaceutically classified as a poison. Paradoxically, alcoholics at the same time are apt to have intense guilt feelings. Because their emotional center is in conflict—remorse, deliberate dishonesty about their problem, feelings of alienation from the rest of mankind, alternate moods of superiority and inferiority—the alcoholic is difficult to treat successfully. Alcoholics Anonymous, which has one of the best records in the field, refuses drinkers with poor motivation to change. One of the most

discouraging aspects of the problem is that ordinary methods of treatment have met with such limited success that the potentially courageous alcoholic who does want to get well doesn't know where to turn. When he has made attempts to "dry out" permanently in the past, his cure has rarely lasted. Quite reasonably, he no longer has hope, much less faith, that anything can be done to help him.

Alcoholics Anonymous believes that the alcoholic cannot really be helped until he has "hit bottom." "Hitting bottom" can mean many things to many people, but a large percentage of the population, as well as those who are alcoholic, think the bottom has been reached when *delirium tremens* sets in. This opinion, dramatically illustrated in the novel, "The Lost Week-End," and in the film derived from it, is shared by most experts on alcoholism. The use of LSD for the problem grew out of this supposition.

One evening in 1953, Drs. Abram Hoffer and Humphry Osmond, Canadian specialists on alcoholism, were discussing the correlation between alcoholic cure and *delirium tremens*. Although the d.t. mortality rate at the time was about ten per cent, this condition—when survived—occasionally led to recovery. Both doctors were familiar with LSD as a "psychotomimetic" agent (a drug which mimics psychosis), and during their discussion they suddenly hit upon the idea that LSD might be able to give their patients artificial d.t.'s, which the doctors could then control. "This idea at 4:00 A.M., seemed so bizarre that we laughed uproariously. But when our laughter subsided, the question seemed less comical and we formed our hypothesis or question: would a controlled LSD-produced delirium help alcoholics stay sober?"

They were aware, of course, that there would be conspicuous difficulties in getting their colleagues to agree that the idea had merit since the use of LSD would be only an imitation *delirium tremens* and since some patients' charts were filled with entries of d.t.'s having been experienced repeatedly, without cure resulting. However, these objections seemed outweighed when compared to the potential value such an experiment might prove to have. They decided, therefore, to go ahead and test the hypothesis, and gave 200 mcg. of LSD to two of their alcoholic patients at the Saskatchewan Hospital at Weyburn. One, a male, immediately stopped drinking and remained sober for several months after discharge; the other, a woman, seemed largely unaffected in her drinking habits. These results, although one balanced out the other, were still sufficiently encouraging that they undertook larger clinical trials.

Drs. Hoffer and Osmond deliberately chose twenty-four of the most intractable alcoholics they could find. To locate them, they contacted other hospitals and agencies working with alcoholics. As Jake Calder, former director of the Canadian Bureau on Alcoholism, recalls, Dr. Hoffer said, when he got in touch with him, "We want your worst cases; we are not interested in mild cases that could recover through A.A. or through any other agency that you now have available."

The subjects of this study had had an average period of uncontrolled drinking of 12.1 years. Eight had experienced d.t.'s at least once, and twenty had tried A.A. and failed. Twelve had been diagnosed as psychopathic. Eight had serious character disorders, and the remaining four were borderline or actual psychotics.

When checked for progress (average follow-up, one year; range, from two months to three years), the recovery rate after LSD was impressive: Of the twenty-four subjects, six following their single psychedelic session were "much improved?"

(completely abstinent since treatment, or drinking only very small quantities), six were "improved" (definite reduction in alcohol intake) and twelve were "unchanged" (but evidently none the worse for having had treatment).

Compared to the amount of reform brought about by other means for handling alcoholism—A.A., group therapy, Psychodrama, counseling, Antabuse, analysis, etc.—these LSD results were imposing. With other techniques, a therapist is considered to be doing well if he stimulates reform in over ten per cent of his alcoholic patients. Yet here, using the most recalcitrant cases to be found, were recovery rates approaching fifty per cent!

Since this early study, LSD has become better understood, and several "psychedelic methods" have been developed for alcoholic patients. As a result, abstinence and rehabilitation rates have been further upgraded. In 1959, at the Josiah Macy Conference on LSD, Dr. Hoffer was able to announce that he and his colleagues had treated sixty "very difficult psychopathic alcoholics" and that after a five-year follow-up,

"... half of them were no longer drinking. You will not believe it, and I would not have, either. The results are very impressive...."

During the summer of 1966, after thirteen years of research in this area, Dr. Hoffer published the statistics relating to the more than eight hundred hard-core alcoholics who had been treated in the Canadian LSD program.

When psychedelic therapy is given to alcoholics using methods described in the literature about one-third will remain sober after the therapy is completed, and one-third will be benefited. If schizophrenics and malvarians[10] are excluded from LSD therapy the results should be better by about 30 per cent. There are no published papers using psychedelic therapy which show it does not help about 50 per cent of the treated group....

Our conclusion after 13 years of research is that properly used LSD therapy can convert a large number of alcoholics into sober members of society.... Even more important is the fact that this can be done very quickly and therefore very economically. Whereas with standard therapy one bed might be used to treat about 4 to 6 patients per year, with LSD one can easily treat up to 36 patients per bed per year.

Because alcoholism in the past has been consistently and stubbornly resistant to treatment, Dr. Hoffer's statistics are, understandably enough, regarded with skepticism by some people, especially those who have spent their careers grappling with the problem without success. Claims are made that LSD therapy, as presented by Dr. Hoffer, smacks of "magic"; it is "too good to be true." And since there is little step-by-step elucidation that is readily available, skeptics of the therapy are vociferous. As reports of LSD programs for the treatment of alcoholism are published, or are presented at various psychological conventions, journalists have frequently criticized Hoffer or his statistics—usually suggesting that the favorable reports are due to bias in the observer, bad sampling methods, or outright lies. Several doctors at Hollywood Hospital, in British Columbia, Canada, noting the reactions in some quarters to the promise LSD holds out for the confirmed drinker, have discussed the detractors with considerable impatience:

Although the psychedelic literature is now extensive, and papers of high quality are appearing with regularity, those who are most vocally and effectively critical are

either unaware of, or unwilling to consider, the facts and implications available.... There is ... an inverse relationship between knowledge and experience, and a willingness to reach unwarranted conclusions and dogmatic derogatory positions.

In terms of the importance of LSD therapy for the six to eight million alcoholics in the United States, there is reason to pause before a discussion of how such treatment works, in order to underscore the validity of Dr. Hoffer's data and the consistency with which excellent results have come about. Dr. Hoffer has already mentioned that all published studies reporting on the use of psychedelic procedures have indicated recovery rates similar to his own. This is a significant point in that even though diverse goals and techniques have characterized the investigations, the findings in at least eleven instances have been essentially the same. Further, a study involving exacting standards and controls has confirmed these results, as have those in which therapy was given solely by professionals who were personally unacquainted with the LSD experience.

Most LSD investigators are of the opinion that drug therapy is enhanced when undertaken by someone personally familiar with the psychedelics. There are many critics, however, who hold that such a therapist is no longer able to judge his results objectively, that all of his critical and scientific abilities are impaired once he has swallowed LSD. Because this latter view is maintained rather widely, it should be pointed out that even when alcoholics are treated with LSD by those who have never taken it, the recovery rates are maintained.

As an example, thirty-three patients were treated with LSD by a team of doctors, none of whom had ever had any personal acquaintance with the drug. They were directed by Dr. P. O. O'Reilly, a critic of earlier LSD experimentation. "I was quite skeptical about the use of LSD as a perusal of the literature seemed to indicate that most of the work done on it was on a subjective level; not too many adequate scientific studies had been carried out. Yet what were the conclusions? Seven "much improved," ten "improved," and sixteen "unchanged." More than half the patients were benefited by the treatment.

This study by Dr. O'Reilly was followed by a larger one undertaken at Union Hospital, Moose Jaw, Saskatchewan, in which he tried to determine the percentage of recovery among alcoholics given LSD therapy by doctors who had never had the drug and to what extent this recovery would be lasting. Of the sixty-eight alcoholics chosen for the study, 60% had been drinking for more than ten years. The diagnoses were: chronic alcoholism, 62%; acute alcoholism, 16%; alcoholic psychosis, 4%; and personality disorder, 16%. The results, after a mean follow-up of fourteen months: "Twenty-six patients, or 38% of the total group, were found to be abstaining from alcohol in the two months preceding follow-up.... There was no significant change in abstinence or indulgence between the two periods selected for follow-up study. This suggests that improvement established immediately following the treatment tends to be maintained."

Another objection to alcoholic therapy with LSD has been the lack of adequate testing systems. But in 1962, Dr. S. E. Jensen of the Saskatchewan Hospital, Weyburn, reported an excellent controlled experiment dealing with some of the most difficult cases that could be located by Jake Calder, Director of the Bureau of Alcoholism. One group of alcoholics was put in the hands of psychiatrists who did not use LSD. Another group was prepared for LSD treatment, but not given it, while a third group—after identical preparation—was given the drug. The criteria for "much improved" were stiff: "complete abstinence at the time of the follow-up or

after a brief episode of drinking after discharge." The follow-up was conducted after periods of six to eighteen months. Dr. Jensen reported that forty-one out of fifty-eight given the drug were improved (thirty-four being much improved), whereas out of two non-LSD control groups only eighteen out of eighty were improved (eleven much improved). Thus it becomes apparent that the application of LSD to the problem of alcoholism can raise recovery rates far above normal expectations.

Going back for the moment to the original theory that *delirium tremens* (or "hitting bottom") could be the gateway to recovery for the alcoholic, Drs. Hoffer and Osmond eventually realized that d.t.'s, real or drug-induced, accounted for only a fraction of the cure process itself. The actual *modus operandi* was of a complexity that made the *delirium tremens* theory seem simple. The patient responses to LSD treatment were unusually varied and reproduced the range of classical drinking cures, but this time in the clinic. Previously, medical cure of alcoholism had been singularly dependent on the patient's experiencing d.t.'s. (Antabuse and other "drying out" methods were looked upon as "aids" rather than any kind of positive cure.) Now, with LSD, the therapists suddenly found their patients involved with many of the non-medical motivations for alcoholic recovery right in the clinic, i.e., they were having "visions of God" and feeling deep guilt over the suffering they brought their loved ones. They discovered Horatio Alger-like insights into "honor" and self-respect. Further, these drug-induced acquisitions of self-knowledge were just as profound, instant and lasting as the inspirational ones, which only rarely strike a troubled soul in the outside world.

In a striking example, a de-frocked priest taking LSD for alcoholism was asked, "John, how would you like to see God?" After a brief silence the ex-priest replied, "I wouldn't mind." The therapist then instructed him to lie down, relax "and maybe He'll come to you." After a ten-minute interval, John sat up and said, "I saw God." "What happened?" asked the therapist. "He said 'No more drinking.'" And from that day on, John remained sober.

The host of confessional-like and home-remedy-type "drives to cure" which patients received via LSD were so bewildering that many doctors stopped trying to account for them. As Dr. C. H. Van Rhijn, a psychotherapist from Holland, put it, they "simply found something that worked and began to use it as a treatment." However, the drug is looked upon by therapists in two different ways: as a *psycholytic* agent, or as a *psychedelic*. The use of the chemical as a psychotomimetic drug to reproduce d.t.'s is obsolescent, for as Dr. Hoffer commented:

... by 1957 it was apparent that even though many of our patients were helped by LSD, it was not its psychotomimetic activity which was responsible. In spite of our best efforts to produce such an experience, some of our subjects escaped into a psychedelic experience.^[11]

Psycholytic therapy is practised widely in Europe and aims at facilitating traditional psychoanalysis through administration of LSD in low dosage. This is found to produce a short-cut to the patient's self-understanding by activating both the emotions and the unconscious.

Regressive and existential experiences are painful, true, but when they surface through LSD, the catharsis is thorough. Rather than having to "ease into" insight for fear that the dislodged material will devastate the patient, as in formal analysis,

and waiting for months for the analysand to accept his findings, LSD seems to lead to self-acceptance immediately.

Current practitioners who favor the drug for psycholytic therapy draw attention to the fact that it adapts itself to existing schools of analysis. Moreover, each system—be it Freudian, Jungian, Adlerian, etc.—finds its concepts confirmed in low-dosage LSD treatment. Rapport is better and more easily established; restricting defenses are dissolved; transferences are quicker; and the core of the problem seems to be more readily accessible.

The second approach to alcoholic treatment with LSD is called psychedelic therapy—developed by Dr. A. M. Hubbard in British Columbia. Because of its extraordinary effectiveness, it has been copied in other parts of Canada and the U.S.A. The treatment consists of a minimum of psychoanalysis, but from the beginning it attempts to give the patient a single overwhelming experience that will catapult him into personality reformation. This is preceded by skillful preparation prior to his session, a good deal of counseling and the administration of a massive dose of LSD (alcoholics seem to require twice the dosage used for other patients: 200-400 mcg. and sometimes up to 1500 or 2000 mcg. are given).

The "goal" in this therapy is to give the alcoholic an experience akin to a spontaneous "religious" conversion, with all of its subsequent powers of character transformation. (William James gave the rationale for this when he astutely observed that "the cure for dipsomania is religomania," and many a country preacher of that day—and this—would have agreed.) When this conversion happens, there is no longer need for symbolic interpretation of the self on the patient's part, for the patient enters what Sherwood, Stolaroff and Harman in an article published in the *Journal of Neuropsychiatry*, have called the "stage of immediate perception":

... he comes to experience himself in a totally new way and finds that the age-old question "who am I?" does have a significant answer. He experiences himself as a far greater being than he had ever imagined, with his conscious self a far smaller fraction of the whole than he had realized. Furthermore, he sees that his own self is by no means so separate from other selves and the universe about him as he might have thought. Nor is the existence of this newly experienced self so intimately related to his corporeal existence.

These realizations, while not new to mankind, and possibly not new to the subject in the intellectual sense, are very new in an experiential sense. That is, they are new in the sense that makes for altered behavior. The individual sees clearly that some of his actions are not in line with his new knowledge and that changes are obviously called for.

By trial and error a system was developed which seemed to propel patients into the desired stage of psychedelic experience more readily. Simple props were used, for it was found that they elicited better responses than the best analytic methods. After having the patient write a brief autobiography, he is asked to bring to the session cherished trinkets, favorite phonograph records and photographs of people who are close to him. Musical background, provided both from the patient's collection and the hospital's library, is used to divert the patient's mind from himself and to relax him to the point of surrendering to the drug's urgings. The patient is often blindfolded and provided with earphones in the initial part of his session. A little later on the blindfold and earphones may be removed, if the

session is going suitably, and the patient will be asked to look at the mementos and photographs he has brought; or he is given a list of questions, relevant to his life and predicament, to study and think over. (This is not to be construed as a "test" of any kind.) He may be shown various "universal symbols"—a rose, a cross, a seashell, for instance and he will probably be asked to relate facets of his own personality to those of other people in the room. Any of these stimuli may precipitate him into a "psychedelic experience."

Dr. Ruth Fox, Medical Director of the National Council on Alcoholism in the United States, has used LSD in alcoholic rehabilitation and hopes to be able to continue to utilize the drug for this purpose. Her endorsement of the drug for therapeutic use differs little from that offered by others, except that she emphasizes the ameliorating effect upon a patient's "nature," when it has been influenced by the drug. A new feeling of compassion and tenderness for others and a restored sensitivity and "concern" often make benign a personality that had previously been cynical and rigid. Dr. Fox also points out that LSD experiences sometimes develop an old-fashioned gratitude to their parents for having borne them. She further describes indications which point to a permanent recovery:

... The patient often states that he feels reborn, whole, clean, grateful, and joyous, loving all things animate and inanimate.

A few suggestions given then for future behavior may have long-lasting effects, suggestions that he will grow to understand himself better as he matures, that life can be good, that sobriety will bring greater rewards than drinking, and that the fellowship of A.A. can give his life a new focus and meaning.

As with LSD "cures" for other conditions, pressures from the past can cause backsliding if the patient is immediately immersed in his old environment. However, vulnerability to relapse is the exception rather than the rule with the alcoholic who has been helped through LSD therapy. And even if regression does take place, instead of being plunged into despair the patient seems better able to break his fall. Indications are that he is able to do this because, although he has failed momentarily, he has not lost faith in his new-found resilience.

A large number of alcoholics who have gone through the LSD program have found that A.A. can help them, although this was not true previously. Such patients come to regard their addiction as something that they can cast off rather than as an affliction that is bound to cripple them for eternity. And with this externalization of the problem, comeback can be dramatic and convincing. In having a tangible external adversary, it is easier for the alcoholic and the public to "see" and understand the recovery, a fact which bolsters the patient in his determination to stay well.

Because the LSD cure for alcoholics takes such firm hold, it is difficult for the dissenter to deny the obvious change in the patient and his return to health. The chances are that through LSD he had met and defeated his hyper-susceptibility to depression, tension, irritability, loneliness, etc.; and having conquered his former grievances, he is no longer regarded by his fellow man as a maladjusted individual, often subject to contempt. The change in the attitude of others, brought about by alterations in the alcoholic after LSD treatment, is reflected in comments by two doctors: [12]

Initially, the treatment personnel of our alcoholism unit were reluctant to work with alcoholic patients. They now have great interest in the program.

When we stopped the second [LSD experimentation program], which involved about sixty people altogether, the unit kept asking us when we were going to start again. When they kept on asking, we asked them why. They said the alcoholics had changed their attitudes so much that it was good even for those who didn't have LSD.

Since alcoholism is thought of as the leading addiction of our time, detail is warranted to show the far-reaching implications of LSD therapy as it applies to problem-solving in all addiction. From the discussion, no doubt it is obvious that similar techniques can reclaim victims of other binding "habits," great and small: narcotics, smoking, compulsive eating, gambling, logorrhea, satyriasis and various excessive indulgences.

At the Josiah Macy Conference in 1959, and at the Quarterly Meeting of the Royal Medico-Psychological Association in London in 1961, reports were given indicating a high incidence of cure of smoking. More to the point of social importance, LSD has proved useful in reducing the high rate of recidivism in narcotics addiction. Unfortunately, several important and unusual studies, just underway, were cut short when all research was curtailed as a result of legal complications and public sentiment. The early information released was tantalizing in its promise, particularly concerning the work being done by Drs. Arnold M. Ludwig and Jerome Levine at the Public Health Service Hospital in Lexington. The latter employed hypnosis as an adjunct to LSD, a procedure they have labeled "hypnodelic":

Frankly, we were surprised to see just how well hypnosis could be used to control, modify, and direct the LSD experience. Many of the patients made dramatic claims of therapeutic benefit, expressing a strong conviction that they should remain abstinent, professed marked symptom relief, and claimed to have a new lease or outlook on life... Undesirable side effects or untoward reactions were surprisingly infrequent.

In the popular idiom, unrewarding action patterns of behavior do not qualify as addictions; only specific, habitual adherents *per se* are so categorized. But, in fact, there are many maladjusted persons who are seriously "hooked" on repetitive, damaging behavior. LSD also has relevance here, since it seems able to wean the individual from dependence on outmoded and restricting "games," such as the array discussed by Dr. Eric Berne. As an example of how LSD can allay such addictions, consider the "game-destroying" capabilities of the psychedelics when used to combat delinquency and criminality (the illogical and deep-seated compulsion to defy authority indiscriminately).

By all accounts, current penal systems of "correction" do not quell the inclination toward criminal habit. Instead, they arouse, more often than not, the competitive spirit of the prisoners, who then indulge in "one-upmanship" games and become adept at pilfering each other's techniques. Just as the rate of recidivism among narcotics addicts is appallingly high—about 95 per cent—so the parole, return and re-parole of inmates is basically a revolving-door situation. Once a man becomes a second offender, he may be well on his way to a life-time immersion in the "Cops and Robbers" game

Hypothesizing that the psychedelic drugs could give inmates mirrored contemplation of themselves at their self-defeating "games," Dr. Timothy Leary and

a group from Harvard set out in 1960 to see if psilocybin (a drug related to LSD) could help a prisoner "see through" his asocial activities and thereby become a less destructive citizen. Thirty-two prisoners who volunteered for this experiment at the Massachusetts Correctional Institution, a maximum security prison for younger offenders, were given two brief psilocybin experiences along with six weeks of bi-weekly meetings. Although most were untrained and not oriented along verbal lines, it was found that those who participated were able to detach themselves from their everyday roles and recognize constructive alternatives to their formerly limited lives. Here are the comments of several of the inmates:

At the time of the peak of the drug's effect I had a terrific feeling of sadness and loneliness, and a feeling of great remorse of the wasted years....

Before taking this drug my thinking always seemed to travel in the same circles, drinking, gambling, money and women and sex as easy and I guess a fast life.... Now my thoughts are troubled and at times quite confusing, but they are all of an honest nature, and of wondering. I know what I want to be and I am sincere in my own mind when I say I will try very hard to make it so....

I felt helpless and wanted to murder you guys who did it to me; then I realized it was my own mind doing it; it's always been my own mind imagining trouble and enemies...

But the real test was, what would happen to these prisoners when they were returned to society? Would their new way of viewing help them to lead useful and rewarding lives? Or would they soon be headed back to prison? Dr. Stanley Krippner sums up what happened and what it might mean:

Records at Concord State Prison suggested that 64 percent of the 32 subjects would return to prison within six months after parole. However, after six months, 30 percent of those on parole had returned, six for technical parole violations and two for new offenses. These results are all the more dramatic when the correctional literature is surveyed; few short-term projects with prisoners have been effective to even a minor degree. In addition, the personality test scores indicated a measurable positive change when pre-psilocybin and post-psilocybin results were compared.

This experiment, although it had included no control subjects, established sound basis for hope and warranted another set of experiments along the same lines—and at least one large controlled study.

Health:

Just prior to World War II, Wilhelm Reich came to the United States with some revolutionary theories about the relation between organic and psychic illnesses. Dr. Reich had been one of Freud's most brilliant and promising students, but he broke with Freud over the issue of organic-psychic illness, as well as on a number of other counts.

Reich was not the first therapist to link mental and physical disorders, but he was the first to develop the theory at length, and to devise a therapeutic method for its implementation. His adherents—patients, admirers of his books and some therapists—were devout in embracing "Vegetotherapy," as his technique was called, even though a multitude of detractors were scornful and pronounced it nonsense.

Today, twenty-odd years later, expert opinion has moderated its rigid stand on the issue, so that psychosomatic medicine, expanded into much broadened fields, is now entirely respectable. It is recognized now that many physical health problems are fundamentally due to mental maladjustments. Increasingly the layman has come to understand that his "asthma," or "hives," may not be the fault of the climate or something he ate. Today, if the condition persists, his general practitioner may advise him to visit an allergist, a psychotherapist or both, and the patient probably will not be offended.

As yet, LSD—comparatively new and still branching out in its applications—has seldom been called into service for the relief of mild health problems. But many doctors report, often with pleased surprise, that their patients have achieved spontaneous relief from organic ailments after they have been given LSD for something else. Dr. Peck, for instance, at the Josiah Macy Conference remarked:

In treating patients for various and sundry psychological complaints, we found that some would come back a week or two later and say, "The headache is gone." We asked, "What headache?" They replied, "Oh, the headache I've had for 10 or 15 years."

Because of such coincidences, a substantial number of cases have entered the records which establish LSD as a competent agent in the cure of such physical ailments as arthritis, partial paralysis, migraine, "hysterical" deafness, and a variety of skin rashes.

The above incident, in fact, was recounted in the course of reporting on a study made by Dr. Peck on what were primarily mentally disturbed patients. In 46 of his 216 patients some form of organic illness was present as well, and 31 of the 46 made "excellent" recovery of their physical symptoms, while 5 others found marked relief.

The physical ailments in these forty-six cases included varied arthritides, asthmas which did not respond to hypnosis, migraine headaches and long-standing rashes. Other doctors who have directly treated such problems with LSD have found that these stubborn and virtually incurable conditions can be eradicated in the course of a few sessions. In Ling and Buckman's book on LSD and Ritalin, five case histories are given of migraine cures—all of these had been previously considered hopeless. There is also a full-length account of LSD's use in treating a severe psoriasis, with impressive photographs showing the patient before and after treatment. Again, the condition had been adjudged hopeless.

Morgens Hertz, a Danish doctor of Frederiksberg Hospital, Copenhagen, who supervised the LSD treatment of some sixty people, found that a very high percentage claimed alleviation of their organic complaints. The following is a sample:

... My long-lasting feeling of paralysis of the left part of my whole person has disappeared....

... A worried feeling of involuntary urinating has disappeared since I had the feeling that I could influence the urinating, and now I feel good....

... My stuttering of many years has disappeared....

... I have stopped crying as a means of obtaining attention....

... My tendency to feel giddy every time I stood on my feet has gone....

... I can no longer feel my pulse hammering unpleasantly all over my body when I lie down....

Such relief gained from using a psychedelic would come as no surprise to 225,000 American Indians, for the Indians from the 1870's, have been relying on peyote, a natural psychedelic, for the maintenance of good health, in addition to the primary use they make of the cactus in religious worship. Frank Takes Gun, national president of the Native American Church, says:

At fourteen, I first used Father *Peyote*. This was on the Crow Reservation in Montana, and I was proud to know that my people had a medicine that was Godpowerful. Listen to me, *peyote* does have many amazing powers. I have seen a blind boy regain his sight from taking it. Indians with ailments that hospital doctors couldn't cure have become healthy again after a *peyote* prayer meeting. Once a Crow boy was to have his infected leg cut off by reservation doctors. After a *peyote* ceremony, it grew well again.

This may be considered only exuberant witchdoctor talk, but reliable observers have confirmed that these economically deprived peoples are in better-than average health and that when they do become sick and turn to peyote, the drug seems to help them. Louise Spindler, an anthropologist who worked among the Menomonee tribe, said that the women "peyotists" often kept a can of ground peyote for brewing into tea. They used it in "an informal fashion for such things as childbirth, ear-aches, or for inspiration for beadwork patterns."

Dr. Peck also made such an observation and, in fact, first became interested in LSD as a result of having seen the effects of peyote:

When I went into general practice as a country doctor in Texas, I was very impressed that some of our Latin American patients, despite their poverty and living conditions, were extremely healthy. One day, I asked one of my patients how he stayed so healthy, and he told me that he chewed peyote buttons... then, I became interested in these drugs that could promise physical as well as mental health.

As early as the late 19th century, medical practitioners and others knew of the health benefits peyote offered, having observed the effects among the Indians. In 1891, James Mooney, of the United States Bureau of Ethnology, brought peyote to the attention of a group of anthropologists in Washington, after having lived among the Kiowa Indians and other tribes where he became familiar with the use of the drug in doctoring illness. In time he recommended it to a medical man and a pharmacologist. These men, Drs. D. W. Prentiss and Francis P. Morgan, both outstanding in their fields, decided to undertake tests with peyote buttons which Mooney supplied. Their subjects were suffering from a variety of physical complaints—chronic bronchitis with asthmatic attacks; neurasthenia; nervous prostration; chronic phthisis with facial neuralgia and catarrh; persistent cough; and softening of the brain. The report by Prentiss and Morgan appeared in the August 22, 1896, *Medical Record* and proclaimed that the "effect of the drug was little less than marvelous" in one particular case, and it sang the praises of peyote with equal gusto in citing others throughout the report. One example:

Gentleman, aged fifty-five years. Chronic bronchitis with asthmatic attacks. Much distressed by an irritative cough which kept him from sleeping... In a letter received from him recently he states that he has improved very much, being able to sleep all night without rising, which he had not been able to do for two years;

and that, although he has no need of it upon some days, he carries a piece of a [peyote]] button in his pocket constantly, as its use relieves the tickling in his throat at once and gives greater relief than any other remedy which he has ever used.

The best responses in terms of health to any of the psychedelic drugs seem to be in cases where the medical disorder is psychically caused, not basically organic (birth defects; broken bones; viruses and so forth). This accounts for the high incidence of asthmatic/bronchial and skin condition cures. There are also other ailments, possibly of psychic origin, known to have responded remarkably well when treated with a psychedelic. In current medical journals and papers a number of organic cures and "coincidental organic cures" can be found: Dr. Jack Ward of the Carrier Clinic, Belle Mead, New Jersey, reports a case of deafness which he suspected was "hysterical" in origin; the patient responded with hearing restored after LSD. R. Gordon Wasson, the banker-scholar-mycologist who discovered the Mexican "magic mushroom" (a natural source of psilocybin), told of giving the mushroom to a mute who thereafter was able to speak. In a clear case of psychosomatic disorder, where the patient suffered paralysis of one arm because of several traumatic accidents, LSD finally was tried as a last resort, after sodium amytal and psychotherapy had failed. The arm became normal again. (Dr. Dietrich W. Hayden goes into this case at some length in the *American Journal of Psychiatry*, 120, 1963.) There are also reports from Japan by S. Kuromaru and his co-workers to the effect that LSD has been used with good results in the treatment of phantom limb pain.

Because many of the cases cited for organic cure with psychedelics are contrary to prevailing, conventional medical theories, they are in danger of being arbitrarily labeled with the shabby disrepute usually reserved for faith-healing, chiropractry, Yoga, and eccentric schools of health treatment. But the fact that LSD cures of physical complaints do appear, however coincidentally or accidentally, in respectable medical literature is an indication that research in this field is needed and will probably—eventually—be continued.

In addition to the actual reports of cures, there are provocative accounts which hint at even more far-ranging applications for the psychedelics in general medical practice. In neurological disorders such as bursitis, gout, rheumatoid arthritis and other inflammation of the joints, LSD may have been responsible for unexpected reversions. The following are two cases in point: [13]

[The subject], a businesswoman in her forties, had for many years experienced her body and her "mind and brain" as being literally "tied up in knots." She could "plainly feel" this knotting, which she felt to be related to her "tenseness." For more than five years she had been familiarizing herself with literature concerning psychedelic drugs and believed that a psychedelic session was "the only means" by which she could free herself from her tensions and the feeling of knottedness ...

About one hour into her session, when ordinarily the various distressing physical symptoms would be experienced, [she] began speaking of a "great but wonderful pain... my body is becoming unknotted." One by one, as she described it, the knots in her body "untangled." Later, in a second [LSD] session, the knots in her "mind and brain" also became "untangled." This second "unknotting," like the first, was experienced as "excruciatingly painful... also quite glorious." This relief appears to be permanent. A year later, [she] had developed no new knots.

... a man felt during his initial LSD experience that his joints were somehow grinding together. He felt that all of the rough edges in his joints were ground smooth, and this gave him a "well-oiled" feeling which seemed to persist for weeks afterwards.

Commenting on "current status and future trends in psychedelic research," Dr. Robert Mogar has noted in the *Journal of Humanistic Psychology* that there is "ample evidence indicating a markedly lowered threshold for arousal (Key & Bradley, 1960) and an increased sensitivity to stimuli in all modalities (Klee, 1963)" after use of LSD. A New York hearing specialist, Dr. James Gould, tested some members of a well-known theatrical company and found that after LSD their hearing range was expanded appreciably. In the case of visual increase, Constance Newland mentions an instance in which vision was so heightened under LSD that a subject was able to read a newspaper at a distance of thirty feet.[14] It is to be hoped that extensive research with the drug will culminate in positive relief for many of those afflicted by impaired sight and hearing.

Dr. Abramson has expressed a similar hope for LSD in terms of the overall medical picture:

... I have always felt that the importance of LSD was not LSD, but that LSD will bring to medicine what it really needs: to have psychiatry a branch of experimental medicine....

Birth and Death:

On a recent day a young woman gave birth to her first child, an eight-pound boy, in the privacy of her home. The birth site was her choice and her husband's.

Yet it was not the site that made this particular event something special. Rather it was this:

The mother had taken a small dose of LSD when she felt the labor pains begin.

Her husband was with her throughout. Her doctor was there, too. At her request, and with full knowledge of what she would be doing, he had consented to deliver the child.

The delivery was excellent, the baby showing no ill effects from the LSD and the mother reporting it had eased her pain. But she had not taken it to avoid the pain. She had taken it for the same reason many others in this city have taken it—for the very intense, very personal experience it promised. Later she was to call the birth the most profound event of her life.

This quotation, from one article in a series on LSD by Jay Levin, appeared in *The New York Post* in June, 1966. While this childbirth account indicates that the mother took the drug primarily for personal reasons, there are other instances when LSD has been clinically used to facilitate birth in cases where there were difficulties. In a case cited in *The Use of LSD in Psychotherapy*, the woman was five-and-a-half months' pregnant, had been under psychiatric care for a long time because of her morbidity (she expressed death wishes and wanted to kill the baby) and because she had been taking barbiturates literally by the handful. She had also undergone shock treatment to no apparent avail. Her case became one of serious emergency when she developed the "screaming meemies." Because blood tests and

other examinations indicated that she was physically normal, and because the doctors were faced with a crisis, she was given 175 mcg. of LSD. She was then able to comprehend the reasons behind her anxiety and to cope with them effectively. Like other mothers who have taken LSD during pregnancy, she was delivered of a child who was completely normal by all physiological and psychiatric tests.

As time passes, it is probable that more women will be using LSD as they undergo childbirth. At the moment, however, there is little published which spells out the benefits or dangers which may accrue. At the Biological Laboratory in Cold Spring Harbor, New York, the effect of moderately high LSD dosage on developing chick embryos during the first ten days of gestation has been studied; when hatched, no ill effects were found. But this is one of the few studies in existence concerning LSD and embryonic life, and while LSD has been used on laboratory animals in other connections, as yet there is no indication that deeper research is underway.

At the present time there is no published record of Caesarean section in which LSD has figured, but because LSD has been used in other operations, it may be effective in Caesarean births also. In a pioneering study at Cook County Hospital in Chicago, LSD was used as a pre-anesthetic in ten cases involving the surgical removal of the uterus. It was reported that LSD was an effective and safe analgesic, not because it dulls the sensorium, but because it induces passive acceptance of threatening events:

The ten patients were all females in good health except for fibroadenomata, who underwent total abdominal hysterectomies. One hundred mcg. LSD was given two hours before surgery as the only pre-medication except atropine... All patients tolerated the procedure well. Some laughed while the mask was applied and, still laughing, fell asleep. After recovery the patients were asked if they would want LSD again, should further surgery be necessary; no reluctance was expressed.

Even the most enraptured "missionary" eager to spread the LSD "gospel" is aware that LSD is not—and can never be—a panacea, the solution to all of mankind's problems. But while it cannot keep us from aging, or reverse the course of fatal diseases, it does have important beneficial effects for those confronted with desperate and terminal illness and death.

The medical world became aware of LSD's ability to change the pre-conditions of death when the A.M.A. published a report on fifty dying patients who were given LSD in a Chicago hospital. In this preliminary study conducted by Dr. Eric Kast, a noted psychiatrist, it was discovered that the drug was more effective as an analgesic than any of the frequently used morphine derivatives:

In... 50 patients, most with advanced cancer and some with gangrene, LSD relieved pain for considerably longer periods than such powerful drugs as meperidine and dihydro-morphinone... On the average, freedom from pain lasted two hours with 100 mg meperidine, three hours with 2 mg dihydro-morphinone and 92 hours with 100 mcg LSD.

To the amazement of observers, the attitudes of these terminal patients also changed—from depression, apathy and anguish to sensitivity, poignancy and deep feeling for the people they loved. They expressed gratitude for life itself. LSD enabled them to face death equably. Instead of attempting to disguise and deny what was happening to them, or view it with hysterical fright, they felt at one with

the universe and therefore looked upon the actual dying process as merely another event in eternal existence. "It was a common experience," says Dr. Kast, "for the patient to remark casually on his deadly disease and then comment on the beauty of a certain sensory impression." Such desirable emotional content lasted for two weeks in some cases, i.e., long after the drug's pain-killing action wore off.

The next study Dr. Kast made was with 128 patients, all suffering malignant diseases and metastasis, who would die within two months. These cases were given no other analgesic agent in addition to LSD. A precipitous drop in pain occurred two or three hours after the drug was administered and lasted twelve hours, and the total pain intensity was less for about three weeks. As in the former study, these patients' peace of mind was remarkable, and they accepted their condition for what it was. There were other factors also which eased their last days:

The first night after LSD administration was almost invariably a good one. After that we noted a meaningful reduction of sleep disturbances up to about ten nights which is also the time when concern about the morbid condition returned... It is noteworthy that not one patient, though they were critically ill, had any adverse medical reaction, and the administration of LSD was well tolerated.

The drawback in the second study was that seven subjects felt panicky at one point in the experience, and 42 had mild anxiety. None of these reactions was long-lasting or severe, but, coming generally at the end of the session, it was distressing all the same. Later, however, in another study, Dr. Kast was able to avoid this by bringing the LSD session to an end with a thiorazine injection, if adverse symptoms appeared. There were 80 patients in this latter group, and all but 8 wished to repeat the LSD experience; this represented an appreciable increase over the 33 per cent in the former group who did not want to have the drug again.

Dr. Kast was concerned throughout these studies with the moral issue of whether interfering with the very personal process of dying was justified. In his last study, seven, when questioned on this, resented the intrusion of the drug into their philosophic and religious concepts; the majority felt gratified and said they had gained deeper insights. "In human terms," as Dr. Kast put it, "the short but profound impact of LSD on the dying was impressive."

Throughout the ages, one of the major problems faced by man has been that of accepting death. Most of those dying either try to structure death or to deny its possibility. Natural death therefore tends to become desperate and hideous, with everyone concerned—patient, family, friends, nurses—refusing to accept the inevitable and appreciate it for the momentous experience it must be. To die in sleep is held to be the ideal "death bed."

LSD, however, has proved that it can alter the emotional atmosphere of death. Because the patient no longer feels intense attachment for his body, he can more readily accept his transition.

It is a well-substantiated rumor that Aldous Huxley took LSD in the last stages of his terminal cancer. Certainly he had knowledge of the benefits LSD might bring in such circumstances, for one of the major events in his final novel, *Island*, was a death scene in which an old woman slipped away with unusual gentleness after ingesting a psychedelic, an imaginary substance Huxley called "the moksha-medicine."

The studies of Dr. Kast, a few hints from Huxley, and such statements from terminal patients as "I know I'm dying... but look at the beauty of the universe"—these have suggested the idea that one day Western society might establish "Centers for Dying," as in India. Dr. Richard Alpert is one of the leading proponents for such and he thinks LSD should be included, explaining it this way:

Why shouldn't there be a place where a person could come to die with awareness instead of denial, where the setting, be it mountain or ocean, would be suitable for the transition; where the staff would be trained as guides to help people with the aid of psychedelics to learn about giving up the ego and seeing the beauty of the Universe? The individual could have doctors, if he or she wished, and could die in whichever religious metaphor he might choose.

Such a Center could revolutionize the whole dying process for millions, and for millions to come. At the same time, however, it would raise unprecedented questions, for it may be that LSD not only changes the preconditions of death, but alters the transition as well. The question is, does it do anything else? No one can answer, for in this realm there is not a single expert.

Footnotes

9. These figures come from Dr. Joel Fort, Director of the Center for Treatment and Education on Alcoholism Oakland, California. They come from *Utopiates*, copyright (c) 1964 by the Atherton Press, New York, and are reprinted by permission of the publishers.

One fact Dr. Fort did not note here is that alcoholics on the average die much earlier than non-drinkers. A recent follow-up study on a large group of alcoholic patients carried out by the Research Department of the Department of Mental Hygiene in Maryland indicated that the life expectancy of this group was ten years less than the average life expectancy of the general population. Further, Dr. Albert A. Kurland, Director of Research for this department, has commented that "this group of patients over a ten year period had a suicide rate of approximately 10 percent."

10. As defined by Dr. Hoffer and his colleagues, "malvarians" are people who carry in their urine a "mauve-colored residue" and who suffer from "malvaria," a biochemical aberration found in most schizophrenics and many neurotics and mentally retarded children. According to Dr. Hoffer, malvarians very rarely experience a psychedelic reaction; to date not one of the over fifty alcoholic malvarians given LSD therapy has achieved sobriety.

11. From Hoffer: *Clinical Pharmacology and Therapeutics* 6:183, 1965, The C.v. Mosby Company, St. Louis.

12. Dr. Kenneth D. Godfrey, Assistant Chief, West Psychiatric Service, Topeka Veterans Administration Hospital, and Dr. Osmond.

13. The first comes from Masters and Houston: the second was reported by Dr. James Terrill of the Mental Research Institute, Medical Research Foundation, Palo Alto, California.

14. Neither heightened vision nor blurred vision is uncommon in the LSD experience. People with pronounced astigmatism often notice the first effects of the drug when they find they can see clearly without their glasses. Some have reported that the improvement carries over.

Chapter V. Education and the Psychedelics

[Albert Hofmann's] experience marked the most significant finding ever made in the social sciences, for science at last produced a method of instilling motivation which was not based upon fear or manipulation... Man has found the key but he remains frightened to open the door and enter the courts of increased insight, extended awareness and induced positive self-motivation.

– Dr. Duncan Blewett, "New Horizons in Motivation and Insight"

WILLIAM JAMES, American psychologist-philosopher-educator-theologian, who died in 1910 at the age of sixty-eight, took peyote once at the suggestion of doctor-novelist Weir Mitchell in the hope of attaining a mystical experience. Instead, he developed a stomach ache, became violently sick and explained, in a letter to his famous brother Henry, "I will take the visions on trust."

Were James to visit the contemporary world, he would find available several non-nauseous psychedelic drugs, and he could safely experiment at first hand. There can be little doubt that, with his wide interests, he would find the new developments on the "drug front" of great significance, possibly of vast importance, for the future of mankind.

James' world was not seething with the rapid developments in science with which mankind is confronted today. In fact, it is estimated that 90 per cent of all the scientists known from the dawn of civilization are alive today!

Among the few familiar landmarks remaining from James' time, however, are a number of virtually unchanged public schools, particularly in New York City where some are not far from his residence on Washington Square. Children today troop into the very same buildings and learn their ABC's under teaching methods not very different from those used in William James' time. It is an arresting thought that two of the least altered routines of life in this country since the turn of the century are those of our education system and smoking.

Education, one of the great concerns of James and his contemporaries, has not lived up to expectations. It was hoped and believed that universal education, once realized, would provide the key to progress and man's understanding of himself. Compulsory secondary education and the population boom, combined with the G.I. Bill and job competition, have superficially made James' dream of universal literacy come true. But the quality of present-day education lays bare the fact that mere literacy in itself is not enough.

Focal points in American education since the 1900s are "progressive education" (1920s to 1940s), a battery of aptitude-personality-achievement-intelligence tests (1920s to 1960s), and small areas of innovation such as the "new math," "TV in the classroom" and teaching machines (1960s). These attempts toward educational progress have done little to enrich and mature American thought and learning. They have served instead to put a premium on information rather than knowledge. In our time, as the *New Yorker* put it, "We are all Infomaniacs, and our only god is Info."

When the "look-see" reading and spelling technique came into educational vogue, it was met with high hopes by both parents and teachers. Then "speed-reading" and high-fidelity "Living Language" came along, and each was embraced

with wide enthusiasm. In actual practice, however, it seemed that instead of gaining understanding, students simply acquired more information, much of which they did not know how to use effectively.

At the present, educators are not optimistic. Instead, they foresee greater demands, larger enrollments and less satisfying rewards. Moreover, the space-race has drained off much of education's creative personnel and promising liberal arts students are taking better-paying jobs in government and industry. Predicting college and university needs to the end of the decade, John W. Gardner, former president of the Carnegie Foundation for the Advancement of Teaching, has explained that by 1970 the colleges should be gaining 37,500 new professors annually, "but by this year's projections only about 20,000 Ph.D.s will be produced in 1969 and fewer than half of them will be available for teaching."

In the United States at the present time, there are about 125,000 schools of which 2,135 are colleges and universities. Approximately fifty-five million people are involved in education, including about two million teachers. At college level, student enrollment now runs over five million. In an effort to avoid an impending crisis, billions of dollars in endowments have been poured into education. Yet money alone does not produce talent or intelligence, for despite the immense ingenuity, concern and good will involved, the static state of education persists.

But what has all this to do with LSD?

There are many observers who have noted that LSD is fundamentally a "learning tool." Dr. Hoffer has already been quoted to this effect. "I would suspect that learning in tasks which are trivial for the subject would be impaired, e.g., psychological learning tests, whereas matters of great importance to the subject might be learned even more quickly... A large number of alcoholic subjects learned concepts and ideas in a few moments that they had not grasped for years."^[1] Hoffer mentions alcoholics because those are the patients with whom he has conducted most of his studies, but of course this does not exclude similar learning potentials for others.

Dr. Donald D. Jackson, speaking at an LSD seminar at Napa State Hospital, Imola, California, called attention to the drug's ability to give a patient a "new beginning," explaining that it may bring about "a sudden liberation from ignorance." Drs. J. R. MacLean, D. C. MacDonald and F. Ogden and E. Wilby of Hollywood Hospital in British Columbia, have put the case more strongly. Reporting on their work with 307 subjects, they commented:

We have long held that the experience is one of accelerated un-learning and re-learning: it is essentially an educational process.... It is our constant goal to maintain a high level of "teaching" ability; to explore new teaching procedures; and to create maximum receptivity among those entrusted to us.

These statements seem to occur almost casually in the literature, but their significance should not go unnoted, nor their reliability of source. The ability of LSD to act as an educational implement, which is barely suggested in clinical writings, is attested to today on the nation's campuses. Those familiar with college life are increasingly aware that untold numbers of students of high scholastic standing claim that LSD is one of the greatest aids to learning they have known.

The fact that the drug is being used illicitly on the campus does not negate the convictions held by student users. The strength of these beliefs is just now

becoming evident to college administrators, professors and observers of the college scene. In an article about "Drugs on Campus," for example, Merwin B. Freedman (Chairman of the Psychology Department at San Francisco State College) and Harvey Powelson (Director of the Department of Psychiatry at Cowell Memorial Hospital University of California) express concern over the large numbers of students who are using psychedelic drugs, but they also feel obliged to explain why "several hundreds of the brightest and most aware of American youth" are attracted to LSD:

The interest of many students in drug experience may not be dismissed simply as a sign of delinquency, rebelliousness or psychological pathology. It represents a search for a new way of life. It indicates needs and desires that American society and education do not now meet or fill....

The brightest and most sensitive of college youth are examining the values of the Western world, and are finding them wanting.... Questions of ethics and morality are on their minds as perhaps never before in American life—not since the Civil War, at any rate. And their education is not meeting these interests. The things that are most important to many young Americans are not being discussed in academic life. The sterile formalism of much American higher education can hardly hold a candle to the psychedelic experience.

Many students have always learned on their own, of course, but with LSD it is entirely possible that self-teaching may take higher precedence than ever before. This is not because the drug provides a greater ability to absorb facts, but because it seems to provide a "guts reaction" to the facts, giving them a vivid immediacy and evaporating the inertia that blocks true intellectual curiosity. LSD enhances all learning responses if the frame of reference is already in the mind, and it lowers the threshold at which "understanding" occurs. The student who takes LSD for a purposeful experience is likely to gain a broader awareness of the adult world and its problems, which heretofore he may have thought were of no concern to him. Consequently, his sense of responsibility deepens.

Throughout history, education has been an "elitist" activity, since only a small proportion of any population has ever had the opportunity, the leisure or the innate curiosity to become involved in the arts, philosophy, science, etc. But those using LSD seem to discover fascination in such matters, if only superficially, and become speculative toward the "outside world." In such a state, curiosity (the doorway to the learning process) abounds. The frequency of this LSD phenomenon is evidenced by a series of brief reports gathered by Murray Korngold in a study undertaken with "normal," unfastidious persons and published in the *Psychoanalytic Review*:

One subject, a psychologist, Dr. P., writes, "Having always had difficulty with myopia as well as limited color vision, I now found myself describing color and form in a most unusual detail. I was able to look into the heart of a blossom and see the most minute changes and alterations in structure and movement... . I observed in another, a Breughel painting in which the colors and shapes astounded me by their clarity.... I felt a great surge of perceptual power and said, 'I Breughel them and now I unBreughel them.' "

Another subject, Miss Z., a young graduate student at U.C.L.A, writes, "Everywhere I looked, the objects and people settled themselves into the symmetry, color and unity of a painting. I looked at the bark of a tree and saw a lovely desert canyon

with layers of striated rock formations.... I was very pleased with myself because I had considered myself devoid of imagination and artistic sensitivity.... My thinking seemed much clearer and I was free of the frustrations I usually feel in trying to solve a problem."

Mrs. M., a middle-aged woman who was a nurse, and like the previous subjects, a rather prosy and unfastidious person, not inclined to any great interest in the arts, writes, "I had a strange desire to touch and see and feel and hear all at once, all at the same time in some kind of harmony of sensory stimuli, as if I were each instrument in a quartet all playing together, the fiddle, the cello, the viola, the bass fiddle, all playing at the same time, and I, hearing myself play in unison."

A young woman, Miss L., employed as a TV production assistant says, "That evening I went to the ballet and for the first time in my life enjoyed classical dancing which usually bored me. However, the whole production took on a color and sparkle which I can only compare to the feelings a child would have when taken to her first theatre performance. It was like a magic world of make-believe."

Most of the preceding reports have to do with visual responses, but all indicate that the LSD experience heightened intellectual appreciation and curiosity. It is probable that because the sessions noted were undirected, visual reactions came to the fore: or the subjects observed what was at hand and embellished upon it. As indicated in the technical-creative, problem-solving section, it is possible to "mold" the LSD "sitting," thereby stimulating predetermined interests. By guiding the receptive subject into specific materials, unexpected strides in learning may be taken.

One of the most interesting examples of experimental work undertaken to test this principle occurred two years ago at a small college in the Midwest. This school, an experiment in education, drew its faculty from highly respected sources: Chicago, Stanford, Berkeley, Oxford, Harvard, etc. Each member of the teaching staff worked on a volunteer basis and devoted his time without salary, staying for a quarter or more. The student body (many of whom left other schools to enroll here) fell into two general classifications: creative artists and those interested in the behavioral sciences—psychology, anthropology, history and sociology.

Classes at this college were small and informal, with a student-teacher ratio of about five to one. No grades were given, for one of the precepts of the school's founders was that any student who attended would do so because he wished to take full advantage of the courses offered and could judge for himself how well he was learning. The curriculum itself was flexible and depended upon the interests of the students and the teachers. Given sufficient interest a wanted course that had not been scheduled could be created.

Intellectually alive, these students were prone to range over a variety of subjects, and as the promising results of the mind-expanding drugs were increasingly examined in technical journals and prestige magazines, quite naturally the topic came up for discussion. One of the persistent questions was whether or not these drugs could actually alter an individual's motivations and attitudes toward new experience without the usual accompanying fear and anxiety. Eventually one of the faculty members set up an organized study of the psychedelic drugs for those who were interested.

The drug course had fifteen students in attendance, about evenly divided into two groups—the artists and the intellectuals. As there were no legal restrictions against psychedelic drugs at the time, it was decided that experimentation was in order. All but two members of the class agreed to participate.

It was observed when the class first met that most of the school body had never taken full advantage of the school's facilities. The college had a small foundry, a printing press, a kiln and a full stockroom of artist's supplies—yet those involved in intellectual pursuits had rarely availed themselves of these. On the other hand, the artists were clearly on unfamiliar ground when they enrolled for some of the courses in history, sociology, etc.

An experiment was therefore undertaken to see if the psychedelics could facilitate introduction to new material, i.e., if members of one group could become open to the activities of the other. Since LSD removes many self-imposed restrictions and diminishes the unpleasant aspects of change, it was decided that the materials to work on and the support of an expert would provide the fundamental background for the experiment. The guide in this instance was to serve as a kindly master initiating a novice into the mysteries of another discipline. To the gratification of nearly all the participants, this technique was highly rewarding.

The most obvious success was with the intellectually orientated students. Under LSD, they immediately took notice of such art supplies as clay, paints, canvas, and collage materials which had purposely been brought to the session. Because of the heightened rapport they felt, which extended to their guide, they had no difficulty in understanding composition concepts and they "Breughled" freely. No one was reluctant to experiment, and they set about with the same lack of creative inhibition as kindergarten children, working with clay and paint to express themselves. In the weeks following the last session these new-found "handicraft" pursuits continued to engage their attention.

The sessions with the artists, however, were less easy to assess. For them the guide played another role. The object of their sessions, too, was to enlarge their fields of interest and involve them in intellectual activities. But instead of providing visual and tactile stimuli, this group was given pre-drug session reading assignments. They were instructed to "browse through" a selection of books on subjects they felt drawn to and to mark a half-dozen passages which seemed to hold something "special" for them.

These chosen passages were then put on tape to be played back during the actual session. There were also recordings made of relevant material—excerpts from broadcasts, phonograph records, plays and so forth—for the subject to listen to and reflect upon under the drug.

One of the recorded sessions proceeded as follows:

Three subjects; 100 mcg. each of LSD. Recordings: Gielgud & Anderson's *Medea*; records from Corfu (native folksongs) taped selections from Mary Renault's *The King Must Die*; *Golden Bough*; Bullfinch; Gayley; Graves and Hamilton. Two facsimile vases decorated with Perseus myth illus. (Medusa); one black and white Laocoon illus.; volume of excavations at Mycenae.

First reactions 9:45 A.M., during field recordings. John informs music not authentic, native to Persia. Says he can see tigers roaming lilac jungle. Asks for "something really Greek." Cynthia hands him a handkerchief and asks that music be turned off altogether. Music turned off. Guide turns on Frazier selection, passage

from Persephone and Demeter (previously chosen by Cynthia). John asks Guide if Pluto is a Disney invention.

Rachel very quiet. Takes no notice of J. and C. Begins to draw on sketchpad—sheaf of wheat, each grain has grotesque dog's head. Scratches it out and exclaims: "Oh no, she is not frightened! Look at my sandals!" All look. Guide says, "Are we there with you?" Cynthia breaks in: "I see a rock and a very handsome man. His skin is dark. He loves you. His muscles ripple. The gold bracelet." John stares at C. Says: "Snake." (Not clear whether he means this as personal remark to C., or is embroidering.)

10:30: All three looked at Laocoon illus., little interest. J. asks for drink of water. Guide puts on Edith Hamilton tape, which excites R. She seems to be "traveling again," with J. empathizing. The two seem in deep communication.

11:30: Several tapes played, R. & J. particularly interested. Rachel says she forgot to break her hairdressing appointment, and then asks if Greek is hard to learn. Guide puts on field recording and asks if she understands the words. She says "very beautiful," but does not answer question. Guide does not press it.

11:50: Guide leads subjects into discussion of Greek War, and Cynthia suddenly remarks she took prize in high school for Latin. Begins to quote from the *Aeneid*. Breaks into tears. Guide quotes few Latin phrases he remembers, and C. looks pleased. Becomes quiet, seems reflective.

12:15: John wanders into adjoining library, and is followed by Stewart. Guide asks S. to leave, but John objects. Says he wants to get pack of Tarot cards in library. Guide and Rachel insist J. stay in session room, and S. leaves to find Tarot pack. Returns and says can't find it. John at this point no longer interested, as absorbed in Mycenae photographs.

12:40: Cynthia announces that she would like to illustrate mythology volume. Wants to go on with Latin next quarter...

The actual session notes continue until 4:30 in the afternoon, when effects of the drug had become minimal and the group went out for a meal. This portion quoted indicates that although there were distractions and strong emotional responses, the subjects were successfully directed to explore a field of interest they had chosen. Rachel, who had "hallucinated" and identified with various mythological figures, later took up acting and also discovered an unsuspected talent for stage design. John was the least affected, but in his sculpture it was clear that his disparagement of classic forms was moderated. Cynthia did not return to her high-school enthusiasm for Latin, but she said at the last interview that she felt her experience had been important, but indecisive, and that she would like to take the drug again.

In the other "artist" groups, similar techniques were used. Thus, for five people who had expressed interest in the civil-rights movement, the taped recordings were excerpts from speeches by Martin Luther King, Bayard Rustin and Louis Lomax. Four others who knew little about geography and have never closely studied maps, were shown the Rand McNally atlas and heard explanations about the historical development of cities, given by a professor who had for years been interested in demography. Another group listened to Shaw's "Don Juan in Hell" while looking at John Held, Jr., cartoons and photographs from "The Roaring Twenties." Colette's Claudine novels were excerpted in another instance at the

suggestion of several students who felt an affinity for French literature and Parisian Left-Bank society; they also listened to recordings from Proust, Mistinguette and Piaf.

In each of these sessions, held primarily for educational purposes, emphasis was on the development of total emotional participation with the material at hand. During the following week, this involvement was to be compounded by looking in detail at related writings, at which time intellectual and factual material could be assimilated. With this method it was discovered that students who ordinarily would have delved little into subjects about which they were only somewhat curious became extremely interested instead and followed out the leads they had been given in class and in session. In this course, incidentally, the guide-teacher abstained entirely from psychedelics during the student sessions. However, he had taken LSD when the plans for the project were in progress and it was realized that the course would be offered.

Further implications for psychedelic learning techniques are evident in a subsidiary study made at the same college with a group of four students who were having difficulties with mathematics. They were not in the "creative artist" category, but were liberal arts majors who were frustrated because their abstract thinking processes seemed impeded. When they heard about the drugs course, one of them consulted the professor about the possibility of breaking a "mathematics block" through the use of LSD. A session was arranged for all four students, together with the guide and their mathematics teacher, who restated for them the fundamental concepts of calculus, which they had been unable to grasp in class. Under LSD each student found himself able to understand calculus, the reasoning behind it, why it was developed the way it was, and why it worked. They were elated about this breakthrough and had no difficulty with the thinking behind Taylor's theorem, integration, partial derivatives and analytical geometry. In the weeks following, although they were not transformed into brilliant mathematics students, it was clear that the "block" had been broken and that they were learning.

Similar results have been reported in other areas, such as philosophy. In one instance a student taped several striking selections from Kant, whom he had "never understood," and listened to them during the third and fourth hour of his LSD session. He played this tape over repeatedly and felt that "Kant was getting through." Afterwards he declared that "Kant was the most brilliant philosopher of them all." Another student steeped himself in the writings of Sartre, Heidegger and Jaspers previous to taking LSD. In the early part of his session he announced that he suddenly knew what existentialism "was All about." During the following weeks he devoted himself to further readings in the field and eventually chose philosophy as his career. Asked what he thought about the importance of LSD, he said that he did not "really think it possible to study and understand modern philosophy without at least having tried a psychedelic."

Probably the earliest reference in the psychedelic literature to the possibility that psychedelic drugs can deepen the grasp of philosophical systems occurs in Aldous Huxley's *Doors of Perception* (1954), in which he notes that "at least one professional philosopher has taken mescaline for the light it may throw on such ancient, unsolved riddles as the place of mind in nature and the relationship between brain and consciousness." In the same book Huxley explains that the drug enhanced his understanding of other "philosophic truths":

The Beatific Vision, *Sat Chit Ananda*, Being-Awareness-Bliss—for the first time I understood, not on the verbal level, not by inchoate hints or at a distance, but precisely and completely what those prodigious syllables referred to. And then I remembered a passage I had read in one of Suzuki's essays. "What is the Dharma-Body of the Buddha?" ("The Dharma-Body of the Buddha" is another way of saying Mind, Suchness, the Void, the Godhead.) The question is asked in a Zen monastery by an earnest and bewildered novice. And with the prompt irrelevance of one of the Marx Brothers, the Master answers, "The hedge at the bottom of the garden." "And the man who realizes this truth," the novice dubiously inquires, "what, may I ask, is he?" Groucho gives him a whack over the shoulders with his staff and answers, "A golden-haired lion."

It had been, when I read it, only a vaguely pregnant piece of nonsense. Now it was all as clear as day, as evident as Euclid. Of course the Dharma-Body of the Buddha was the hedge at the bottom of the garden.

Alan Watts is another writer-philosopher who has confirmed the educational value of psychedelics when used intelligently:

LSD... is an instrument which a person in any field of inquiry can use. Just as a microscope can help a biologist, LSD can remove the inhibitions to perception which prevent us from seeing the central relationships of the world...

All heroes bring souvenirs back from a journey and people who make the LSD journey had better bring something back. One of the most fascinating discussions I have ever heard was when a group of art historians in New York sat around the first cubist painting and discussed that work while under LSD. People can think and talk while they are under LSD. That discussion made sense. It should have been recorded.

The above examples of "psychedelic education" are generally positive, and the people involved have benefited from their experiences. However, as indicated in the extract from the mythology session, the resulting alterations in outlook and interest can be impressive, and may lead to alterations in values.

Wilson Van Dusen, a psychologist at Mendocino State Hospital in California, said in this connection, I spent my first three LSD sessions discovering my life was arranged in layers. The outermost and most superficial was my position and concerns as a psychologist. These seemed unimportant. The papers on my desk were nonsense. Status-striving was no more meaningful than walking up hill.

Such discoveries are often reported as the outcome of LSD sessions because the drug is known to radically change personal values and to ferret out overlooked or undervalued interests.

Skills:

The foregoing represents perhaps the major advantage of the psychedelics as applied to education, but in more pragmatic matters, such as learning languages and acquiring skills (typing, dancing, piano playing, faster reading), the drugs are also of practical aid. Outlandish claims, however, are sometimes made—claims that are unsubstantiated or based on rare cases. On a CBS television program in "The Defenders" series, the protagonist, on trial for giving LSD to a youth who

subsequently killed himself, performed an extraordinary memory feat. He said that he was able to put himself in an "LSD state" at will as a result of total familiarity with the drug, and he astounded the drama's courtroom (and undoubtedly the viewing audience) with an extensive example of total recall.

There are few, if any, LSD researchers who would give credence to this demonstration, but nonetheless there are instances of less extravagant LSD accomplishments which came about through memory enhancement. The most notable and the one most often used as illustration is language learning. The process is similar to that of technical and creative problem solving. A student, who learned enough German in a week to enroll for a second-year college course in the subject, describes the technique:

It was a week before registration and it depressed me tremendously that I had not spent the summer learning German, as I had planned. I had intended to give myself a crash course so I could take second-year German, which I needed for my study in physics. I had heard of a woman who had learned enough Spanish in a few days, via LSD, to speak it fluently when she had to go to Mexico on business. I had taken LSD before, and while I couldn't see how she did this, I decided it was worth a try.

I hadn't even gotten around to picking up a textbook, but I did have a close friend who knew German well and who said he was willing to "sit in" while I took the drug and try to teach me the language. Fortunately, I knew something about conjugation and declension, so I wasn't completely at sea.

I wanted to get worked up and feel involved with the language, as it seemed that this must be at least part of the key to the problem, so I asked my friend to tell me about Schiller and Goethe, and why the verb came at the end. Almost immediately, after just a story or two, I knew I had been missing a lot in ignoring the Germans, and I really got excited.

The thing that impressed me at first was the delicacy of the language (he was now giving me some simple words and phrases), and though I really messed it up, I was trying hard to imitate his pronunciation as I had never tried to mimic anything before. For most people German may be "guttural," but for me it was light and lacy. Before long, I was catching on even to the umlauts. Things were speeding up like mad, and there were floods of associations. My friend had only to give me a German word, and almost immediately I knew what it was through cognates. It turned out that it wasn't even necessary for him to ask me what it sounded like.

Memory, of course, is a matter of association, and boy, was I ever linking up to things! I had no difficulty recalling words he had given me—in fact, I was eager to string them together. In a couple of hours after that I was reading even some simple German, and it all made sense.

The whole experience was an explosion of discoveries. Normally, when you've been working on something for a long time and finally discover a solution, you get excited, and you can see implications everywhere. Much more than if you heard someone else discovering the same-thing. Now this discovery thing, that's what was happening with me—but all the time. The threshold of understanding was extremely low, so that with every new phrase I felt I was making major discoveries. When I was reading, it was as though I had discovered the Rosetta Stone and the world was waiting for my translation. Really wild!

After "Falling in love with German," on the basis of this one LSD session this student then went on the following day to read Mann's *Dr. Faustus*. He had both the original text and an English translation. By the time he had finished the novel, he found that he was scarcely referring to the English version. He also discovered that in having read that much German, he had developed a feeling for grammar structure and word endings that was almost intuitive. When his friend questioned him, he said he could not readily explain what the third-person singular past-tense ending was, but he demonstrated that he could use it. In this sense, he had learned the language as a child learns it, not as it is taught in formal instruction. When he registered for German 210, an intensive reading course, the following week, the instructor expressed skepticism when he heard the student was self-taught. Upon testing him, however, it was soon evident that his German reading comprehension was well above average.

Others who claim to have learned skills through using LSD express surprise at the ease and scope of their gains, particularly since they were made in a relatively brief period of time. One man, who had always been afraid of water, realized that not only were his fears groundless, but he could comfortably swim around after using LSD. Following two subsequent-lessons, he was fairly proficient at the Australian crawl. One woman claims to have learned two years of piano instruction in one session. While at the piano, she felt a "direct connection between her hands and her brain, so that she only had to think of the music and it was played."

The explanation generally given for these stepped-up learning capacities is that LSD makes possible total absorption and at the same time "inhibits the inhibitors" in the psyche. The drug brings about a state of surrender, but far from the surrender of resignation; rather, it is the surrendering up of the psyche's forces to the channels of discovery, change and acquisition of skills. LSD encapsulates one in an emotionally charged receptivity, in which it seems silly and pointless not to "give in," and sometimes this results in practical or profitable attachments.

Bernard Roseman, for example in *LSD the Age of Mind*, found it behooved him to become involved with the practical endeavor of typing. In detailing his system for becoming an accomplished typist through psychedelics, he emphasized the necessity for knowing the basics of the touch-system. Once this was acquired, with a fair rhythm, he offered the following advice for "drumming in" a conditioned response:

Take [the drug] while typing and continue right through the transition period (where one's consciousness changes).

Now here is where "will power" comes in, as you will find yourself inventing a thousand reasons why typing is useless and you could not care less about learning it. It would be so pleasant to stop and listen to a little music or just meditate. Well, if you wish to accomplish something with psychedelics that lingers on into your ordinary state, you must exert an act of will. By doing nothing but letting that state direct you, a pleasant time will be had, but little accomplished.

Therefore you must continue this regime... if possible up to fourteen hours.... It will feel as if you have been typing for centuries locked in a small enclosure with but one action to perform. When the drug wears off, go to sleep. It is almost guaranteed your mind will still be seeing numbers and letters, and your fingers will jerk as they wish to automatically respond to the actions required of them. Upon awakening, go back to the typewriter. You will be amazed to see your speed and

accuracy greatly improved. A force will seem to grab your hands, and your fingers will fight to obey. The typewriter is now a permanent part of you, and the impression made can never be erased.

Footnote

1. From Hoffer: *Clinical Pharmacology and Therapeutics* 6:183, 1965, The C. V. Mosby Company, St. Louis.

Chapter VI. Religion, Mysticism and ESP

There is a central human experience which alters all other experiences. It has been called satori in Japanese Zen, moksha in Hinduism, religious enlightenment or cosmic consciousness in the West. .. [It] is not just an experience among others, but rather the very heart of human experience. It is the center that gives understanding to the whole... Once found, life is altered because the very root of human identity has been deepened... The drug LSD appears to facilitate the discovery of this apparently ancient and universal experience.

– Wilson Van Dusen, "LSD and the Enlightenment of Zen"

AN ISSUE of *Time* magazine, published during the Lenten season in 1966 had no face on its cover—only the question "IS GOD DEAD?" against a background of black. A church in Florida has given out "green stamps" for attendance. *Honest to God*, a volume of popular atheism expressed in a theistic vocabulary, has sold over a million copies—thus far outselling any other "religious" book except the Bible. And a recent study at Harvard indicated that four out of five students today do not consider the church significant for their own lives.

In 1944, the German theologian Dietrick Bonhoeffer propounded the "heretical" view that modern science and business leave no room for God in most daily lives—and that He has been driven into an exile, wherein He is virtually of no importance to anyone. Since then nearly every leading theological figure—from Bultman to Tillich to Niebuhr—has espoused this "heresy," proclaiming that for the average man there no longer exists anything of ultimate meaning and value. "Operationally, God is beginning to resemble not a ruler but the last fading smile of a cosmic Cheshire cat," Julian Huxley has remarked.

What society witnesses today is an unprecedented religious crisis, for which traditional religion apparently has no satisfying answer. Some of the clergy have presented jazz in the courtyard or poetry readings in the sanctuary to make the church seem more contemporary. Others build sermons around the Death of God or some other gimmicky theme, hoping to renew the interest of their parishioners. None of these attention-getters, however original and "modern," seems to have served its purpose. Churchmen point with pride to the figures for church membership: from 112,000,000 in 1961 to almost 121,000,000 in 1965—but what does this increase really represent? The population explosion? Huckster know-how? Or religious starvation?

Man's need for religion is as old as history itself. And today, as his personal world becomes more fragmented and his outside world more chaotic, his longings deepen—but at the same time the answers become more elusive and untenable. Aldous Huxley describes the crisis in Christianity in no uncertain terms:

Countless persons desire self-transcendence and would be glad to find it in church. But, alas, "the hungry sheep look up and are not fed." They take part in rites, they listen to sermons, they repeat prayers—but the thirst remains unassuaged. The sole religious experience is that state of uninhibited and belligerent euphoria which follows the ingestion of the third cocktail.

The psychedelics cannot produce "Instant God," or universally explain the

cosmos. But thousands have testified that LSD does seem to make skepticism "dissolve," or cease to be a problem. Under LSD the universe is perceived in its entirety as eternal, natural and perfect, and those seeing it in this way have no wish to question it or probe the ineluctable godhead at its core. After the first moments of wonder and awe, they seem to take the verities for granted—frequently for the first time in their lives. This acceptance is often mentioned in case histories dealing with various disorders and problems, particularly in those of the alcoholics.

On the other hand, alcoholics traditionally have changed their behavior patterns after "seeing the light." They needed no additional drugs; it was "the spirit" that "moved" them. Yet the "spirit" quite clearly could not be relied upon in most cases. Spontaneous and natural conversion is rare.

So, too, for all religious revelation, regardless of the use made of it. Throughout time, only select men have "seen God." A Zen master is considered fortunate if he can find within his life-span a student or two who achieves satori. Among the multitudes who enter monasteries and convents, only a few are beatified.

But with LSD, this appears no longer to be the situation. Businessmen, alcoholics, salesmen, schoolteachers, philosophers, atheists, scientists, artists, priests—thousands have recounted religious or mystical LSD experiences. Here is how Dr. Huston Smith, Professor of Philosophy at MIT, explains these particular powers of the drug:

... given the right set and setting, the drugs can induce religious experiences indistinguishable from ones that occur spontaneously.^[1] Nor need set and setting be exceptional. The way the statistics are currently running, it looks as if from one-fourth to one-third of the general population will have religious experiences if they take the drugs under naturalistic conditions, meaning by this conditions in which the researcher supports the subject but doesn't try to influence the direction his experience will take. Among subjects who have strong religious inclinations to begin with, the proportion of those having religious experiences jumps to three-quarters. If they take them in settings which are religious, too, the ratio soars to nine out of ten.

For most orthodox Christians, the wisdom of using a drug to elicit deep religious insight may seem blasphemous. There is perhaps some comfort in hearing that atheists under LSD frequently report meaningful religious experiences. (In one LSD group, for example, of which less than 10 per cent of its members were "believers," terms such as *God*, *the Divine*, *deep religious experience* and a *meeting with the infinite* were used in over half the follow-up reports.) But on the other hand it is rather disconcerting to hear religious professionals report they have had their only profound revelations after using psychedelics. (An experiment conducted with 69 theologically trained individuals in religious locations indicated that over 75 per cent had what they considered moving spiritual insights under LSD, and over half—fully aware of the implications of what they were saying—declared that through the intercession of the drugs they had "the most important religious experience of their lives.")

The hard-core evidence for the efficacy of LSD and the other mind-changing drugs in the realm of religion is considered well established by qualified researchers. One may question what a true religious experience is, but theologians deeply concerned with these matters have repeatedly attested that the drug-

induced experience is genuine. Dr. Abraham Maslow, Professor of Psychology at Brandeis, best known for his investigations of "peak experiences," has written, "In the last few years it has become quite clear that certain drugs... especially LSD and psilocybin... often produce peak-experiences in the right people under the right circumstances." Dr. W. T. Stace, Professor Emeritus at Princeton and a leading philosophical authority on mysticism, said, when asked about the resemblance of artificially induced mystical experience (via the psychedelics) to the natural one, "It is not a matter of its being *similar* to mystical experience; it is mystical experience."

By way of further confirmation, a double-blind experiment was conducted on Good Friday in 1962 to check out Dr. Stace's affirmation, using nine check-points he had listed as fundamental characteristics of mystical experience—characteristics "which are universal and not restricted to any particular religion or culture": unity; transcendence of time and space; deeply felt positive mood; sense of sacredness; objectivity and reality; paradoxicality; alleged ineffability; transiency; persisting positive changes in attitude and/or behavior.

In a private chapel, twenty Christian theological students took part in this experiment after having been tested and screened exhaustively; ten were given 30 mg. psilocybin and the others (as nearly as possible, a duplicate group) received 200 mg. of nicotinic acid, a vitamin that causes tingling of the skin and other physical sensations simulating certain psychedelic effects. Neither the subjects nor their guides knew which drug had been given to whom.

During the experiment (which came to be known as "The Miracle of Marsh Chapel") and in the following six months, extensive data were collected. These included tape-recordings, group discussion, follow-up interviews and the answering of a 147-item questionnaire used to quantify the characteristics of mystical phenomena. The reaction level in each of Dr. Stace's nine categories was significantly higher for the psilocybin group than for the controls. Nine out of the ten who had the psychedelic reported having religious experiences they considered authentic, while only one from the control group claimed to have had spiritual cognition. More important in terms of classical aftermath of mystical experience, there was a lasting effect upon behavior and attitudes. Dr. Walter Pahnke, the chief investigator (who wrote up this experiment as his doctoral thesis at Harvard), summarized these results:

After an admittedly short follow-up period of only six months, life-enhancing and life-enriching effects, similar to some of those claimed by mystics, were shown by the higher scores of the experimental subjects when compared to the controls. In addition, after four hours of follow-up interviews with each subject, the experimenter was left with the impression that the experience had made a profound impact (especially in terms of religious feeling and thinking) on the lives of eight out of ten of the subjects who had been given psilocybin.... the direction of change was toward more integrated, self-actualizing attitudes and behavior in life.[2]

To date, the most significant effort to discredit the use of psychedelics for religious purposes was written by R. C. Zaehner, Professor of Eastern Religions and Ethics at Oxford, in his *Mysticism, Sacred and Profane* (1957). In this work Professor Zaehner examines his own mescaline experience and that of Huxley, compares them to classical accounts of religious and mystical experience, and

concludes that the psychedelics can do no more than create a minor kind of "preternatural experience."

As Masters and Houston indicate, "... Zaehner's position is clearly open to criticism." They fault him on his logic and his argument that drugs can induce pantheistic and monistic mystical experiences, but not theistic ones. Here is Professor Huston Smith's comment:

With respect to the new drugs, Professor R. C. Zaehner has drawn the line emphatically. "The importance of Huxley's *Doors of Perception*," he writes, "is that in it the author clearly makes the claim that what he experienced under the influence of mescaline is closely comparable to a genuine mystical experience. If he is right... the conclusions... are alarming." Zaehner thinks that Huxley is not right, but Zaehner is mistaken.

It is probable that as more people take LSD, organized religion as it is known today will be seriously weakened, for there will be less interest in worn-out and irrelevant dogma. As religious insights become embodied in more levels of our culture, perhaps many will come to feel that the true way to worship God is to do so alone.

Some *religieuses*, predicting this pending crisis for Christianity, have established "psychedelic churches," loosely modeled on the American Indians' Native American Church. Having been recently formed, these groups are at present small and obscure, but the movement in the direction they have chosen is unquestionably growing. These churches have a framework similar to that of the Quakers, Unitarians, Christian Scientists and others, in that they put little emphasis on orthodox doctrine or ritual and are a loosely gathered fellowship whose common bond is the search for spiritual fulfillment. They differ, however, in that they offer "communion," with a psychedelic drug as the "host." Like the Indians, the members of these "churches" hold that the church is "a place to talk to God" and not just talk about Him.

It should be pointed out that organized religion has not been totally oblivious to the psychedelics. The Quakers and a large number of clergymen in England and Canada have taken serious notice. In fact, LSD has become a rather popular topic for Sunday service, and the positive response of congregations has been observed by many ministers. As an example, one minister, after delivering a sermon about his LSD session entitled "The Most Astounding Experience of My Life," reported that "in 48 years of preaching he had never seen people more interested and full of questions about a sermon."

But this is not to suggest that organized religion will not oppose the use of LSD for sacramental purposes. The lines are already forming, with many churchmen aligning themselves not only against the psychedelics, but also (and in consequence) against the value of personal religious experience. In the past, "divine visitation" has been considered an acceptable, or at least tolerated, element of religious life because it could be absorbed by the immense structure which is Christianity. Saints and other holy men are usually disturbing to any religious organization. They are inclined to follow their own "inner direction" rather than that of temporal authority. But until recently "visions" have been few, and therefore manageable. Now, however, with growing numbers of people experiencing "mystical" or "visionary" states, the uneasy relationship between a

structured religion based on the historical Christ and a spontaneous one which depends upon each man finding his own "inner light" will require re-examination.

If a significant portion of society turns to the psychedelics for the discovery—or re-discovery—of God, non-drug-using Christians may react by putting increased emphasis upon a strict interpretation of Christianity, a sort of Barthian theology with primary attention paid to the "historical Christ." Karl Barth is the logical authority for this stand since he exempts personal revelation and "natural theology" from his *Church Dogmatics* and regards theologians such as Tillich as worse than heretical—as not even being religious. On the other hand, there may be some who will be satisfied simply with the position that the use of drugs for "instant mysticism" is wrong and immoral. Still others may quote favorite spiritual masters who advise against the use of psychedelics for spiritual advancement. Already there are those, for the most part uninterested in Sufism, who have quoted with approval Avatar Meher Baba's comment that "The experiences which drugs induce are as far removed from Reality as is a mirage from water. No matter how much you pursue the mirage, you will never quench your thirst, and the search for Truth through drugs must end in disillusionment."

Meanwhile, as the psychedelics become better known, much initial dismay at the thought of drug-induced "religious experience" is changing into a realization that LSD may be indeed a "tremendous theological breakthrough" and that it may bring about a religious resurgence previously unknown. Some who have sought to discredit the drug are discovering that their initial fears are not justified and that their questions are sometimes incongruous. Edward Dalton, a writer on the semantics of mysticism, indicates how the present debate is being upheveled when he takes on the questions, "Is the experience valid?" and, "Is it fair that just anybody could have it, whether they deserve it or not?":

When we write [such questions] just like that, it is hard not to see how [they] reflect the values and fears of our particular culture, age, and situation... let me ask them again in a less obvious way...

Is it authentic? How can I be sure that I'll get the real thing? Will the experience I have be just like the one that happened to Moses, Paul, Gotama, or Tzu?...

Is it natural? Isn't there something insipid about planning to have an enlightenment experience on a particular day and hour? Isn't it like planning to fall in love at ten o'clock on Thursday evening?...

Is it fair? This is the other side of "Is it natural?" What about the poor monk who spends all his life seeking satori and never gets it, and then some junkie comes by claiming to have it in a bottle? Few of us can tolerate the idea of something for nothing, especially when someone else is getting it. Call it grace, freely given, undeserved, and people will agree with you, but they won't believe it. Even Jesus was hard put to get this point across.

Some traditional church-goers are finding it quite possible to accept the psychedelic "religious experience" as valid, once they have seen the evidence. In their framework the experience "corresponds almost exactly [in Alan Watts' words] to the theological concept of a sacrament or means of grace—an unmerited gift of spiritual power whose lasting effects depend upon the use made of it in subsequent action." In elaborating this concept, Watts gives the explanation which is being accepted as organized religion's apologia for interest in the psychedelics:

Catholic theology also recognizes those so-called "extraordinary" graces, often of mystical insight, which descend spontaneously outside the ordinary or regular means that the Church provides through the sacraments and the disciplines of prayer. It seems to me that only special pleading can maintain that the graces mediated through mushrooms, cactus plants, and scientists are artificial and spurious in contrast with those which come through religious discipline.

Such a statement is bound to be repeated from the pulpits because of the immense curiosity the psychedelic experience engenders in Christians. Further, experience has shown that church members who have taken LSD tend to become more ardent and involved members of their congregation. Trial records resulting from various attempts to outlaw the Indians' use of peyote in their religious ceremonies are filled with testimony indicating that Peyotists are quiet, sober and upright church members, not the stupefied, orgiastic savages that have sometimes been painted by white missionaries. Professor J.S. Slotkin, an anthropologist who intensively studied the Menomonee Indians of Wisconsin, wrote of the Peyotist congregation, "I have never been in any white man's house of worship where there is either as much religious feeling or decorum." Similar testimony is plentiful regarding the effects of LSD upon a Christian's church life. And the same seems to hold true for those who have used this drug without religious intent.

In the book *Utopiates*, an extensive study of 92 LSD users who were attracted to the drug for non-religious reasons, religious effects are clearly indicated. When questioned, 40 per cent of these subjects "indicated their understanding of the teachings of their own church had changed, largely toward an increased understanding of doctrine." Thirty per cent "expressed a deeper understanding of their previous religious feelings and felt closer to their church." Thirty per cent "believed their moral standards had changed toward increased personal responsibility," and 40 per cent "expressed lessened anxiety regarding death." Many commented that Biblical passages and obscure religious terms suddenly acquired vivid meaning and that they were better able "to accept the truth of such abstract concepts as God, the majesty of God, the evolving life force, the reality of life after death, the universality of religion and so on." Here, from another source, [Ling and Buckman] is comment on one man's life and his religious outlook following LSD treatment (for sexual problems), as related by his wife:

I have always said that my husband was gay and full of humour, and that is exactly what he *is* now. I used to be afraid when I first heard about his having LSD that he would emerge from it (if he ever did at all) a totally different personality, but instead of that his true personality has been able to break through the shell that imprisoned it. I also thought it might destroy his religious faith, but there is no need for me to say anything about that... he has expressed far better than I can how greatly his faith has been strengthened and deepened.

Unreligious people who take LSD for the first time are often quite indignant when told that they may find the most important part of their session will be spiritual. If their agnosticism, or atheism, is not the result of rebellion against early Christian training, however, they may find themselves attracted to Buddhism or another of the Eastern religions.

This occurs because the LSD mystical experience leans toward pantheism unless there are religious images already established. While there are numerous instances of people taking the drug and reenacting the crucifixion, identifying with Christ or God, and having Biblical-scene hallucinations, a good percentage have other forms

of mystical adventures. As one pastor put it, "The drug seems to make an end-run around Christ and go directly to the Holy Spirit." Similarly, a Hassidic rabbi after using a psychedelic danced in ecstasy with his tallith, declaring that his "experience was truly religious, but wasn't 'quite Jewish enough.'" The group most often expressing the feeling that psychedelic mysticism is perfectly appropriate to their religion is the Buddhists. Their comment frequently is, "Just what I expected."

In the last quarter-century Eastern theology has made inroads on Western thought as a result of new translations of basic Eastern religious works. Also, the writings of such intellectuals as Heard, Isherwood, Eliot, Huxley and Watts have gathered a wide audience. Now, as evidence grows of the psychedelics' ability to give first-hand experience of "the clear, white light" and other typically Eastern mystical states, we are likely to see an acceleration of interest in the *Tao Te Ching*, the Tibetan and Egyptian *Book of the Dead*, the *I Ching* and the *Upanishads*. One of the most remarkable characteristics of "psychedelic people," is that many who have considered themselves "hard-headed realists" before use of the drugs have subsequently developed an affinity for such writings. At any gathering of those involved in the "psychedelic movement," it often happens that before long one or another of these books is mentioned favorably—even by those who formerly disparaged them.^[3]

The religious awakenings brought forth by the psychedelic drugs do not always assume forms we might expect, nor are they necessarily lasting in their acute impact. The chances are, for instance, that former atheists will not be transformed into church-goers (on the other hand, they will probably never again be militant atheists). But after the initial reaction fades, the value of the experience is nonetheless secure; the awakening to deeper spiritual values remains.

Now that the phenomena of "psychedelia" (religious experience via drugs) is known and increasing numbers of people are interested, it seems reasonable to assume that LSD will one day take a respectable place in religion. The following three statements concur in this prediction:

Whether the current chapter of man's religiousness is being written more in the church or on the college campus, more in the halls of ecumenical councils or in the amorphous groupings of the Youth Revolution is a question whose answer is blowing in the wind.

— Prof. Huston Smith, "The Religious Significance of Artificially Induced Religious Experiences"

It is just possible that God, in His inscrutable Grace, may wish to shatter all our Pharisaic pretensions, and through these remarkable chemical substances gracefully provide glimpses of the realm of the Spirit precisely to those whose path would otherwise never have come near it....

Seldom has the demand for the rethinking of the nature of mystical, experiential religion been so insistent. And this demand rests with unusual weight upon the Society of Friends, because of its claim to be a religion of immediate experience, of the *inward* Christ.

— Joseph Havens, "A Memo to Quakers on the Consciousness-Changing Drugs."

Undoubtedly it would be the supreme irony of the history of religion should it be proved that the ordinary person could by the swallowing of a pill attain to those states of exalted consciousness a lifetime of spiritual exercises rarely brings to the most ardent and adept seeker of mystical enlightenment. Considering the present rapid assimilation on a mass cultural level of new discoveries, therapies, and ideologies, it then might not be long before the vested religious interests would finally have to close up shop.

- R.E.L. Masters and Jean Houston, "Religious and Mystical Experience."
(From *The Varieties of Psychedelic Experience*.)

It would seem that there will always be a need for organized religion, which through the ages has been a mainstay of human enrichment. But when religion is pinched and thin, or is primarily a booming commercial enterprise, its purpose is negated. The psychedelics employed thus far for religious purposes in an organized way have been included in the church ceremony in a rather loose, arbitrary manner, vaguely in the style of the Native American Church. While there have been some attempts to use Eastern concepts and writings in the services of these new "psychedelic churches," these are not very satisfactory for the average American, and involves enormous "mind-bending"—as bodhisattvas, mantras, mandalas and sangsara do not "resonate" familiarly in the Western unconscious as they do for the natives of Tibet, China, Japan, etc.

There are new translations, however, of early Christian writings (such as the first-century "Hymn of Jesus") and the introduction of new methods for conducting services, which some of the psychedelic theological groups are using. Another innovation which has been privately tried with some success, and which may prove useful in seminaries, is the taping of a philosophical-theological discussion held prior to a session and its playback after the drug is ingested. Ministers and theological students who have experimented with this system often claim to have been mortified at hearing their own excessive verbiage and the irrelevance of much they have had to say. Instead of consternation, however, they have generally expressed gratitude at having their misapprehensions so clearly revealed. Under the drug's stimulus they receive an intensification of the goals they held when they entered the ministry, thus sparking more direct and creative preaching.

One of the most rewarding by-products of these religious-oriented psychedelic sessions has been the emergence of a strong spiritual bond which developed between participants. The empathy resulting from the shared experience is such that many have declared that only a long and intensive retreat together could provide a similar feeling of brotherhood. Under the drug, they claim to feel the glory of God and the spiritual glory of each other—and of all mankind.

This spiritual-brotherhood reaction is not peculiar to the theologians who experience psychedelia, but also extends to laymen. Regardless of difference in background, age, interests or problems, there is among LSD users an almost uncanny recognition of and sympathy for those who have gone through the experience, whether they have taken the drug together or not. This may account to some extent for the protectiveness users feel toward each other and their almost immediate discard of defenses. The fact that each has known the naked vulnerability of being adrift in the cosmos, with none of the everyday trappings and props for support, provides a common bond and lays a cornerstone of trust.

Further, the reverence and understanding they have for each other would seem

to emanate from a tacit but strongly felt "universality," a concept known to Bergsonians (with their mind-at-large theory), to Jungians (who believe in a collective unconscious) and to the truly devout of all faiths. So pervasive are spiritual realities among those who have used the psychedelic drugs that many are unaware of the depth of their involvement. Mention the words "Universe," "God," "Energy" or "Eternity" to any serious LSD enthusiast and he will instantly accede to the meaning without bewilderment or reference to "empty" phrases.

That the godhead is inescapable to the psychedelic "elect," consciously accepted or not, is often detected by the shrewd observer and by "insiders" who have "been there." Frequently it is reflected in their manner, style, conversation, thought and even in their dress. The transcendental "mark" is on them in one way or another and has a way of announcing its presence, whether the bearer knows it or not.

If the foregoing views on "spiritual brotherhood" and acceptance of "universal" and "eternal" truths seem somewhat overstated, there are a multitude of well-authenticated tests which bear them out, as does the following report by Willis Harman in *Main Currents in Modern Thought*:

Through the psychedelic experience persons tend to accept beliefs which are at variance with the usual conception of the "scientific world view." In a current study [by C. Savage, W. Harman, J. Fadiman, and E. Savage] the subjects were given, prior to and immediately after the LSD session, a collection of 100 belief and value statements to rank according to the extent they felt the statements expressed their views. Subsequent personality and behavior-pattern changes were evaluated by standard clinical instruments and independent interviews. It was found that therapeutic consequences of the LSD session were predictable on the basis of the extent to which subjects indicated increased belief in statements such as the following:

"I believe that I exist not only in the familiar world of space and time, but also in a realm having a timeless, eternal quality.

"Behind the apparent multiplicity of things in the world of science and common sense there is a single reality in which all things are united.

"It is quite possible for people to communicate telepathically, without any use of sight or hearing, since deep down our minds are all connected.

"Of course the real self exists on after the death of the body.

"When one turns his attention inward, he discovers a world of 'inner space' which is as vast and as real as the external, physical world.

"Man is, in essence, eternal and infinite.

"Somehow, I feel I have always existed and always will. "Although this may sound absurd, I have the feeling that somehow I have participated in the creation of everything around me.

"I feel that the mountains and the sea and the stars are all part of me, and my soul is in touch with the souls of all creatures.

"Each of us potentially has access to vast realms of knowledge through his own mind, including secrets of the universe known so far only to a very few."

Note that in accepting these statements the individual is in effect saying that he is convinced of the possibility of gaining valid knowledge through an extrasensory mode of perception. Thus, the person who feels a compulsion to explain away all ESP data will also find the LSD subject to be the victim of delusion and hallucination.

Psi Phenomena:

The supernatural world was both real and awesome to early man, as it still is in primitive societies, and heavy dependency was put upon it in worshipping and propitiating the gods. It is more than likely that the degree to which our ancestral *homo sapiens* relied upon telepathic communication instead of articulate speech would today fill us with both amazement and disbelief. Certainly human beings who populated the earth prior to the fourteenth century are well documented as having had a keen interest in the spirit world, thought transference, witches, premonitions and so forth.

In order to conjure departed spirits, make predictions, or go into trance, a variety of drugs existing since antiquity (many of which are now being put in the hallucinogen classifications by modern biochemists) were used by witch doctors, alchemists, shamen and cultist tribesmen throughout the world, and seemed to buttress natural powers. Yagé, a drug related to LSD and known under several different names (including "telepathine"), is from a vine native to the Amazon Basin and is identical with harmine, an alkaloid from the seeds of wild rue. Both are reputed for their alleged ability to aid in locating missing objects, to transport users to distant lands and times and to give direct communication with the dead. Greatly favored in Europe at witches' sabbaths was bufotenin (related to serotonin and first obtained from toad skins), scopolamine and henbane.

However, by Savonarola's time the church itself had declared magic and witchcraft evil. After the witch-hunts and witch burnings that continued for three centuries, the supernatural world with its ghosts, demons and human emissaries was in a state of subjugation. It was not until the nineteenth century that there was any open revival of interest in "seers" and "spooks" or acceptance of their possible validity.

Those who pioneered the re-exploration of what is now called "psi phenomena," or all things pertaining to the psychic world, were considered crazy, pathetic, eccentric and ridiculous. They were roundly sneered at for their sacrilegious superstition and made to feel uncomfortable among their fellow men. Sir Oliver Lodge and a handful of others did succeed, however, in establishing the Society for Psychical Research in London in 1882, and gradually interest in spiritualism, clairvoyance and mental telepathy seeped out of its small confines and spread elsewhere. The American Society for Psychic Research was founded in 1906; however, the psi subject did not gain much public ground until the 1930s and it is still far from respected. This, despite the efforts of such men in the field as Drs. J. B. Rhine, and Gardner Murphy, who have approached it scientifically and have been steadily working at it in conjunction with their European colleagues.

The reasons for the snail's-pace progress toward heuristic restoration of the psychic element into man's customs and life are manifold. To begin with, the curtain has been lifted for only a comparatively small number of years, and religious prejudice, especially in formal church doctrine, still rules such matters out. Also, in spite of the huge but sprawling body of evidence for the reality of psi factors, adequate methods for presenting concrete, scientific proof have yet to be devised. At present, no matter how precise and painstaking the investigation, or how well attested, at the end the question remains: All right, so it happened, but why? While the majority of people still consider "ghosts," "extrasensory perception" and "mediums" explainable in terms of coincidence, chance or hoax, there is a growing curiosity about psychic phenomena, whether much headway is being made toward discovering its source and veridical status or not.

This growing interest was quietly spearheaded by important men such as Einstein and Edison, to name but two. Psychic phenomena have long attracted followers among artists, literary people and liberal theologians, but until very recently there has not been much "speaking out," for obvious reasons: If proof cannot be offered, the belief is not scientifically valid and must be taken on faith, a province still considered the exclusive territory of organized religion.

But in the last year or two, ESP "buffs" throughout the Western world have taken encouragement because of scientific breakthroughs in other areas which may be connected with psi. The subject has become sufficiently popular and gained enough pseudo-serious approval to move a number of television networks to present special programs designed to enlighten the public on the progress of this odd research. These programs, dealing with the subject in an intelligent and thorough fashion, have been well enough received to warrant reruns.

As the general public becomes more exposed to the idea of ESP as something more than a possibility, it is being joined by a specialized minority which needs no convincing, however much it too may need proof of validity for its deep-felt claims. This group is the growing number of persons who have taken psychedelic drugs. A large percentage seem to have vivid ESP experiences during the drug sessions, and almost all users have noticed at least minimal ESP effects, if nothing more strange than acute empathy.

To date, two international conferences have been held by parapsychologists to investigate the use of LSD in connection with ESP, and while the conferences have resulted in almost no conclusive material, or even realistic formulas for testing, those involved expressed optimism and said they thought the time was close when the psi world would be wide open for exhibition and examination.

These researchers have concluded, for instance, that many of their "hunches" and speculations over the years seem to point in the right direction; they have affirmed many parapsychology theories about which there had been some doubt; and they have postulated a number of previously uninvestigated questions which they hope may eventually serve to give the answers to why psi occurs, why certain people are apparently psychically gifted and others not.

Modern investigators have thought for some time that telepathy, clairvoyance and the appearance of other psychic manifestations do have more rhyme and reason than had once been assumed. Psychic abilities, it is now believed, tend to ebb and flow and are in no way constant to the individual or locale, but are as seemingly capricious as "moods" and emotions—yesterday's clairvoyant can be

powerless tomorrow. But, as with emotional response, there has to be an underlying cause. It is now generally accepted in parapsychology circles that the psychic factor in individuals has no correlation with I.Q., that ESP is strongest around adolescence and early youth (there has rarely been a poltergeist case reported in the absence of children or young people), and it has been suggested that hormonal function may be an important influence, as may metabolism and other physical characteristics.

It is thought, too, that the psychic person performs best when he is in a particular kind of relaxed physical state, unencumbered by the effects on his system of such drugs as caffeine, alcohol and tobacco. Being slightly tired, relaxed, and in a "mind-wandering" frame of mind appears to enhance receptivity.

Because LSD chemically produces many of these physical and mental side effects—particularly the depersonalization of the subject who, like the best mediums, has no sense of himself—and because spontaneous psychic reactions have occurred unsought in countless sessions, those working in parapsychology expectantly set up LSD experiments. The results of these initial studies, however, were gravely disheartening to researchers.

But as it was observed that unelicited psi experiences seemed to persist among LSD users, the experimenters concluded that their testing methods may have been at fault. The Zehner card test, for example, which has been given for years, is now generally considered to be too exacting and rigid to allow any subject under psychedelic drugs to perform at normal, much less optimum, advantage. The LSD subject is undergoing too many lightning-fast and distracting ideas to be able to concentrate on scoring well at one of the most repetitive tests ever devised.

But researchers find it difficult to replace the antiquated testing machinery with something better. Cavanna and Servadio, a research biochemist and a parapsychologist-psychoanalyst respectively, undertook a project working with LSD and psychics a few years ago in Italy. They published their findings, which were exceedingly thin, in their book, *ESP Experiments with LSD and Psilocybin*. The "stage" for the sessions could not have been more cautiously scientific nor the preparations more exhaustive. Yet their techniques were probably too formal and their screening of the subjects, inadequate. (Perhaps they should have given subjects an LSD test run to familiarize them with the drug's peculiarities.) As it was, they used stimulating photographs for "send-offs," and the "picture-match" method (having the subject try to describe the picture inside a sealed envelope) after the medium felt the drug working. The results were not scientifically validated.

Masters and Houston, on the other hand, fared quite remarkably in their tests using the same "picture-match" method in slight variation, and "out of 62 subjects tested, 48 approximated the... image two or more times out of ten. Five subjects approximated ... seven and eight times out of ten." "Thought transference" may be a more likely explanation here, since the Masters-Houston subjects felt more at ease with their researchers than was the case with the Italian investigators.

Both in hearsay LSD reports and published ones, thought transference is frequently mentioned—often to the eerie extreme of "switching" or "intermingling" of souls. Particularly is this the situation when people are close to each other and have known each other for a long time—husband and wife, parent and child, twins, etc. Richard Alpert, who has had wide experience with psychedelics, accidentally projected himself into the "heads" of two persons whom he was guiding. One, a

"psychopathic young fellow," gave Alpert the feeling that being inside this person's mind "was like a tropical jungle [overhung with] flowering vines, waterfalls, deep dark moist caves... I was quietly in the midst of this imagery [when the subject]... said, 'Are you inside my head?' " The other "head" that Alpert "visited," a more dignified one, also detected his "presence" and asked the same question.

Amusingly—and sometimes amazingly—LSD-induced thought transference, telepathy and/or psychokinesis seem to have made their way into the gambling world, too, both amateur and professional branches, and reportedly a great deal of money has been won via the psychedelics. Halfway through one amateur gambler's session, for example, he felt a strong urge to play blackjack, and several friends accommodated him. Much to his surprise, he became aware of "all kinds of subliminal signals" he was unconsciously giving to others and realized that the other players, too, were telegraphing their cards. Upon correcting his own defect, he found it extraordinarily easy to win.

Although it is clear that as yet no trustworthy system has been worked out for testing ESP with LSD, the drug's congeniality with ESP crops up on a striking number of occasions. Because controlled test situations have not as yet produced adequate acceptable criteria, there is a paucity of material in the professional literature on the drug's arousal of ESP ability. But there is a large body of first-person accounts of such, mostly unpublished although adequately witnessed and attested. The following appear in print for the first time:

J.L.C. is a man of average intelligence, has a moderate amount of formal education but only a passing interest in cultural matters, history or contemporary problems. He is in his late thirties and is of an easygoing, pleasant disposition. J.L.C. took LSD merely because it was suggested that he might like what it would do for him. His two companions, who acted as guides, had extensive and responsible experience in giving the drug and had had it several times themselves. Both were college graduates and were professionally involved in the liberal arts.

In the third hour of J.L.C.'s drug session, he suddenly began to exclaim that he was seeing "all kinds of things and people from the past." This was extremely vivid, and when asked if he himself was among the people, he replied with some anxiety, "Yes, I am the King of Belgium—yet I'm a Spaniard. There is a helluva clattering of wooden shoes! Joan's around too. She's my wife. But her name is something else—not Joan. Juana? I'm very concerned about the situation—everything. This was all a long time ago. I get it in the 15th century. My clothes look like that. But it is happening now."

Following the session, one of J.L.C.'s guides, vaguely recalled that J.L.C.'s "vision" had a basis in historical fact. Upon checking in various encyclopedias, it was discovered that King Philip I of Spain (1478-1506) fit J.L.C.'s description very closely, and that his Queen was Joanna. Philip had inherited the Netherlands (Low Countries) from his mother, Mary of Burgundy, and it was during his reign that the "Wooden Shoe Uprising" took place, after which he was held a "virtual prisoner" in Ghent for eleven years.

The chance that J.L.C. was familiar with this piece of history, even in schooldays, is remote. On the other hand, the various explanations that come to mind, if indeed the "hallucination" did not arise from shelved knowledge, are unmistakably psi m content. Was J.L.C. possibly King Philip in a former life? Might

he have been reading his guides' minds? Was he delving into Jung's collective unconscious? What else might explain it?

Another occurrence (but of a slightly different sort) which points very persuasively at ESP came about when a young man, R.H., with strong mediumistic abilities, took mescaline. During his session, he decided to visit a friend who lived in another part of town and telephoned to announce that he and his guide were on their way. Before their arrival, however, his hostess received an unexpected visit from a guest she knew very slightly, a person completely unknown to R.H.

Hardly was R.H. in the door, before he asked the guest if he were a sailor. The guest replied that he was a writer, but that he was "fond of sailing as a hobby." Not long after, R.H. rose abruptly and said that he had to go. But within the hour he telephoned his hostess, informing her that he had left because of her caller. He said he had "seen" the man on a boat, and had gotten a definite impression that her visitor had murdered someone there.

His hostess was very disturbed and rather angry that R.H. would say such a thing and immediately promised she would check with mutual friends to see what she could find out. Three of those she consulted reported that the "sailor" had been aboard a boat several years before when someone had "mysteriously" disappeared, never to be seen again, and that at the time the finger of suspicion had been on the man in question, although nothing was ever done to determine whether he had been responsible.

The third example comes from a painter who described, when taking LSD for the first time, a beautiful painting which he was "seeing":

The painting, in very intense, sparkling color, was of an unusual fishing vessel, rather like those which might be found in the South Seas, yet different. The waters on which the boat drifted were "of marvelous luminosity" and the nets "glistened with jewel-like drops." The side oars were of an odd shape, such as the painter (S.R.) had never seen before, and the sun pictured was of a color which he "longed to duplicate" as soon as he could get to his paints. After the drug wore off, S.R. still thought the painting "very remarkable," making a preliminary sketch of it some days later.

About six months thereafter, S.R. was in the market for a house, and upon being shown through one up for sale, saw in reality the painting he had "seen" under LSD. It hung in the owner's living room, and when S.R. inquired about the artist, he was told that the woman who had painted it "had died in May, just after it was finished." Startled, S.R. asked for the exact date of the artist's death, and learned that it was the very same day of his first LSD session, during which the vision of the painting had come to him.

The next episode might suggest "coincidental hallucination" or reincarnation. It occurred early in an LSD experience and is told by H.S., a young businesswoman:

"All of a sudden I had a great intuitive flash of familiarity and a scene created itself, a 19th century European court, only for some reason it was assembled around a flight of steps in endless, fountained, formal gardens. I, myself, was off at some distance from the group of key figures and was kneeling among a group of petty officers of the military. As I stared toward the people in the foreground (the royal family), I experienced feelings of devotion, patriotism and of secret longing. This

was all directed toward the woman in the tableau, and I instinctively knew she was very far above me, was indeed my queen.

"The 'queen' was wearing a dress cut in the empire style made of white satin and midnight blue velvet, the folds of which fell gracefully about her splendidly formed body. She had very pale blonde hair and was wearing a small crown. As I looked at her, I realized it was Alfreda, my guide. 'Why, I know who you are!' I cried aloud, as if there had been some mystery about who she was before. 'You're that queen in that painting—the one they use for an ad for Courvoisier brandy! On the back of *The New Yorker*.'

"Alfreda tells me that she exclaimed, 'How's that again, honey?' but I did not know that she had—or why she had—until moments and visions later....

" 'All right, all right,' Alfreda was saying, 'but just tell me again about that queen in the ad on the back of *The New Yorker*.'

"For an instant the vision from the 19th century painting came back, then it flashed off. But I remembered it all. 'Did I tell you how stylized that painting of you was?' I asked. 'You were much more beautiful than that, actually, so much more delicately made, so graceful, and you had such infinite gentleness, kindness. And your clothes were so different from those he had you wearing in the painting. Blue and white—'

"'Good Lord,' she said sharply. 'How on earth could you have known about this? Who were you?'

"'I was a soldier. A Prussian officer, I think. A member of the petty nobility. And you were my queen, and I loved you too. Maybe had a secret crush on you—I felt all of that very strongly.'

"Then Alfreda told me the astonishing secret about herself which I had stumbled upon: all of her life she had identified with the Prussian Empress Louise, the 'queen' in the painting I had seen. Alfreda told me that her clothes when a child had been copied from those Louise had worn as a child, and when Alfreda married the only piece of furniture she had chosen to take with her from her ancestral *schloss* in Prussia was the *escritoire* which had once belonged to the empress Louise.

"There was a good basis for Alfreda's avid interest in this person. (Louise's chief claim to fame was that she had tried to negotiate with Napoleon, standing in for her husband who lacked the wits and diplomacy to do so, in an effort to save Prussia. The painting in question, a detail of which is used by Courvoisier as an ad, was titled 'Napoleon at Tilsit.') Alfreda was distantly related to Louise and Alfreda's grandmother headed a group of several hundred German noblewomen who were curiously dedicated to the memory of the Empress and who had formed a Louise 'cult' which they pursued as regularly as any ordinary club interests. Just why this was, Alfreda did not quite know and agreed that it was rather extraordinary, for none of the women so busily keeping Louise's memory alive could have possibly known her.

"Yes, as I say, there was a basis for Alfreda's interest in the Empress Louise, but there was none whatsoever for my having seen the depth of this interest. I could not have known that all Alfreda's life she had secretly thought of herself as this

woman. My friendship with Alfreda was a fairly recent one; I was an American, had never been to Germany, had no interest whatsoever in the minutiae and obscurities of German history. Further, when I saw the Courvoisier ad again some weeks later, I was more baffled than ever that I had ever made the connection between Alfreda and the Empress. Aside from being German, blonde and amply proportioned, Alfreda in no way resembled the woman in the painting. It was curious, too, that I had seen her costume as blue and white, which Alfreda verified as having been Louise's favorite color combination, for in the painting she was dressed in white and wine red. When I had said the painting therefore was 'stylized' compared to the 'real' thing—at least 'LSD real'—I was putting it lightly indeed. There was simply nothing in the painting to which I could have consciously linked Alfreda."

Other Dimensions:

Current scientific research seems to be as varied and complex as are the countless forms of living organisms. The breakthroughs now being made strike awe in their observers, however different the areas of scientific inquiry may be. Today's exciting achievements no longer come mainly from the mechanistic, simplistic concepts of classical mathematics and physics, but are being made in biology and genetics, and in the study of the mind. In Washington and the Virgin Islands scientists are trying to communicate with dolphins. In California dozens of laboratories are working with electrical brain implantations, with "sensory deprivation" and with experiments to change genes. Throughout the country researchers are studying RNA, DNA, Cylert, acetamido-benzoate and a host of other chemicals with which they hope to probe the mysterious labyrinths of human mentality.

In all of these simultaneously conducted studies, we seem to stand on the threshold of discovering how to revolutionize life as it is now known. A revision in man's total concepts, so drastic as to have no parallel in history, seems to be in the offing. Much of this has been stimulated by the knowledge turned up through LSD, and more seems probable. This is because the simple ingestion of the chemical clearly demonstrates that other realities do indeed exist with their own boundaries, logic and laws. As Dr. John Beresford believes, the discovery of LSD may be "the most critical event in human history." "Take it once," he says, "and you know that all you've known about consciousness is wrong."

In the past, virtually everyone has shared the same idea of ordinary consciousness, the major differences lying in individual interpretation of experience. Should the use of LSD become widespread, the present concept of consciousness may seem absurd and constrained. Like other writers on psychedelics, Mary Barnard poses interesting questions in her article, "The God in the Flowerpot" (originally published in *The American Scholar*):

When we consider the origin of the mythologies and cults related to drug plants, we should surely ask ourselves which, after all, was more likely to happen first: the spontaneously generated idea of an afterlife in which the disembodied soul, liberated from the restrictions of time and space, experiences eternal bliss, or the accidental discovery of hallucinogenic plants that give a sense of euphoria, dislocate the center of consciousness, and distort time and space, making them balloon outward in greatly expanded vistas?

As yet, no verification of the historical influence plants have exerted upon man's theological systems has been made, though many scholars, such as Robert Graves and the Wassons, believe that psychedelic mushrooms and other plants were used in Eleusis and other holy centers, where they were the basis for many "miracles" and initiation into "the mysteries."

In this regard, Mary Barnard goes on to say:

Perhaps the old theories are right, but we have to remember that the drug plants were there, waiting to give men a new idea based on a new experience. The experience might have had, I should think, an almost explosive effect on the largely dormant minds of men, causing them to think of things they had never thought of before. This, if you like, is divine revelation...

Looking at the matter coldly, unintoxicated and unentranced, I am willing to prophesy that fifty theobotanists working for fifty years would make the current theories concerning the origins of much mythology and theology as out-of-date as pre-Copernican astronomy.

All these speculations are open to debate. Because they are so unusual to the accepted order of things, we approach them with caution and mistrust. Dr. Humphry Osmond, speaking of an LSD experiment involving "a major, witnessed thought transference," tells of a reaction which, typically, brings such experimentation to an end: "Unluckily we had no recording equipment and our observer became acutely panicky because he said it was uncanny."

Some investigators, however, do follow through and contribute invaluable evidence. Christopher Mayhew, a Member of Parliament and a former journalist, offered to take a psychedelic drug at his home with BBC television cameras on hand to record his experience. He wrote a full account of his "Excursion Out of Time" for the *London Observer*, which begins as follows:

What happened to me between 12:30 and 4 o'clock on Friday, December 2, 1955? After brooding about it for several months, I still think my first, astonishing conviction was right—that on many occasions that afternoon I existed *outside time*.

I don't mean this metaphorically, but literally. I mean that the essential part of me... had an existence quite conscious of itself... in a timeless order of reality outside the world as we know it....

The television camera could not photograph Mayhew's mind, of course, so he felt it necessary to explain at length what he thought had occurred to him. His experience, which began with color hallucinations, soon gave way to a preoccupation with the very strange "behavior" of time: it kept slipping out of sequence—i.e., he would see a cup at his lips before he actually removed it from the table—and he could never tell how far along he was in the experience. His watch did not help either, for, although his eyes registered various clock times, the hours were not in proper sequence and he would see two-thirty after he had already seen three o'clock. It was only the increasing recurrence of certain objects which had arrived late in the experience that enabled him to realize that the session was coming to an end.

Time played another even more extravagant bit of seeming magic when it sent

him into another dimension where "I would be aware of a pervasive bright pure light, like a kind of invisible sunlit snow...." for an extended period of time:

I would become unaware of my surroundings, and enjoy an existence conscious of myself, in a state of breathless wonderment and complete bliss, for a period of time which—for me—simply did not end at all. It did not last for minutes or hours, but apparently for years....

For several days afterwards, I remembered the afternoon of December 2 not as so many hours spent in my drawing-room interrupted by these strange "excursions," but as countless years of complete bliss interrupted by short spells in the drawing-room ...

On the first occasion when I "came back" in this way from an excursion I assumed that a vast period of time had elapsed and exclaimed, in astonishment, to the film team: "Are you still there?" Their patience in waiting seemed extraordinary: but in fact, of course, no time had elapsed, and they had not been waiting at all....

These "time phenomena," unheard of as they are in normal everyday consciousness, seemed totally convincing—not "hallucinations" but another part of reality. Mayhew, like others who have used psychedelics, is definite on this:

The common-sense explanation is that since events in our drawing-room actually happened in a normal time sequence (with plenty of witnesses, including the camera, to prove it), I just *couldn't* have experienced them in some other order, so I must have merely *thought* I did—I was deluded.

For anyone else than myself, this must be easy to believe; but for me, it is impossible. I am not—I repeat—saying that events *happened* in the wrong order, only that *I experienced* them in the wrong order. And on this point I cannot doubt my own judgment.

Mayhew's account is of particular significance because it has been so well documented and comes from such an estimable source. The drug was administered by a foremost authority, Dr. Humphry Osmond, given to a distinguished man, and witnessed by reliable observers. There are countless persons who claim to have had equally memorable experiences under the drug, but since these did not occur within the framework of scientific experiment, they cannot be recorded "officially." As they did not have acceptable documentation which could be demonstrated, they have remained in private, hearsay circulation, or at best they have been published in apologetic, confessional tones. Authoritative accounts by people of recognized integrity (Mayhew, Watts, Huxley, Smith and Pahnke), but outside the field of psychotherapists, lend credence to the claims which the ordinary enthusiasts make. Taken together, they tend to remove some of the ill-repute surrounding the "drug experience." Thus the limits of the framework of acceptability are being expanded.

In the past the average layman has had little more than intimations of mystical reality. He was frightened of it and turned away. Now, however, the prospect is different since the inexplicable experience seems to be controllable. With familiarity, the frightening contours will diminish. Religious psychologist Walter Clark, a professor at Andover Newton Theological School, says, "These drugs present us with a means of studying religious experience ... No psychologist of religion can afford to be ignorant of them." Huxley goes even further:

For an aspiring mystic to revert, in the present state of knowledge, to prolonged fasting and violent self-flagellation would be as senseless as it would be for an aspiring cook to behave like Charles Lamb's Chinaman, who burned down the house in order to roast a pig.

Sixty-five years ago, William James, commenting on his experiments with nitrous oxide, pointed out that normal, waking consciousness is only one special type of consciousness and that "parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different." James's unshakable conviction was that, by the application of "the requisite stimulus," these forms of consciousness "are there in all their completeness... At any rate, they forbid a premature closing of our accounts with reality."

With LSD and the other psychedelics it now appears that we may have a potent form of "the requisite stimulus." However, our situation with these drugs and consciousness can be likened to man's back-door approach to a workable digit system—we are still using the clumsy Roman numerals, serviceable but inefficient. It may be that as the benefits of LSD become better recognized and more people become adept at translating themselves into new systems, we will wonder how we ever made do with our lives as we know them today. Alan Watts says in this regard, "The end of this century may find us, at last, thoroughly at home in our own world, swimming in the ocean of relativity as joyously as dolphins in the water."

Footnotes

1. Professor Smith gives a useful definition: "By a religious experience I mean one which elicits from the experiencer a centered response, a response from the core of his being. As his being includes thoughts, feelings, and will ... a religious experience triggers in the experiencer a triple movement: of the mind in belief, of the emotions in awe, and of the will in obedience. A religious experience is awesome, convinces the experiencer that its noetic disclosures are true, and lays upon him obligations he acknowledges as binding."

2. *Time* magazine, in its September 23, 1966, issue, devoted half of its "Religion" section to "WORSHIP—Mysticism in the Lab," and commented favorably on this particular experiment: "Most experiences of mystical consciousness have come only after hard work—Spartan prayers, meditation, fasting, mortification of the flesh. Now it is possible, through the use of *LSD* and other psychedelic drugs, to induce something like mystical consciousness in a controlled laboratory environment...."

3. Alan Harrington's reaction in this respect is typical: 'to one who has practically never thought in terms of lotuses, reincarnation, stages of existence, etc., and who through the years has been irritated by the enthusiasts of Eastern philosophy, the *LSD* journey brought evidence of recurring personal death and rebirth. It made possible a vision of eternity not unlike those of Blake and Swedenborg."

Chapter VII. LSD and Mental Health

I had a vision, and I still have this vision, of mass therapy: institutions in which every patient with a neurosis could get LSD treatment and work out his problem largely by himself. Classical psychotherapy or psychoanalytical therapy is, of course, a costly procedure, and most people do not have enough money to undertake it; nor do we have health benefits to pay for individual psychotherapy. I hope that there will eventually be health insurance funds to pay for LSD therapy.

– Dr. C. H. Van Rhijn, *The Use of LSD in Psychotherapy*.

COMPARED TO OTHER public health problems, mental illness is a giant, half hidden in shadow. The statistics are appalling: an estimated 17 million persons in the United States suffer from some form of mental disorder; approximately 700,000 patients are in mental hospitals; over a quarter of a million enter mental institutions each year; an estimated 3 billion dollars is spent annually in costs to combat this problem; and to aid the mentally disordered there are *only 12,000 psychiatrists practising in the entire country*. Apart from the lamentable statistics, the unknown quantity of personal tragedy involved is impossible to assess. For every person suffering from mental illness, there are many others who are directly affected. The patients themselves are not simply maladjusted, unhappy people who nonetheless manage to function, but those who have little or no contact with reality, despite longing and strenuous effort. A visit to a mental hospital confirms this in a harrowing way.

The fact is that in spite of the isolation of the mentally sick from the community, once hospitalized, they are still very much among us, although virtually ignored. Few beside hospital personnel and visitors are aware of the agony and terror suffered by the paranoiac; by hearing voices; by constantly fearing imminent death; by feeling that a chair is a mortal enemy; by screaming incessantly and uncontrollably; by losing all memory; and by being locked up.

The steps taken in the last fifteen years in treating mental illness are large and impressive, coming, however, after centuries of unbridled growth of such disease. Inhumane treatment, bedlams, shock treatments, "snakepits," lobotomies and strait jackets are on their way out as a result of crusaders (such as Dorothea Dix, the Kennedy family and Albert Deutsch) and crusading organizations, such as the National Association for Mental Health; the widespread use of tranquilizers in treatment; increased hospital personnel; and more active public interest and awareness of the problem. For the first time in history there is sound basis for hope that mental illness can be controlled and that the disturbed individual may not be consigned for life to his sickness.

Encouraging as this may be, it is a mistake to think that the end is yet in sight. In *Action for Mental Health*, the most comprehensive and penetrating appraisal of present-day needs (resulting from a five-year study involving 34 agencies), the situation is sharply summed up: more than 50,000 persons die in mental hospitals every year, not including 8,000 additional homicides and 16,000 suicides. As for public concern:

The prevailing system, with few exceptions, has been to remove the acutely ill of mind far from the everyday scene—to put them away in human dump heaps.... The

facts so arouse a sense of guilt that, even within the mental health professions, we would rather not dwell on them.

Pointing in severe criticism at the current system which leaves mental care to the States, which "for the most part, have defaulted on adequate care for the mentally ill, and have consistently done so for a century," this report calls for a massive program to deal with the problem. "*Expenditures for public mental patient services should be doubled in the next five years—and tripled in the next ten. Only by this magnitude of expenditure can typical State hospitals be made in fact what they are now in name only—hospitals for mental patients.*" (Emphasis in original.)

In 1949, Albert Deutsch, after visiting two dozen mental institutions, wrote:

Most of them were located in or near great centers of culture in our wealthier states such as New York, Michigan, Ohio, California, and Pennsylvania. In some of the wards there were scenes that rivaled the horrors of the Nazi concentration camps—hundreds of naked mental patients herded into huge, barn-like, filth-infested wards, in all degrees of deterioration, untended and untreated, stripped of every vestige of human decency, many in stages of semi-starvation.

The writer heard state hospital doctors frankly admit that the animals of near-by piggeries were better fed, housed and treated than many of the patients in their wards. He saw hundreds of sick people shackled, strapped, straitjacketed and bound to their beds; he saw mental patients... crawl into beds jammed close together, in dormitories filled to twice or three times their normal capacity.... [Albert Deutsch, *The Shame of the States.*]

There is a tendency on the part of the public to minimize such reports because it is commonly believed that "miracle drugs," particularly tranquilizers, have worked all miracles available and that there is no longer need for serious concern about the mental health problem. Actually, this is not the case.

What has happened is that tranquilizers have made it possible to dispense with strait jackets, padded cells and other means of physical restraint. Also, these drugs and the energizers have made patients somewhat more accessible to psychotherapy, hence enabling them to be released in shorter periods of time than before. In New York State, which uses tranquilizers on a large scale, the average hospital stay has been cut from eight to four months.

When the patients return to their communities, they are able to obtain adequate maintenance therapy, primarily through prescribed tranquilizers and energizers. (Despite complicated side effects, the anti-depressants—monoamine oxidase inhibitors—are now being used in the treatment of over four million Americans per year.)

But for all this, hospital admission rates for the mentally ill continue to rise. Therefore, it is clear that these drugs now in use, and some three hundred others being clinically tested, are not solving the problem.

With LSD, however, the psychiatric profession for the first time seems to have a means for dealing effectively with some of the deeper problems of mental disease which elude the tranquilizers and energizers. Medical reports indicate that LSD dramatically reaches into the roots of the disorder, rather than merely disposing of the symptoms and easing the patient. In some cases—with catatonics and autistic

children, for instance—the therapist finds himself able to make contact with the patient for the first time since onset of the illness. As Dr. Gordon H. Johnsen^[1] puts it:

During the first two years of our work with these compounds, we were in doubt of their value... We now consider that they give us therapeutic possibilities in areas where we were formerly powerless. In fact these drugs are of such great importance in our psychiatric instrumentarium that we can hardly think of doing without them. Indeed, this is a great step forward in psychiatry.

In agreement with Dr. Johnsen, a high percentage of psychotherapists who have worked with LSD believe that the drug, in many ways, may be the answer to Freud's hope for a chemical which could exercise a "direct influence... upon the amounts of energy and their distribution in the apparatus of the mind"... and thus open up "undreamed-of possibilities of therapy." Throughout his writings, Freud repeatedly deplored the fact that there were no exact tools for direct dealing with the patient's deeper disorders, and he voiced hope that the future would see this need fulfilled:

We are here concerned with therapy only insofar as it works by psychological methods: and for the time being we have no other. Behind every psychoanalyst stands the man with the syringe. Psychoanalysis never claimed that there were no organic factors in the psychoses.... It is the biochemist's task to find out what these are.... So long as organic factors remain inaccessible, analysis leaves much to be desired.

When LSD was first tested, it was given to volunteers in the hope of inducing a temporary facsimile of psychosis that could be studied. At that time clinicians thought this to be LSD's sole function. Many teams of experimenters undertook such projects in the belief that by creating schizoid-like states under controlled conditions, they would be closer to a cure. After all, malaria, yellow fever, tuberculosis and diabetes, for instance, had yielded to medical science following the artificial production of the disease, and by analogy researchers around the world hypothesized that schizophrenia might yield in the same manner.

But this was not to be. First of all, it was discovered that the hallucinations produced under LSD were quite different from those of psychosis—for the most part they were visual rather than auditory. Also, it was found that certain drugs could terminate the LSD "psychosis" but were totally ineffective with natural schizophrenia

Even so, through these experiments great impetus had been given to the research on mental illnesses, and investigators began to pay serious attention to the possible biochemical basis of mental abnormality, studying serotonin, epinephrine, adrenaline, the "M" substance, nicotinic acid and adrenochrome.

Although the facsimile or "model" psychosis theory was eventually abandoned by most researchers, LSD was not. It was found that the drug did have an important place in therapy for, as mentioned previously, it "abreacts" the patient to early traumas, creates exceptional rapport between patient and therapist and, consequently, facilitates transference. In this regard, British psychiatrist Dr. R.A. Sandison, one of the first practitioners to recognize the potentials of LSD, made the following statement to some of his colleagues:

There are good reasons for believing that the LSD experience is a manifestation of the psychic unconscious, and that its material can be used in psychotherapy in the same way that dreams, phantasies and paintings can be used by the psychoanalysts.

In documenting this statement, Dr. Sandison gave evidence that the drug was, in his experience, a successful, safe treatment for intractable neurotics and that in other cases, such as the compulsive obsessive, the results were often spectacular.[2]

One reason why LSD has not been more widely used in therapy—despite its demonstrable effectiveness—is that it may have been "too effective." Highly excited reports, which by now number well over two thousand, have, as Dr. Buckman put it, "succeeded in antagonizing" much of the informed psychiatric opinion:

Many therapists were outraged because of this threat to their omnipotence. Many were justifiably concerned about the irresponsible use of a powerful drug on unsuspecting patients or volunteers. As a reaction to the early reports that the answer to the problem of mental illness was here, at last, there began to appear publications stressing mostly the dangers of suicide and psychosis, and accusing those who were using LSD of charlatantry and self-deception.

In actuality, any contra-indications of the use of LSD in treatment of mental patients are minimal when the therapist is thoroughly educated in the drug and its action. In 1960 Dr. Sidney Cohen undertook an extensive survey of psychedelic use to determine the nature of possible drawbacks. He wrote to 62 European and American investigators who had published papers on their work in LSD therapy. Forty-four replied with detailed data on the dangers of psychedelic treatment; the accumulation represented over 5,000 patients and 25,000 sessions covering a dosage range of from 25 mcg. to 1500 mcg.

In the survey, no serious physical complications were reported—even when the drugs were given to alcoholics with generally impaired health. (This was a somewhat unexpected result, since many of these individuals had diseased livers, a condition which previously it had been assumed would produce an adverse drug reaction.) There was also a surprisingly low incidence of major mental disturbances. Despite the profound psychic changes that occur while a subject is under the influence of LSD or mescaline, psychotic reactions lasting longer than 48 hours developed in fewer than 2/10ths of one per cent of the cases. The attempted suicide rate was just over 1/10th of one percent. Not one case of addiction was reported.

If this sampling of five thousand drug users is divided into two classes—the mentally sound volunteers and the mentally unstable—the results seem even more encouraging. Among those who had simply volunteered for LSD or mescaline experiments, major or prolonged psychological complications almost never occurred. In this group, only one instance of a psychotic reaction lasting longer than two days was reported, and there were no suicides. Among the mentally ill given the drugs, however, prolonged psychotic states were induced in one out of every 550 patients. In this group, one in 830 attempted suicide, and one in 2500 carried the attempt through.

In evaluating the statistics, it should be pointed out that at the time of the

survey (1960) the proper use of the drug in therapy was not well understood, and that at least some of the negative reactions were deliberately brought about, as many of the doctors were trying to produce "model psychoses" in their patients. Nevertheless, the statistics clearly showed that contra-indications to the use of the drug were lower than those normally encountered in conventional psychotherapy.

Since 1960, new LSD therapeutic techniques have been introduced and methods of administering the drug have been refined. These advances have resulted in further reduction of potential hazards. Dr. Hanscarl Leuner, an outstanding European expert on psycholytic therapy, has this to say about Cohen's report:

Cohen... showed very well how low the relative risk of the therapy is, if it is carried out responsibly by qualified doctors. Thus, we actually are threatened less by adverse results, or severe complications, than we had to assume at the start. Our experience has shown that this risk can be reduced practically to zero in a well-institutionalized therapy, as in our clinic. This holds for the activation of depressions and schizophrenic psychoses, as well as attempted or successful suicides.

Some of LSD's therapeutic unpopularity may be attributable to the strain put upon credulity by the use of the term "miraculous" in describing results the drug has brought about. Rauwolfia was synthesized in 1947 and chlorpromazine was manufactured in 1953; both were put into use almost immediately by physicians throughout the United States. The tranquilizers are far easier to understand in their action than are the psychedelics since they do not bring about any impressive or long-lasting behavior change. As long as the patient responds to the tranquilizers and uses them regularly, he maintains the desired well-being; should he become immune to them or give them up, he reverts. This seems reasonable enough. But with the psychedelics, change in the patient is often so radical that the ensuing case history, with its vivid content, may be viewed with suspicion by those who are unfamiliar with the field.

It bears repeating that many professional researchers who have made use of the drug feel that cure has come about through what is essentially a "religious" conversion. This explanation is in itself an excellent means for alienating those medical practitioners who are oriented to traditional therapeutic concepts. Consequently, when LSD therapists speak of their gains, they are inclined to confine themselves to the subjects of abreaction and transference, which fit conventional attitudes, rather than to refer directly to the suspect territory of the "mystical." Undoubtedly it is the "miracle cure" and "mystical" aspects that put many medical practitioners off and arouse their adverse criticism, regardless of how persuasive or elaborate the evidence. A recent, somewhat unconsidered AMA editorial reflected this when it urged that "Every effort should be made by the medical profession to block the use" of LSD and similar drugs.

A third problem which interferes with general professional acceptance lies in the nature of the claims put forth by practitioners; they seem to contradict each other, and often sound unreasoning and chaotic. Nowhere is this better illustrated than at the 1959 Josiah Macy Conference, where 26 experts on LSD therapy came together. The conflict, disagreement and confusion over the four papers presented made it clear that there were approximately 26 separate opinions on how LSD should be used in treatment. Dr. Charles Savage^[3] had this to say about the conference:

This meeting is most valuable because it allows us to see all at once results ranging from the nihilistic conclusions of some of the evangelical ones of others. Because the results are so much influenced by the personality, aims, and expectations of the therapist, and by the setting, only such a meeting as this could provide us with such a variety of personalities and settings.

At the present time, psychedelic therapy is still in an exploratory stage, with individual doctors favoring widely assorted techniques, dosages, drugs and drug mixtures. Over the past quarter century, Sandoz Pharmaceuticals spent over \$3-million in developing the drug and handed out sample doses of LSD to hundreds of reputable investigators. As a result, well over 40,000 patients to date have received the drug from a "variety of personalities" and in a variety of settings. The dosage range ran from 25 mcg. to 2,500 mcg. and was taken privately or in some cases administered to whole hospital wards. Some received only one dose; others had over 120. In most instances the drug was used as an adjunct to psychotherapy, but many patients were given it as a onetime treatment. Most investigators screened out psychotics or schizophrenics, but some did not and claimed surprising success in such cases. Most patients received the treatment from only one therapist, but a number of researchers believed better results obtained when treatment was given by teams of several persons. Among the varied techniques, hypnotism was used in conjunction with LSD; some installed nurses as "parent surrogates" for the patients; others encouraged their patients to "act out" aggressions during the LSD session by giving them objects to tear up, strike, etc. There were also doctors who depended primarily upon symbolic interpretation of familiar objects and universal insignia, as well as those who concentrated on dream material. Some used LSD alone; some combined it with Ritalin, Librium, Dramamine or amphetamines of several kinds, while others added one or another of the familiar "mind-changing" drugs as well as some of the lesser known such as CZ-74.

Just as the techniques and dosages differed in the extreme, so did the "variety of personalities" of the physicians guiding the sessions. Inevitably included were many who did not truly understand the characteristics of the drug's transformations and who, consequently, were inept. Tact, zeal and intuition are considered requisite in guiding a session, in addition to familiarity with the drug's action. That many "psychotic reactions" were attributable to the personality of some of the therapists is evident from the remarks of two doctors^[4] who have frequently supervised the administration of LSD:

We've also had psychotomimetic reactions in patients who were not psychotic before we gave them the drug. We have traced these reactions back to the effect of the attitude of the treatment personnel. We have been able to give the drug again and get a psychedelic reaction, after we have worked through with the treatment personnel what had caused the psychotomimetic reaction.

... there is already considerable evidence to suggest that the potential harm in the drug lies in its dramatic appeal to the sick therapist. I have wondered, further, if its repudiation by many is a function of too-limited experience and, in some instances, the therapist's need to control the rehabilitative process more closely than can be done under LSD.

Today there is a general agreement among LSD therapists that the drug is a superior instrument for treating the whole range of neuroses, or any similar disorders, which ordinarily respond to psychoanalysis. Typical reports seem to

indicate that even with severe problems only 10 or 15% fail to achieve any improvement. Hollywood Hospital in Canada, following up 89 patients for an average of 55 months, found that 55% had a total remission of the problem; 34% were improved; and 11% were unchanged. In Germany, at the University of Gottingen's Psychiatric Hospital, Dr. Leuner's results, independently rated, showed 76% "greatly improved" or "recovered" in patients with character neuroses, depressive reactions, anxiety, phobias or conversion-hysteria. And Dr. Ling states in an evaluation of his work at Marlborough Day Hospital in London:

An analysis of 43 patients treated privately in 1962, i.e., three years ago, shows that 34 are completely well and socially well-adjusted. Six are improved, one abandoned treatment, one had to leave for Africa before treatment was finished, and one failed to respond satisfactorily, so treatment was abandoned.

Such recovery rates speak so positively that even those LSD specialists who have definite reservations about the drug's use in therapy are, nonetheless, of the opinion that LSD should be used when accepted techniques have failed after a year or more, as long as there is high patient motivation for change. Dr. Donald Blair, an English consultant psychiatrist, says, for instance: "People who have had psychotherapy or psychoanalysis for some time, as much as eight years, and haven't gotten anywhere, do so with the drug; it does break resistance... You get neurotic patients who have been to numerous therapists, analysts, and they don't get better. Then they come to one of us who are using LSD and thanks to the effect of the drug, they do get better."

In using psychedelic drugs for psychotherapy, European doctors seem to be considerably more enlightened than American doctors, and until very recently there were no legal restrictions that made these drugs difficult to obtain. Now European laws are being tightened, too. In the United Kingdom, where once any hospital could buy and dispense LSD at its own discretion, and the drug was available to approved psychiatrists, new bills restricting LSD distribution have been passed by Parliament. Since these rulings, the black market there has grown and may soon be comparable to that in America; British research and therapeutic programs are now also curtailed. The same situation may eventually spread to the Continent, where psycholytic therapy has been widely available for ten years.

Based upon Leuner's successful work at the University of Gottingen, 17 centers using the psychedelic drugs in multi-session therapy were set up in Europe. Experience indicated that best results came about when the patient had had an average of 26.7 sessions. The average number of treatment hours for the doctor amounted to 55.5 per patient, in addition to about ten hours of pre-treatment and after-care. Sixty-five therapy hours per patient may seem a disproportionate amount of attention, but as Dr. Leuner explains it:

... keeping in mind that psycholysis is a causal therapy for most severe and previously incurable cases, to those resisting all other forms of therapy, including long years of psychoanalytic treatment, this expenditure seems slight. If we were to carefully assume that on the average our cases would have required 300 individual psychoanalytic sessions, our time expenditure is less than one fourth, completely ignoring the far greater effect. Furthermore, new indications such as sexual perversion, psychopathy and borderline cases can be treated.

Another advantage to LSD therapy is that the patient need not necessarily be institutionalized, even if his case is severe. Such therapy has the advantages of speed and intensity as well. Dr. Ling cites an illustrative example:

A senior executive of an international advertising agency who had had two years of analysis, four days a week, stated that he had derived more insight in his third LSD session than in the two years' analysis. As a busy man, he made it clear he was not going to spend "endless hours" between sessions in view of his failure to improve previously with one of the leading orthodox analysts in London.

As with traditional methods of therapy, one of the basic components of *psychoanalytic* LSD therapy is abreaction, i.e., the patient's recall of events in his life in which negative and threatening experience was dominant and never subsequently resolved. When such material is repressed, the individual's emotional and intellectual maturation may be stunted. Freud, in fact, was of the opinion that no symptoms of any kind were removable unless abreaction occurred. If these traumatic events also happen during critical growth periods in a person's life, their effect will be even more serious—and more elusive. This is particularly true when treatment is on the verbal level only.

In the successful session with LSD, abreaction is spontaneous and almost inevitable. In addition, this process can be elicited and abetted by means of "props," such as Panda bears given to the patient to fondle, hot water bottles, dolls, mirrors; and the creation of homelike atmosphere and practices such as reading children's stories aloud to the patient, tucking him in bed, "cooing," calling the patient by a childhood nickname, etc. Because the LSD experience produces vacillating states of past and present (or co-existing past and present), the patient can bring his mature viewpoint to bear on a problem that occurred in childhood; thus what might have heretofore seemed incomprehensible, unfair or cruel can—in the light of the LSD insight—seem perfectly natural or of no adult importance.

Abreaction, however, is only part of the story. Dr. Jack Ward has some discerning remarks to make which are pertinent here:

It is my conviction that in both the Psychodramatic^[5] and LSD treatment experiences the forces leading to growth are somehow concentrated in greater intensity than in other forms of therapy.... In both forms of treatment there is no room for the "as if" operation. In Psychodrama, if the protagonist, group or auxiliary egos are acting instead of living what they are doing, the session will be almost useless. If the converse is true, the session is very productive. In LSD there is no "as if" experience. One is not "like" something; one is. It is not as if one were looking at one's self; one looks at one's self. It is not as if one had a heart attack like that which killed father; one has it and so convincingly that on one occasion an empathic physician present felt the same acute physical symptoms himself....

.... the intense experiences of the LSD patient are basically common to all of us. This is probably the reason why the LSD patient feels that he has shared with the observers a basic experience even though he often has not spoken about it while going through it. It is obvious that everyone has an exquisite perception of the reaction of those about him when he is undergoing the effects of the drug. Negative comments often bring out paranoid reactions as in one patient who said to a physician who was his friend and who began to probe, "Your fingers are growing long and claw like. It's amazing how someone can change in one minute. I'm not going to answer anybody's questions from now on." More usual, if one has a skilled LSD "Audience," is the unexpected comment, "Thank you for being here and going through this with me."

Impressive in both techniques is the amount of spontaneity that human beings

are capable of under favorable conditions.... the individual is freed or forced to experience a great outpouring of feeling often far beyond his conception of his own emotional capabilities. Sometimes the patient becomes so overwhelmed by the unexpected extent of his own spontaneity that he experiences acute (fortunately temporary) panic because of his own "lack of control." However, such feelings are usually followed by a feeling of great peace, a result which is also similar to many successful Psychodrama sessions.

So far, the majority of successful reports on the treatment of mental patients with LSD are those which deal with neurotic patients who have had at least reasonable motivation to get well. There seems to be a tacit agreement among therapists that LSD will not be effective in the psychoses, and those practitioners who undertake LSD treatment of schizophrenics are often regarded by many as brave and/or reckless.

In general, it is true that LSD does not work particularly well with the patient whose mental derangement is well developed. It may, in fact, precipitate a worsened condition. Nevertheless, there are indications that those who have administered LSD in such instances have nonetheless obtained positive reactions that are impressive and worthy of broader consideration. Dr. Fred W. Langner, who has had wide experience with LSD, has used the drug effectively with severely disturbed persons whose disorder was preponderantly schizophrenic. His conclusions, after using LSD in over two thousand patient sessions, are that pseudo-neurotics and paranoid schizophrenics do not respond favorably, and may, in fact, suffer regression; but that schizoid personalities, whose egos are not too brittle, may through LSD have their first experience with "feeling." One of his patients said, "I know now that I never knew what people were talking about when they talked about feelings till I took LSD. I didn't know till toward the end of my second year of therapy that feelings could be good as well as

Dr. Edward F. W. Baker of Toronto has also found LSD "extremely effective" in treatment of acute psychoses. After he presented a paper on his work with schizophrenics and others, Dr. Savage commented:

I really admire Dr. Baker for his courage in using LSD with involuntional manic-depressives and paranoids. It suggests to me that perhaps we have been a little too fearful and timid in our approach. Have we been threatened by others in the hostile field with which we have been surrounded?

While many physicians are reluctant to give LSD to psychotics who are out of contact with reality, latest indications are that more will eventually come to agree with Dr. Savage (seeing that it is a matter of "bedside manner" with these badly regressed patients, and that trust and understanding in LSD application may be the *sine qua non* for positive results). It is clear now that spectacularly beneficial changes can be obtained, even in severe cases where prognosis has been poor. The present conflict of opinion closely resembles the earlier arguments concerning LSD and the treatment of alcoholics who had liver damage. Many were emphatic on the subject at the time and said a definite contraindication was a diseased liver. But when alcoholics—who had been abandoned as hopeless because of advanced liver deterioration—received the drug, it was found that no deleterious effects resulted.

Ironically, another reservation about the wisdom of giving LSD to the psychotically disturbed is fear that the initial jolt that the drug brings to the state of consciousness may so alarm the patient that he will become further disoriented.

This attitude, however, fails to acknowledge the fact that LSD's action resembles the psychotic state itself, and that the psychotic mind regularly wanders in and out of everyday reality. Consequently, the psychotic might actually be a more likely and appropriate candidate for this treatment than the average person, because he is already familiar with oscillations of consciousness and can more easily accept them.

It is to be hoped that a thorough systemization of sundry techniques and methodologies will soon be undertaken so therapists in the field will have a clearer picture of the directions being taken, their significance, and a delineation of future avenues of investigation. Such a clarification may prove of vital importance to the mental health movement.

Work with autistic children was also considered forbidden territory for LSD, but in the past few years research has broadened surprisingly—however quietly—and using the drug on autistic children is only one of the new areas which has come under LSD exploration. Casework has also been done with juvenile delinquents and potential suicides—and even with such unlikely subjects as dolphins.

Early in 1966, *The New York Times* picked up a story from the *American Journal of Psychiatry* concerning the LSD treatment of five-year-old twins who had almost completely withdrawn from human contact; this was the first case reported in a series of eighteen at the Neuropsychiatric Institute at UCLA. The twins, after receiving the drug, "markedly reduced their bizarre repetitive movements, their preoccupation with mechanically rhythmic activities," and indications were that for the first time they might be reached. As the *Times* reported it, "One reason why childhood autism has been so resistant to treatment is that its victims can make no contact or express any interest in the people who try to help them. There is little eye contact, no speech, lack of concentration on everything but mechanically repeated activities." This study was especially important not only because the twin boys became subjectively more accessible, but also because the procedure was witnessed by independent observers unaware that the pair had been given LSD. The *Times* report on this study was significant, for it constitutes one of the first accounts of such work to appear in a newspaper of wide circulation.

In the following case, which concerns an adult who had been institutionalized since childhood for retardation, the therapist took the drug along with the patient, and there was a psychologist present as an observer.^[6]

PATIENT: (Lying on cot) I haven't had the same opportunity as those outside. I had to learn by my surroundings... (Referring to the staff) Their expressions tell me what they think... (Referring to patients) The worst one to watch for is the quiet type. They can talk but won't talk...

THERAPIST: How would you feel if you were a whitecoat?

PATIENT: If I took a liking to a particular patient, I would not show this in front of the other patients. It is just the way you would treat your own children. You should not favor one over the other.

THERAPIST: Do you think that a lot of the patients here need help?

PATIENT: Not a lot of them, *all* of them... One little word of kindness sparks a whole new world of love... I would like to talk to you in 3 or 4 weeks, after the drug has worn off. Then compare what I say then and what I say now.... You people talking to me after 30 years is like the world coming to an end... Other boys feel this way. It is like a key is opening a door and the light is flowing in. And this means a great deal to me....

THERAPIST: When he goes through these gates, what do you think that he should do first?

PATIENT: He should get to know others. There is no return. Do not look back, go ahead... Find a girl who feels the same way you do and maybe get married... Why have you given me your time when nobody ever did before?

OBSERVER: How much is enough time?

PATIENT: Eternally... I don't know whether to laugh or cry ... Do you get the feeling of closeness as humans, instead of like man and patient?... If I get out, write and let me know when you have helped another patient...

At this point, the discussion turned to religion. The patient told the therapist that as a psychologist he should have a Bible in his office, which he did not.

PATIENT: I feel sorry that you don't know the Bible. You are never too old to learn and you'll never learn any younger. If you want to know the patients, read the 5th chapter of Matthew. Work out these verses, verse by verse.

OBSERVER: Unfortunately we can't do that.

PATIENT: (Shouting) *Can't or won't*. The truth hurts. I want it to hurt you as it hurts me... You have to give kindness in order to get it. You won't get kindness by poking somebody ...

Following this episode, the patient grew increasingly critical and verbally aggressive. Possibly this could have been avoided had the observer humored the patient about the Bible verses. (In the original report it was noted that one alert observer, visiting temporarily, did bring in a copy of the New Testament when the subject of religion was first mentioned. In any case, the session deteriorated from that time on and did not fulfill its original promise.)

At the same institution, another patient who was "opened" by the LSD treatment responded more positively. Like the patient in the previously cited case, he also seemed to enjoy himself at times during his LSD session. He responded with laughter, displayed intuitive ability and made some rather sharp observations.

The second case is especially interesting in that through the patient's LSD sessions, the therapist was made aware that such patients, although suffering from advanced mental disorders, may—within their virtually impregnable mental "fortress"—be far more alert and rational than is generally assumed. If this is true, it becomes obvious that great care must be exercised in dealings with such patients, for it may well be that they are so oriented to minutiae that even an inadvertent blink of the doctor's eye can destroy trust that has been established and close the patient up once again. "These are human beings," the therapist remarked, "not vegetables."

As a result of this particular session, the therapist reported that he has gained a number of other insights as well. He found the patient's response to religious material and to music indicative that much more daily attention should be paid to these interests and that a music therapy program might be of considerable benefit to such patients.

Additionally, the therapist stated that this case presented, in a new light, the importance that work and doing a job successfully has for these patients. It became apparent that rotating jobs for the patients was ill-advised. Continuing on the same project helped the patients define themselves and establish at least an island in reality. Work therapy was the institution's primary means for helping the patients pass time, yet as a result of this patient's LSD session, the doctor realized that mere employment was an inadequate answer to the patients' needs. The doctor was able to see that the patients would benefit from exposure to the same diversions as those found in life outside the institution:

Once these people are oriented to outside living and are trained in specific skills which they can offer the community, they must not be tossed out of the institution like a man swept off of a ship into the raging sea. They need to feel the security of companionship while in the new environment—to learn to share the pleasant experiences of Christmas, Easter, Thanksgiving, Mother's Day, Father's Day, birthdays, picnics in the park, and all those little things which give value to living. It is not enough to train them for a job—this is only a part of the outside world, a very essential and important part, but only a part of the whole.

It is not enough to have a social or guidance worker drop around to see how you are doing occasionally—these people need real love and understanding, the love and understanding which seems to come through LSD. Maybe it is an artificial way of achieving it, but if it achieves the end of a fuller life, then this, in my opinion, is good.... If LSD has brought this idea to a more prominent place in my thinking, then although it may have its drawbacks, it is beneficial—at least for me.

If all nursing staff was administered one shot of LSD under suitable conditions, we may have the growth of a new approach to the mentally handicapped, an emptying of our overfull garbage cans.

Repeatedly the "need for love" is stressed by LSD therapists. At the Amityville LSD Conference, for instance, the "plea for love" was made 60 frequently that the moderator, Dr. Frank Fremont-Smith, commented on it:

It is a great advance to have people who are courageous enough in a scientific meeting to speak of love. I am delighted... It is crucial.... But for doctors to admit they have to give love of the appropriate kind, as described by Dr. Kramer, to their patients is something we are afraid of. Because of the suffering of patients and the call upon us as medical students for a kind of love that we don't know how to manage, we don't know how to put it in the right frame of reference. We have had no training in this respect at all. We tend, rather, to build up our defenses against it.... We have to make it respectable in the nursing profession, in the medical profession, and in the whole therapeutic team. The appropriate way to manage an expression of love is not only highly respectable but absolutely a demand.

One of the most unusual bits of evidence suggesting that LSD can create affection and end alienation is to be found in the work Dr. John Lilly and his

associates have done with dolphins. An experiment conducted in the Virgin Islands included a female dolphin who had been accidentally injured and thus had developed a phobia for human beings that lasted for two years, i.e., until she was given 100 mcg. of LSD. Prior to that she had remained on the far side of the pool, remote and isolated. Given LSD, she proved a particularly interesting subject for Dr. Lilly, one of many scientists experimenting with dolphins (because of their superior intelligence) in an effort to "communicate" with them in their language and ours.

Forty minutes after the dolphin's LSD injection, she approached Dr. Lilly and looked him in the eye for ten minutes without moving. This reaction was exciting because it was totally without precedent on her part. To test her further, Dr. Lilly began to circle the tank—and she followed him right around the edge. When an assistant took over, the dolphin followed him also. Now she approaches Dr. Lilly to within five feet instead of maintaining the twenty-foot distance she had kept between them previously.

One English case-worker who learned of this response, Mary S. Wicks, likened it to her own experience in working with delinquents and others whose reaction to past experience had rendered them incapable of trust and mutuality:

I know from... working with these people for years, who never give in, and who always hit back at society, and I have had the same experience you had. After one or two treatments with LSD they are feeling for the first time that they are actually relating, and that it is possible to get near someone, and that it is all part of the process of loving—and then being able to accept love.

Among those most alienated from the rest of humanity are the incipient suicides. According to statistical prediction, some 20,500 Americans this year will elect to die. This group presents an especially baffling mental health dilemma because often there are no warning signals that suicide is contemplated. However, LSD has been known to identify latent suicidal tendencies and alleviate them. Such instances may be found throughout the LSD literature.

The majority of doctors who use LSD in practice are exceedingly cautious in treating known potential suicides because there are on record a number of cases in which the drug may have actually pushed the patient over the edge. In fact, this is one of the few areas in the LSD controversy where specialists are in general agreement. Yet, at the same time, such contraindicant persons are known to have responded well to the drug when it has been given in instances where histories of past suicide attempts have been concealed from the therapist. Dr. Baker, for example, in discussing a suicide case he had treated also mentioned four other patients who were suicidal (and had, in fact, been in barbiturate coma when admitted to his hospital), who later, after LSD, lost their suicide drive. In the case where an actual suicide had occurred, Dr. Baker said that he did not know whether it could be ascribed to the LSD interview which had taken place two weeks earlier, to the patient's schizoid personality or to other unknown factors. Dr. Cohen, when asked to compare LSD-induced suicide with that brought about through the therapeutic use of other drugs or other forms of treatment, replied:

The comparison can't be made. If a group of potentially suicidal patients has any kind of therapy, a few will commit suicide, and many will be rescued. If a drug is involved, it will be of less importance than the skill, alertness, and devotion of the therapist.

In explaining how LSD has upon occasion helped to subvert suicide, two rationales are generally given. The first focuses upon the drug's ability to produce a state of euphoria at the same time it creates the fantasy of death and rebirth—which together can replace and satisfy the suicidal urge. Some people seem to feel attracted to death by suicide from early childhood, and in such cases there is as a result good theoretical justification for the LSD experience.

One example of such a case occurred when Masters and Houston were conducting their research. It concerned a businessman in his late forties who had definitely decided to kill himself and who took LSD as a last resort. However he did not mention suicide to his guide either before or during his session. Even after the drug began to take effect, he gave no sign that anything out of the ordinary was happening to him except when, for a while, he assumed the foetal position. Only two weeks later did the subject confess his chronic suicide compulsion, stating that previous treatment with various therapists had actually intensified it. But after taking LSD, he found himself free of his depressions. During his session he felt as if he had died and been reborn, and consequently no longer needed to kill himself. Here are the subject's own words, describing his feelings before and after:

It was absolutely essential that I die. It was not the depression alone that created this urgent need within me. I had lived with the depression for years and while it was extremely painful it was not beyond my ability to endure. No, there was something else that I cannot explain beyond saying how I felt. There was this inescapable and irresistible feeling that I *must die*. I am absolutely certain that had I not "died" in the LSD session I would have had to die in some other way, and that could only have meant really dying. Committing suicide, destroying myself, as I surely would have done.

A second way in which LSD seems to eradicate suicidal promptings is to bring forth long-repressed death wishes which might have tragically surfaced in dramatic fashion. One of Dr. Sandison's patients, who was in a state of depression, describes her experience:

I had the sensation... of a snake curling up around me... I then began to see serpents' faces all over the wall—then I saw myself as a fat, potbellied snake slithering gaily away to destruction. I felt horrified and thought, "Whose destruction?" I then realized it was my own destruction—I was destroying myself. I seemed to be having a battle between life and death—it was a terrific struggle, but life won. I then saw myself on the treadmill of life—a huge wheel was going round and round with hundreds of people on it. Some were on top going confidently through life, others were getting jostled and trodden on but still struggling to go on living (I saw myself as one of these people) and then there were the others who just couldn't cope with life and were being crushed to death in the wheel. I had another realization of how I was destroying myself—by carrying on this affair with this married man.... I knew it must cease and knew that I must never see him again.

It is clear that in the case just cited the problem centered in a drive toward self-destruction, but it took an LSD session for these impulses to emerge; all that was specifically known before was that this patient was "deeply depressed"—a diagnosis which might never have been understood in enough detail, even with lengthy treatment under ordinary analysis.

Sometimes when LSD has not been used for therapy itself, analysts have employed small quantities of the drug as a diagnostic tool. Prior to actual treatment, as an exploratory measure, the candidate was given a sample dosage, along with standard psychometric tests to establish the nature and depth of the patient's disorder. This served to clarify in the therapist's own mind the nature of the patient's problem—and the patient himself, gaining insight under the drug, became more cooperative. One particular patient who had been oblivious to all of her symptoms, cried out, during her second diagnostic LSD session, "I am a sex maniac," much to her own astonishment. Her therapist, Dr. Baker, commented on this outcry and the relation it bore to her "gun-phobia," for which she had entered treatment:

[It] brought her to realize the male genital symbolism involved (you must believe that this was not suggested by the therapist). At the same time she realized her own marked, hitherto repressed, genital sexual drive.

LSD has proved useful, too, in determining whether certain homosexual patients have such a deep-set disorder that their only hope is to accept it, or whether the condition can be corrected and the patient's life situation thereby brought into normal focus. This prognostic ability of LSD also applies to neurotics; the drug helps the therapist gauge the patient's amenability to psychotherapy.

Dr. Johnsen on this subject says:

If we get sexual perverts, for example, we may question what kind of treatment to give them; we want to find out a little more about them. We could use three or four weeks finding out, but we shorten that and say we will try if we can find out more with one or two LSD sessions. We use small doses then. We find that the symptoms are clearer; they are willing to speak more openly to us; we can get a clearer picture of the diagnosis. We have used it in that way to save time.

A second indication for limited LSD use is in the termination of regular analytic treatment. LSD will be administered in small doses when the therapy is nearing its end to bring about a clarification and emotional summary of the preceding gains. It may also bring to light any important material that has been overlooked. Just as in technical and creative problem-solving, LSD seems to synthesize and provide a fuller understanding of stored-up intellectual matter previously apprehended primarily on a verbal level. It forces an emotional crisis in those who have over-intellectualized, and makes their cure sounder, on an unsuperficial level.

That LSD can benefit others beside the patient involved was indicated earlier in speaking of what therapists have learned of "feeling the psychotic experience" instead of simply witnessing the performance from the outside. Through clearer understanding of the schizophrenic process, valuable and entirely new tests have been devised, based upon a closer look at the details of mental disorder, unavailable before. The Hoffer-Osmond Diagnostic Test (the HOD Test) explores the experiential world of the schizophrenic, and though it is a crude instrument, it is unexpectedly effective. An ex-schizophrenic said of the HOD Test, "I wish you had had this test when I was ill. I would have known you knew something about my illness."

And, as might be expected, artists and other creative people have contributed their personal psychedelic findings to the drug's growing body of literature at the disposal of the clinician. Henri Michaux, the distinguished French painter-poet,

used his experiences with mescaline, psilocybin and *cannabis* to picture for the layman the difficulties and problems encountered by the mentally deranged. In the "Chasm-Situations" section of his book, *Light Through Darkness*, and in the "Experimental Schizophrenia" section of another volume, *Miserable Miracle*, he vividly describes what it is like to be a "model psychotic." His work is of great value to psychologists and medical students.

Perhaps the outstanding instance of creative problem solving lending itself to therapeutic implementation occurred when Kyoshi Izumi, a prominent architect, was asked to design a mental hospital in Canada and decided to take LSD in search of better insight into the problem. In his words:

Psychiatrists talk one language and I talk another. They knew what they wanted but someone had to translate their wishes into architecture. To me there was really no other way. If I were to really understand the fears and problems of the schizophrenic, I would have to look at things the way they did.

Consequently, when he took LSD, Izumi paid extensive visits to old mental institutions in an attempt to see them through the eyes of derangement. He found himself terrified by literally dozens of standard hospital accoutrements and features which had always been taken for granted as adequate. The tiles on the wall glistened eerily, thereby projecting hideous fantasies that sprang at him from the cracks.^[7] The recessed closets seemed to yawn like huge, dark cavities, threatening to swallow him alive. The raised hospital beds, too high for a patient to sit on and at the same time touch the floor, were like crags jutting out over abysses. There was no privacy, and the time sense was nil, due to the absence of clocks, calendars or any other measuring device which might help a patient find his bearings. The bars on the windows were a constant reminder of incarceration. But worst of all were the long, endless corridors^[8] leading into more of Nowhere which, nevertheless, had to be traversed.

After his LSD insights, Mr. Izumi was able to design what has been called "the ideal mental hospital." The first was built in Yorkton, Saskatchewan, and five others have been modeled upon it elsewhere in Canada. There is a similarly-inspired hospital in Haverford, Pa., and because commendation has been made for this outstanding architectural advancement by the Joint Information Service of the American Psychiatric Association, it is possible that the present outdated hospitals will give way to new ones resembling Izumi's designs.

The Yorkton hospital consists of small, cottage-like clusters of rooms, thirty to a unit, joined together by underground passageways. Seen from the air, the entire structure resembles a Maltese cross.^[9] There are many windows, low and unbarred, eliminating the old, dismal barnlike aspect of mental hospitals. The walls are painted in pleasant, flat colors, and each patient has his own room in one or another of the clusters, rather than a bed in an austere, nearly bare ward. The beds are low to the floor, and the rooms are furnished with regard to making it easier to define the floor as a mere floor, not a pit. Also, the furniture is comfortable and not unlike that with which the patient is familiar at home. The closet problem has been solved by installing large, moveable cabinets which the patient can clearly see possess both a back and a front. Clocks and calendars abound, while floor tiles are sparingly used. The emphasis throughout puts patient needs foremost, without sacrificing utility. Izumi's ingenious designs for mental hospitals are monuments to humanitarianism, making it clear that LSD can be not just a "mind-or consciousness-expanding" drug, but a "conscience-expanding" one as

well. For so many centuries the doors to compassion for the mentally ill have been closed, barred by fear, superstition and misunderstanding. One doctor [Dr. Savage], who had thought himself reasonably kind and understanding, made an explicit statement regarding the therapeutic and humanitarian implications that have flowed from experience with LSD:

First, I would suggest that we be more alert for the early onset of schizophrenia, which is commonly accompanied by strong feelings of unreality and perceptual distortions. Very often the schizophrenic makes early appeals for help, often repeatedly calling his friends or his family, yet he is so blocked that he does not get his message across. Such patients make frequent appeals to the doctor.... I believe that if we can recognize them at this point and somehow reduce the level of anxiety, we can materially impede the perceptual distortions and the rapid disintegration of the ego....

Second, I would like to suggest that our treatment of the acute schizophrenic reaction is all wrong. At a time when the schizophrenic is desperately trying to hold on to some vestige of reality, we do everything in our power to destroy his hold on reality. We take him from his home, to a police station; from there to the emergency hospital, then to the admission ward, and finally either to the treatment ward or to the mental hospital. We cloud his sensorium with soporifics and shock, dealing a blow to his grasp on reality. We isolate him, putting him in a quiet room—as unreal an environment as one could ask for. We change his doctors and nurse; every eight hours a new shift comes on and several new faces appear.... The talking is important, but more important is the presence of another person, whom he can learn to trust and whom he feels is capable of understanding. I think that during an experience when time is meaningless, to have the attendant disappear for prolonged intervals is devastating. As one subject with LSD put it, "Your physical reality disappears, and then your body disappears, and you have only another person and something gets between you and the other person, and you're cut off from the only thing that can save you."

It is difficult to imagine "madness" with any sense of accuracy or intensity. One can imagine blindness, to some extent, by simply closing the eyes;^[10] one can empathize with another "normal" personality, regardless of sex or idiosyncrasies. But the acute derangement of the senses falls beyond the imaginative and empathetic powers of most individuals. This is, perhaps, the explanation for the paucity of "inside understanding" of schizophrenia and the general feeling of revulsion towards the insane. It may be that LSD is on the verge of changing all this. Just as the LSD therapists who worked with alcoholics found that the drug brought about cooperation both with the patients and among themselves, so those who have used psychedelics in treatment of mental disorder are finding the same rewards and gaining new and vital knowledge. Dr. Savage, as quoted above, has been joined by similar spokesmen in this branch of medicine. Dr Robert C. Murphy, Jr., in a paper entitled, "A Psycho therapist's Debt to LSD," gives the drug credit for enabling him to become better acquainted with his patients and to "give freely and unguardedly" of himself.

Appreciation for this progress in physicians' understanding of their patients (and the ensuing shifting of personal attitudes toward the patient) was recently voiced by Norma McDonald, a former schizophrenic: ^[11]

One of the most encouraging things which has happened to me in recent years was the discovery that I could talk to normal people who had had the experience of

taking mescaline or lysergic acid, and they would accept the things I told them about my adventures in mind without asking stupid questions or withdrawing into a safe smug world of disbelief. Schizophrenia is a lonely illness and friends are of great importance. I have needed true friends to help me to believe in myself when I doubted my own mind, to encourage me with their praise, jolt me out of unrealistic ideas with their honesty and teach me by their example how to work and play. The discovery of LSD-25 by those who work in the field of psychiatry has widened my circle of friends.

Today government restrictions make further LSD therapy and experimentation virtually impossible, no matter how grave the need or plentiful the evidence that LSD can be effective in reversing the upward trend of mental disease.^[12] (Of all the promising projects that were in process, only six conservative investigations into the area of human response have been allowed to proceed at this writing.) There is now a general despondency among LSD practitioners—who have the feeling that they have been needlessly "laid off" and will continue so until the governing agencies can come to grips with the nature of the disagreement and realistically define the role of LSD in therapy. Dr. Langner, for instance, asks, "Do I feel any patients are being denied an experience of significant value as a result of non-acceptance of LSD as a therapeutic tool?" and answers, "Yes, I do."

Footnotes

1. Dr. Johnsen of Modum Bads Nervesanatorium in Norway, has treated about 200 patients in 1500 sessions with LSD, psilocybin and CZ-74.

2. An account of Dr. Sandison's work with LSD can be found in *The Hallucinogenic Drugs and Their Psychotherapeutic Use* (C. C. Thomas, Inc.), edited by Crocket, Sandison and Walk.

3. [At that time] Director of Research, Spring Grove State Hospital, Maryland.

4. Dr. Kenneth Godfrey, and Dr. Fred W. Langner of Albuquerque, New Mexico.

5. Psychodrama is a technique developed by Dr. J. L. Moreno in which the "acting out" of problems in group therapy is the principal method used.

6. This work was carried out at the Saskatchewan Training School, Saskatchewan, Canada.

7. Dr. Humphry Osmond describes the effects of curious moldings and other standard hospital decorations upon the mentally ill: "When you look at them with LSD, you suddenly realize how very strange they are. In many mental hospitals there are literally thousands of square feet of nicely polished tiles on the walls, which act like distorting mirrors at a fun fair. These are illusion-producing machines *par excellence*, and very expensive ones at that. If your perception is a little unstable, you may see your dear old father peering out at you from the walls and you may become extremely frightened, particularly if it happens you didn't get on too well with him. And even if you got on very well, it would be a little upsetting, if he has been dead a few years."

8. Dr. Osmond also indicates how the mental patients constancy of perception

becomes disorganized when he looks down a long corridor: "One of the best places to see this without taking LSD is at the TWA Building at Kennedy Airport. In one of the octopus-like legs of that contraption, we have inadvertently produced a machine for destroying constancy of perception. You cannot be sure whether the people walking toward you, along those sinuous corridors, are dwarfs close by or normal-sized people far away. And in such a corridor, when people walk toward you, instead of getting closer (our normal way of describing things), they merely seem to become larger, and if you don't realize what is happening, this can be quite frightening. The architect who has become sensitive to these matters, quickly recognizes the need to avoid vague and strange spaces."

9. Such a design, influenced by psychedelics, may only coincidentally embody religious symbolism. Certainly, however, it has an intriguing metaphorical aptness. It is interesting to note that the Maltese cross was the symbol of the order of the Knights of Malta (Knights Hospitalers), who in the eleventh and twelfth centuries were noted for ministering to the sick and wounded.

10. The difficulties in describing unfamiliar colors even to those who have their sight are yet formidable. For instance, *Webster (Third New International, Unabridged)* is put to some pains to describe "onionskin pink": "a light brown that is stronger and slightly redder and darker than alean, stronger and slightly yellower and darker than blush, lighter, stronger and slightly redder than French beige; and redder, stronger, and slightly lighter than cork."

11. From *The Inner World of Mental Illness*, R. Kaplan, ed. (N.Y., Harpers, 1964)

12. Some of the evidence fits well in current psychological testing. Indications are, for instance, that the Rorschach, while not a very good guide to the selection of patients, does reflect LSD recoveries by a definite change in the approach to the test. "We think the Rorschach test definitely points to a permanent alteration of outlook in a significant number of cases," says Dr. Sandison, "and it will be interesting to see whether this correlates with permanent freedom from neurosis. Looking through the results, I have been impressed by the quite remarkable changes that have taken place in the tests over a period of 12 months."

Dr. Savage has this to say about the effect of LSD on the depression scale of the Minneapolis Multiphasic Personality Inventory: "I am coming more and more to the conclusion that LSD might be the treatment of choice with depressions, because according to MMPI data, at any rate, it moves the depression scale down further than anything else being used. It stays down; it doesn't come shooting right back up."

Chapter VIII. Guidelines to the Use of LSD*

* The "guideline" hints given here, it should be understood, are offered mainly for future reference—in the event that the present restrictions against use of LSD are loosened. The authors do not intend them as encouragement to illegal experimentation.

Since LSD is at present so easily available, despite the measures taken against it, many other people are likely to use it from a similar lack-of-knowledge starting point. I should say here that although I came through the experience unharmed, I now think my casual approach to the drug was extremely dangerous. I've taken many other drugs, including heroin and cocaine, and never experienced anything as powerful and overwhelming as the LSD experience.

— Tom McGrath, *Peace News*

EARLY IN 1966, Lawrence Schiller, a journalist-photographer for *Life* magazine, traveled around the country making a survey of LSD use and distribution. When he learned from a UCLA psychiatrist that 10 to 15 per cent of the University's students had taken LSD, he found it hard to believe. Even harder to believe was the fact—soon verified by Schiller—that the story was neither local nor restricted to the campus:

An eighteen-year-old girl in Los Angeles gave me the name of the president of a major corporation listed on the New York Stock Exchange. A seller gave me the phone number of an established sculptor. One boy introduced me to a major supplier and I confirmed that even the editor of one of the most respected magazines in this country admitted taking LSD.

Because *Life's* facilities for collecting and checking data are fairly exhaustive, Schiller's report has to be taken seriously. Bearing in mind that this investigation preceded the recent "psychedelic explosion," which has led to more experimental drug-taking rather than less, the implications of Schiller's findings are sensational: "I believe approximately four million Americans took LSD last year, judging from conversations with suppliers ... one out of eight take it at least every month."

While conservative estimates of LSD users still hover around the one million mark, it would seem that Schiller's figure is the more accurate because other sources of information indicate that metropolitan centers are inundated with LSD. (The Los Angeles Narcotics Bureau states that in the Southern California area alone more than a million doses are distributed per month.)

Of these millions of Americans purportedly taking LSD, how many know how to use it properly? How many understand the necessity for a sound pre-knowledge of the drug's action? Only a minute percentage, if one is to judge by the availability and sale of "guide manuals." Leary, Metzner and Alpert had sold fewer than twenty thousand copies of their book, *The Psychedelic Experience*, at the time Schiller made his survey—yet this is the only detailed guidebook, with do's and don't's for psychedelic sessions. In light of the importance of knowing what to expect of the drug, it is unnerving to realize that so many users were unaware of the manual, or did not think specific guidance necessary, or just did not want to spend five dollars to buy the book. The situation is somewhat analogous to home-doctoring with modern "miracle drugs" or such highly dangerous drugs as penicillin.

Now that the number of LSD users has mounted even higher, there are still no

more than half a dozen articles or sets of guidelines available and none is very satisfactory. *The Psychedelic Experience* is biased and unacceptable to the reader who cannot or will not accommodate himself to Eastern thought and mysticism. Houston and Masters devote a chapter of their book to the training of a guide, but it is generalized and offers little to the non-professional or the uninitiated. A fairly good short set of directions is available from Dwight Bulkley of Newport Beach, California, a layman who describes himself as a "reasonably responsible senior citizen, knowledgeable in these materials and in the technical sciences." And an article by Gary Fisher in *The Psychedelic Reader* supplements the foregoing, as it goes into the matter of dosage levels in some detail.

Set and Setting:

"Set and setting," a phrase coined by Dr. Leary, has become a permanent part of the psychedelic idiom because in very simple terms it gives the components which determine what happens in an LSD session. "Set" refers to the user's state of mind, his personality, his expectations and any memory material which may surface when he is under the drug. "Setting" is a term used to designate the environmental factors that might influence the occasion—other people present, selection of music, comfort, locale (indoors or out-of-doors), aesthetic background, amount of privacy, etc. By properly understanding the concept of "set and setting," it is possible to "program" a session for particular goals.

In the beginning of clinical research with LSD, reports from the experimental centers were perplexing because of their unevenness. This was especially apparent when representatives of several psychiatric disciplines got together at the Josiah Macy Conference and began comparing notes on their work with LSD. Some stated that not one of their volunteers ever wanted to take LSD again, whether the "setting" had been the office or the hospital. This came as a shock to those who maintained the exact opposite about their groups—all of their people had thought the experience rewarding. In time, because of this divergence of responses, it was realized that the drug itself played a minor role in determining the effect of the experience and that the salient point was to have a warm, supportive atmosphere.

Observers who have audited many LSD sessions and have seen the range of reactions that arise from various sets and settings claim that professional accreditation of the guide is no assurance of a productive experience; conversely, strictly regulated circumstances need not rule out a pleasurable "trip." Seasoned witnesses, however, do stress that the "warm, supportive atmosphere" contains the essence of the outcome and unless something close to "implicit trust" is felt by the experient for the guide, there is not sufficient "warmth" in the setting.

The session can be programmed by choosing a setting complimentary to the "set." As the mind under the drug works by an associative principle, cues from the guide and the environment are fed into the participant's stream of activated consciousness and can color it entirely. Thus, if the session has been planned with art appreciation in mind, the selection of appropriate "props" must be made with careful forethought. (If a decorator feels it important to understand "Action Painting," that is to say, it will not be appropriate to surround him with reproductions of Academic paintings simply because they fall under the heading of "art.") All sessions, of course, are "programmed," whether advertently or not, since they are shaped by set and setting. A consciously programmed session, however, is

superior to an unplanned session for it eliminates the "channel-shifting" aspect and possible "static" that brings about confusion. Also, unplanned sessions may not readily move beyond "visual" material.

The Guide:

The function of the guide is multifold: head nurse tutor, baby-sitter, Mother Earth, sympathetic ear, scullery maid, priest, trouble-shooter, tourist guide, doctor, navigator, soulmate, and blank screen

The competent guide knows that it is the subject's session, not his. This is why he must void all of his own emotional involvements to the best of his ability, become as nearly "blank" as he can, and in the twelve-or-so hours of the session, superimpose as needed the various other guide roles upon himself. He must be prepared to make a quick change from soulmate to scullery maid; or priest to trouble-shooter.

Probably the guide has had many sessions, at least one of which was devoted to concentrating on the clues to becoming a good guide. Without personal, first-hand experience with the psychedelics, it would be virtually impossible for him to appreciate what there is to be guided and to know how vital this trusteeship is. An involved non-involvement is the desideratum

This didactic point of view, shared by the majority of serious LSD advocates, is contested by some conservative clinicians.[1] They argue that a guide who has had the drug has no objectivity and cannot properly maneuver the subject or evaluate the outcome. Masters and Houston are emphatic in their rebuttal of this and similar charges:

The argument that the person who has taken the psychedelic drugs thereby disqualifies himself as a person able to objectively view and evaluate the experience, must strike most seasoned researchers as simply ludicrous... Work done by those who refused to take the drugs does not demonstrate greater objectivity than that of persons who have had the drug experience; and doubtless refusal to experience the psychedelic state is a product, in some cases, of anxiety about the person's ability to cope with that state...

It is agreed by most persons who have worked with the psychedelic substances that the guide, to be effective, must himself have taken at least one of the drugs, preferably on several occasions. We see neither the need for nor possibility of a satisfactory alternative to this, and would add that the psychedelic experience of the guide-to-be should include at least two guided sessions in which he is a subject.

In the early days of clinical use of the psychedelics, it was taken for granted that the "medicine" need not be tried by the therapist, but that it was like other medicines and could be prescribed automatically for specific purposes. Because of this, the few rather than the many actually took LSD themselves, and when they did, it was usually out of curiosity. The patient was given his "dosage" and left in a room by himself while the drug took effect, with only a bell or signaling device to summon help if he needed it. Gradually therapeutic practice recognized that more than a signaling device or a "watcher" was required. Now those specialists who have

used the psychedelics for eight or ten years know that a guide is absolutely necessary and that he must be highly trained to cope with crises and to interpret and direct the session. Dr. Van Rhijn, who at the Macy Conference expressed the opinion that patients could get along on their own, had by the time of the Amityville meeting (six years later) recognized new variables which require more subtle and complicated techniques, and *therefore demanded the presence of an expert guide*. Specifically he suggested the following qualifications:

I think the method could be learned by a qualified psychiatrist in about half a year, through studying and observing methodology while assisting a colleague (who should have, I think, at least three years' experience in psycholytic therapy), in combination with at least five of his own experiences, with dosages ranging from 50 to 500 mcg.

A question frequently discussed is whether or not the guide should have at least a minimal dosage of LSD during a session. There are good arguments on both sides, but most cautious investigators agree that anything above 25 mcg. for the guide would necessitate the presence of a third person.

It is believed that a small amount of the drug helps to establish a quicker and more fluid rapport between guide and subject and also lessens the possibility of boredom on the part of the guide. It is far from easy to sit from eight to twelve hours with a person who may be silent and motionless much of the time. Furthermore, the guide's responsibilities are so much greater and more complex than that of an ordinary nurse that inattention may be disastrous. A small quantity of LSD is in most cases considered adequate to keep the guide alert and interested, while leaving him capable of fulfilling his function. Having a bit of the drug himself also frees his imagination, and his interpretations of the subject's material are more trenchant.

A good rule of thumb is never to accept as guide a therapist or anyone who is antagonistic personally, for vulnerability and naturalness will be inhibited to some extent at least, regardless of good intentions.

A well-trained LSD therapist will never try to manipulate the subject, i.e., probe obviously, ask loaded questions, etc. If detected, these will be taken as hostile manifestations. Because of the sensitivity aroused in the LSD subject, hints of underlying ambivalence, either positive or negative, will be telegraphed and will distort the session.

The following is an example of "discoloration" of the LSD session through such material:

One group of five patients was tested while under LSD. Each was accompanied by a selected nursing assistant throughout the test experience. Only one patient had a psychedelic experience, and he did so "because I found it too painful to come back into consciousness to answer the questions. I just gave up and paid no attention to the questioners." The other four patients had psychotomimetic reactions, mostly at the paranoid level, and were most vociferous in telling us so after the tests were over. Because of our understanding the basis for the disruptive impact of psychological testing, we gave them another opportunity to have LSD, but in the informal, completely supportive environment. We will not test patients anymore while they are undergoing an LSD experience....

This observation was made by Dr. Kenneth Godfrey, Assistant Chief, West Psychiatric Service, at Topeka Veterans Administration Hospital. He continued giving the drug to the group of four, using 500 mcg. dosages, and all had psychedelic experiences. By doing away with the testing program and providing a congenial setting, Dr. Godfrey and his colleagues found that "almost 100 percent of the patients began to reach a high level of psychedelic experience within one and one-half to three hours.... Experiences of ecstasy became somewhat commonplace."

A final word on guiding—if full self-confidence is lacking, more harm than good can result. As Drs. Leary, Metzner and Alpert say:

From our own research studies and our investigations into sessions run by others—serious professionals or adventurous bohemians—we have been led to the conclusion that almost every negative LSD reaction has been caused by fear on the part of the guide which has augmented the transient fear of the subject.

The Candidate:

There is continuing argument among professionals as to who is a good candidate for LSD and who is not. The matter is simplified if it is understood that the guide can be no more than an expert navigator, and that the subject is both the captain and the ship. No reliable captain would take his ship out without a navigator worth his salt, but no navigator can save a ship from peril if the captain refuses to act on his advice. This is why splendid results have sometimes occurred in the most unpromising cases. Among the proscribed have been middle-aged spinsters, neurotics and social isolates. Yet if motivation and guide-trust are high, these are among the very people who stand to gain the most from psychedelic drugs. With poor motivation and an indifferent guide, almost anybody, on the other hand, can run aground.

The success of a psychedelic "voyage" seems to depend less on the psychological label of the candidate and his personal history than it does on his willingness to surrender to the possibility of great chaos. "Swingers," those who enjoy wild, uninhibited activity, or those who can cope with a good deal of tumult, usually do well in their sessions. On the other hand, if flexibility is all pose, LSD can shred such protective facades, and at some point it probably will. Being unprepared and defenseless under a flood of confusion may give rise to shock and anxiety.

There are also those orderly, cautious personalities who require an explanation for everything, who are most comfortable in a static set of circumstances, and who are compelled to maintain a favorable self-image—those in this group tend to find the LSD experience terribly upsetting, if not devastating. This need not always be the case, however, if the pre-session briefing has been intelligent and thorough, and if the guide is astute and gifted.

The cardinal qualification for the LSD odyssey is ultimately one of honesty. In time of personal catastrophe, the most appropriate reaction is an honest one, in which the individual functions with a minimum of hysteria. So, too, when LSD swirls the voyager into unknown regions. He must be prepared to confront, without panic, unsightly scenes (his own image included), threats and tragedy. Some who

have had LSD experiences that they called "delightful cruises," without "bad weather," may yet run into heavy seas. Somewhere along the line there usually does come a reckoning from which there is no escape, especially if the subject has been dissembling. Without a well-trained guide, the psychedelic experience is best avoided by those individuals who must maintain defenses that keep self-exposure at second remove.

Except for those who have been involved in drug usage for therapeutic reasons, it would appear that the prerequisite of granite-bound honesty deters many who might otherwise benefit from a well-guided LSD session and restricts it to those already possessing the positive attitudes the drug tends to elicit. This dilemma, however, is resolvable. Those who desire such atrophied qualities rejuvenated *can* overcome their hesitancy and face up to the fact that the ultimate destination is worth the trip. To borrow the clinician's term, the "highly motivated" are promising subjects.

Of course this, too, amounts to problem-solving. The awakening or revitalization of such human qualities may be one of the greatest benefits of the psychedelic experience. If the drug should be taken with a definite problem-solving goal in mind, the shoals encountered in the LSD trip will be far easier to navigate.

Dangers and Precautions:

The dangers of LSD use have popularly been presented in bogey-man fashion—i.e., exaggerated and not fully explained. In almost every incident of failure, the subject has been left ignorant of basic facts. The guide has been careless in his duty and neglected to remind his ward that he must never forget that whatever is happening to him is simply the effect of a drug, and that the experience will terminate in a matter of hours. The subject must understand in advance that although he may feel capable of "flying" while under the drug, he must not let himself be deluded in this regard. Properly prepared, his residual judgment will remain intact and keep him away from windows and other danger areas. Similarly, he must be reassured that the guide will not attempt to "freak" him by misrepresenting realities. If the subject thinks he is in eternity and that the whole universe is in similar condition, he must be assured that on another level the old reality still exists and that he will be able to return to it when he wants to. Therefore, one of the main obligations of the guide is to provide the subject with a firm perspective, whenever necessary; if this is met, the dangers inherent to the drug are minimal.

Over-guiding, in contrast, can actually cause dangers where none exist.[2] Too much forewarning in a negative fashion implants anxiety—if not fear—which may become overwhelming in session, especially if the guide is not especially capable. This was particularly true when the drug was first known. Psychiatrists would say to their volunteers, "You know you may go mad, don't you?"—a suggestion more appropriate to brain-washing techniques than keeping the patient out of harm's way.

Most LSD experiencers spend part of their session bewildered by their surroundings, dazzled and in doubt of their external world. When Albert Hofmann first tried psilocybin, for instance, he saw his hospital ward change to Mexican scenery (earlier he had been thinking about the source of the "magic mushroom")

and his German doctor transformed to an Aztec priest, hovering over him with an obsidian knife. Try as he would, for several minutes he could not return the situation to normal. In most cases such alterations in externals are fascinating to the subject rather than disturbing, especially if it is known that these visions will pass and give way to other things. But to some of the inexperienced who have received poor preparation and mediocre guidance, "traveling via the mind to other lands" may not be at all pleasant, especially if the sensation of being "lost" comes as a surprise. The novice wanders into a side room or down a hall and suddenly no longer knows where he is. His disorientation—like other LSD mishaps—is then amplified and reverberates. "How did I get here?" "Will I ever get back?"

"Getting lost" is probably the most disagreeable portion of a misguided trip as well as the most obvious step-off into psychotic trauma. Yet it is possible to avoid, since it stems from surprise and general ignorance of the drug-induced state of mind. Advance preparation for the possibility of temporary dislocation is usually enough to sustain the bewildered experient until he can regain his bearings.

The next danger zone, not uncommon to the casual LSD session, is sexual paranoia. The subject may feel victimized and spied upon and fear that at any moment he will be helplessly swept up into an obscene orgy with unwanted sexual partners. This suspicion usually occurs to the subject when he has sent out distress signals and his guide is trying to comfort him by physical reassurance. If the subject and guide are of the same sex and if the subject's libido is insecure, well-meant gestures may be interpreted as an accusation of homosexuality and the subject may have a deep psychotic reaction. This possibility will be obviated if there is prior understanding of the guide's function.

It is not unusual to find cautionary advice in the psychedelic literature, although the details are often scanty and tend to be forgotten as soon as they are read. Without a frame of reference, it is difficult to keep their importance in mind. It is all too easy to gloss over such warnings and assume they are only for the "other guy." Likewise, many assume that a first-hand knowledge of marijuana or any other psychedelic drug is more than enough preparation for LSD. This is simply not the case. To avoid the obvious craters, and the small ruts as well, thorough and concentrated briefing must take place, preferably including both reading and discussion.

Dosage:

Dosage is regarded as the last serious consideration in an LSD session, being preceded by set and setting, preparation and choice of guide. The drug is, after all, only a key, and as long as it is of sufficient strength, it will open the door to psychedelic realms. Once these provinces are available for exploration, the question really is how far the subject wishes to "travel." Those people who are experienced with the "lock," who know their way with LSD, can travel far and fast on small dosages, and "setting" becomes secondary to "set" for them. But the inexperienced adventurer who is reluctant to go far afield may absorb a massive dose and stubbornly resist its effect. There are even those who rely on heavy dosage to anesthetize fear of "crossing the threshold," yet are unable to attain psychedelic experience and escape instead into the safety of blackout. This would seem to illustrate that initially the subject must take the drug or the drug cannot "take" the subject.

The easiest way to understand the various strengths of dosage is to think of the drug as a high-powered microscope with a range of optic lenses that can be manipulated to suit the individual eye or the matter being observed. The dosage in this scheme determines the magnification.

LSD, because it is the most potent drug known to man, is not measured in the usual milligrams, but in the smallest unit in the scale, the microgram (a millionth of a gram). Anything lower than 15 mcg. rarely has an effect on humans and doses higher than 2000 mcg. are extremely rare in clinical literature.

The range between 25 and 75 mcg. brings the psychedelic microscope into low focus and gives an effect similar to that of marijuana. At this level the drug is useful in group therapy. It also causes perceptual alterations and heightens reception of auditory and visual entertainment—the ballet, for example. A dosage between 100 and 250 mcg will change the focal length so that the subject is projected into the realms of the unconscious and will be concerned with psychological and sexual matters. If his session has been programmed for intellectual and artistic reasons, suitable material will be brought into focus. This is the dosage most commonly used. An increase in dosage to 300 to 600 mcg. will produce cosmic and mystical experience, and above 600 mcg. the LSD field shifts into what are often called "cellular" or "molecular" realities. Because the dosage changes the type of experience, the concept of "overdosing" in the narcotic sense is not applicable and is inaccurate. The lethal human dose, if any, is not known as yet.

Each of these dosage levels should be understood as a necessarily rough approximation since the effects depend upon so many variables. With alcoholics and addicts, twice the dosage is needed to achieve characteristic effects. Women require about 75 per cent of the amount required by men—body weight being one of the determining factors. Once above a certain dosage, a session has some aspects of all of the LSD "states"—the goal is more the determinant than the dose. Nonetheless, the dosage defines the intensity even though it does not rigidly restrict the terrain.

Many scientific researchers feel that the first experience requires a "super dose" in order to get the subject propelled with dispatch. Others, objecting to a rapid escalation, suggest a "boost" if the subject remains on a low plateau. If such a "boost" is necessary, it is generally thought that a duplicate dosage should be given within the first three hours. It is considered important, however, to allow more than the standard 20 to 40 minutes for the drug to take hold, for some people have high thresholds of resistance.

The other psychedelics, usually measured in milligrams (thousandths of a gram), often have side-effects not ordinarily associated with LSD. The dosage range for psilocybin falls between 10 and 40 mg., and one may expect some initial physical effects; perhaps slight nausea, chill, slight cramp. The emotional impact is gentler than that of LSD and the subject slips into the drug state instead of being thrust into it. The same applies to mescaline (derived from the emetic, peyote), for which the dosage range is 100 mg. to 600 mg. In the gross sense, all the psychedelics lead to the same "beyond within," but to the adept, the approaches are quite different.

There are some scientists and laymen who feel that a combination of drugs is the best way to put the psychedelics to use. As mentioned earlier, Drs. Ling and

Buckman, Dr. Ruth Fox and Dr. Jack Ward, among others, gave LSD with a number of less potent substances such as ritalin, librium, methedrine and other amphetamines and some barbiturates. To prevent nausea, particularly induced by peyote, some doctors recommend using Marezine, Bonamine, Dramamine, etc.

Should it seem advisable to terminate the session, a strong phenothiazine-type tranquilizer such as Thorazine (chlorpromazine) is used. An injection of 100 to 200 mg., or 80 to 100 mg. taken orally, brings the subject "down" when an average psychedelic drug dosage has been ingested. For heavier doses, one milligram per microgram (of LSD) is the usual terminant. Some doctors, on the other hand, prefer nicotinic acid (200 to 600 mg.)—in the larger doses to end the session, and in smaller doses to reduce confusion and anxiety. Nicotinic and ascorbic acid (vitamins B3 and C) are increasingly used because they are readily obtainable and there is no danger if an excessive amount is taken. If the intent is simply to ameliorate the session and calm the subject without ending the experience, 20 to 100 mgs. of librium are also considered adequate.

Tight Spots:

A "dry-run" examination of an LSD experience would be incomplete without a consideration of "tight spots" and how to get out of them. Such moments of potential crisis are due to the nature of the experience, for like any voyage, it is not all smooth sailing. The following points out some of the "reefs" upon which LSD users have run aground and suggests a few methods of circumvention:

1) Under LSD, the user is not simply adrift, a tourist cast off at the mercy of the elements and in the grip of forces that cannot be influenced. He is, instead, the master of his ship and can change directions. Because of the overwhelming nature of what occurs, however, this may not be easy to remember.

One subject became hopelessly enmeshed in a net of music and could not break the thrall. He was listening to a recording of "Spellbound," and believed that the eerie music somehow was emanating from his nervous system. As each recurring theme built to a climax, he would twitch and wriggle along the floor. He felt "unable to do anything" until a thoughtful assistant walked over to the record player and turned it off. He was released at once.

Since "real life" continues after the ingestion of LSD, there is always the need during the session to get up, move about to some extent (to go to the bathroom, to cite a practical example). But in the psychedelic state, few people feel capable of doing so—until they try. The subject under LSD can function normally and he can also alter the experience as he wishes. He should fully grasp this fact before taking the drug. Once into his session, he should take time out and practice "reversing" sensations. He can turn water into wine (at least his taste buds will tell him so) just by thinking it; he can make a light object feel heavy; he can turn a tin can into a silver samovar; or he can turn another's glistening tears into a dry-eyed expression of joy. When he is sufficiently skilled, he will be able to "select hallucinations" for himself.

2) For the initiate, some difficulty may be encountered in "take-off," since the transition is comparable to a jet thrust. Care should therefore be taken to reduce rigidity and awkwardness. The best approach for entering "inner space" gently is made with the aid of a "fluid" selection of music and simple breathing exercises, or a massage, since a tense, tight attitude may grow out of "waiting for something to happen."

3) During the eight or ten hours of altered reality under LSD, much that is shocking or distasteful may occur within the subject, especially unpleasant fantasies of a physical nature. Cardiac specialists as well as other doctors often direct their heightened psychedelic sensitivity to their bodies and witness in surgical detail the actions of internal organs. They may develop the delusion that they are bleeding to death, suffering an attack, or experiencing the collapse of lungs or other organs. These physical scrutinies also preoccupy the layman of course, and birth experiences—being born or giving birth—are within the ordinary line of LSD events. As mentioned previously, disorientation with regard to time can terrorize the most valiant.

All of these "hallucinations" are merely subjective experiences with little basis in everyday fact. If the subject wants them to "go away," his best remedy is to dispense with the natural impulse to "fight them." "Going with them" or "giving one's self over" disperses the unwanted vision and the "screen" is cleared for something else.

Facing terrifying LSD events calls for courage and stamina in the early sessions.

4) If resistance remains high, the experience may become repetitious, leading up to a crucial point but without a breakthrough. The subject vacillates—hot and cold, back and forth, endlessly affixed to the same treadmill. He cannot make decisions. He has been through this all many times before.

In such instances, "boosting" may be called for. An additional dosage is usually enough to "break the set" and move the subject off his plateau. Dr. Duncan Blewett gives the rationale:

One of the things we discovered is that if you don't give a large enough dose of the drug, a person gets into a sort of interim position. He has one foot in the camp of the usual frame of reference and the other in the camp of unhabitual perception. He finds it impossible to make a break between these two... But if a large enough dose of the drug is used, so that the person is propelled rapidly out of the old context and cannot maintain the self-context as he has known it, he then—rather than becoming more uncomfortable as you would think—becomes much more comfortable and able to accept as valid this new and novel way of seeing the world.

One of the reasons for the occasional vortex-like recurrence of the same material seems to lie in the fact that the drug effects come in waves, and if the subject is allowed to persist in one particular area too long, he may be caught in an undertow. The favored method for breaking through this "hangup" is to change the subject matter completely—with the intention of returning to it later if it seems worthwhile. If the recurrent material is deliberately brought up again after

some time has passed, the subconscious will have had a chance to devise other approaches and the insight level will probably be more acute. A good technique in such instances, borrowed from hypnosis, is to suggest to the subject that in a specified length of time he will return to his problem and then be able to resolve it

5) The development of physical symptoms (such as coldness, nausea, pressure on the spine, restlessness, tingling, tremors or "a pain in the kidneys") is often the body's way of evading psychedelic effects. With peyote, and to a lesser extent with magic mushrooms or morning-glory seeds, these effects may be attributed to the drug, but with LSD and other synthetics, such symptoms are a sign of the subject's resistance. The guide should in such cases recognize these symptoms as an indication that the drug is about to take effect, and he should reassure the subject that these physical symptoms will soon pass, with "the psychedelic experience" taking their place.

6) Another evasion of the full psychedelic experience may involve over-intellectualizing what happens and talking on and on throughout the session. Because language depends upon familiar ways of thinking, reliance on words keeps much that is non-verbal from developing and restricts the LSD experience. To carry on a lengthy conversation confines "psychedelia" even further, since the subject when questioned or spoken to is somewhere "out in orbit" and must then come back and touch down before replying. For the average person, a period of verbalization may not develop into a problem, but a rigidly defensive person, on the other hand, may use words to avoid the experience, and as time passes he may become increasingly desperate. This may make him aggressive, causing him to react with hostility toward the guide. He may impute a variety of menacing motivations to him. In such a situation the guide should refuse the various "ploys," gently reminding the subject what he is there for.

7) If terror grips the subject continuously during the session, physical comforting may lend the needed reassurance. But as pointed out previously, this is a delicate matter unless the guide is certain that the subject will not misinterpret the gesture. Because attendant LSD distortions may seem too vile or alien to be shared, the subject who has lodged himself in a crevasse can most successfully be brought out, if other means have not been satisfactory, by the guide's taking him into his arms and soothing him.

8) If "reversing" the disturbing hallucinatory material has not dispelled anxiety, counter-diversion should be attempted. The subject should be encouraged to try some appropriate physical activity such as dancing, keeping time to music, playing the piano or even typing. Taking deep breaths and paying attention to the lungs as they expand and contract is quite effective. Such diversionary efforts will in all probability become the new focus of attention.

9) The skilled guide always has extra resources up his sleeve or is capable of fast, imaginative thinking. One example, which can serve as a pattern for the latter, occurred when the subject decided she was made of metal and was unable to move. "Oh, you're the friendly robot in that TV serial," the guide remarked genially, and as the subject was familiar with the program referred to, she immediately "recognized herself" and began moving about gaily in a deliberate parody of an automaton's gyrations.

Dr. Leary had an amusing and instructive episode to recount along these lines. An electronics engineer had taken psilocybin and was reacting with great anxiety:

... his traveling companion was unable to calm him down. The psychologist in charge happened to be in the bathroom. He called to his wife, who was drying dishes in the kitchen: "Straighten him out, will you?" She dried her hands and went into the living room. The distressed engineer cried out: "I want my wife!" and she put her arms around him, murmuring: "Your wife is a river, a river, a river!" "Ah!" he said more quietly. "I want my mother!" "Your mother is a river, a river, a river" "Ah, yes," sighed the engineer, and gave up his fight, and drifted off happily, and the psychologist's wife went back to her dishes.

10) Pinpointing the source of the unpleasant hallucination can eliminate it rapidly. One subject, for instance, convinced that the house was on fire said he could actually see his "charred limbs" in the ruins. He was set straight when he was shown a burned-out candle in an ashtray, still smoking because the wax had been set afire by cigarette butts. Another person was able to deal with distasteful hallucinatory material when told that he was "merely a visitor passing through a slum" and that "a better neighborhood would soon emerge."

11) Crises do sometimes arise even in well-planned sessions. If the subject is unable to cope with them in a sober manner, the guide may suggest "game-playing." The subject should be instructed to think of himself as a versatile actor who must portray a character in a serious role, stand aside and let the play begin.

12) If the subject has insisted upon taking a stroll through heavy traffic, wants to drive a car or undertakes some other ill-advised pursuit, and if the guide has been outwitted or has lost contact, the subject should remind himself that what is happening is due to the drug he has taken and that its effects will, in time, wear off. He should realize that finding his way home is not an impossible feat. He should try to recall, step by step, how he did it the day before. Since evaluating distance may be difficult, he should force himself to obey all traffic signals rigorously in crossing streets, taking his cue from the surge of the crowd. He must curb his inclinations toward bizarre behavior and bear in mind that his mission is simply to get home.

If the subject has been driving a car, upon realization of his situation he should park as soon as he can and take a cab, a bus or proceed on foot. Although he may not believe it, most people will have no idea of his condition, either through their own preoccupation or the simple fact that it is not always easy to detect psychedelic drug behavior.

These final precautions have been deliberately emphasized because they deal with the rare mishaps which the popular press has presented as run-of-the-mill, without suggesting any means for avoiding or coping with them. In point of fact, "runaway" and out-of-control sessions are extremely unusual. Rather, those who fear the ballooned Mr. Hyde (promised by the press to lurk just beneath Dr. Jekyll's thin, suave veneer) and who reject the drug, sight unseen because of this, usually find if they eventually take LSD that the "Mr. Hyde" who lives in their unconscious is not such a bad fellow after all.

The carry-over of the psychedelic experience, once the session is completed, depends upon where the stepping stones have been placed, or if the desired bridge has been reached. A single resolve, clung to throughout the whole of the session, strengthens the effects. So does the delay, or avoidance, of return to established routine. Ideally, time should be allowed for relaxation in "normal reality" to let the subconscious integrate its new insights. This is the time to put the "psychic house" in order; to speculate about what has been resolved and what remains to be resolved.

Footnotes

1. It has been recently disclosed that grants to study the effects of LSD are not available to applicants who have used the drug, whether they have done so professionally or not. Since the National Institute of Mental Health is the sole legal distributor, this decision limits research even further.

2. Another danger situation is over-preparation, or too much eagerness for the experience, especially if long awaited. Jane Dunlap, in her LSD memoirs, *Exploring Inner Space*, unwittingly records well over fifteen episodes during her five experiences which any objective reader would find gruesome, disgusting or terrifying. Miss Dunlap, however, seemed to take them all in good stride because she was so grateful for the other aspects of her LSD experience. The point, though, is that all of her negative sensations were intensified as a result of inadequate guiding. When she felt utterly helpless in the early part of her first session, for instance there apparently was no one who knew what to do. "This blood-freezing emotion, I knew, could be relieved if Dr. Snow, seated near us, would pray for me. Although I asked him to pray and he is a deeply religious man, he was now wholly a psychiatrist and remained silent."

Chapter IX. Drugs Past, Present and Future

IT IS RECORDED that at the time of Montezuma's coronation peyote was passed around to enhance the pageantry and splendor of the occasion. Ololiuqui, a somewhat anemic-looking morning glory with a seed that contains lysergic acid amides, was used as a "divine plant" by the Aztecs well before the Conquistadores arrived in Mexico. In northeastern Asia, the Tungus, Yalcuts, Chukches, Koryaks and Kamchadeles traditionally intoxicated themselves during the interminable winter months on a hallucinogenic fungus called "muchamor" (*Amanita muscaria*). Natives of the Amazon had access to another psychedelic—the caapi vine—before the white explorers first entered that region. As previously mentioned, the Greeks may have employed "mind-changing" mushrooms in their "Mysteries," and the witches of Europe made use of various hallucinogenic substances in ointments and brews during the Middle Ages. The mild psychedelic *Cannabis sativa* (hemp, hashish, kif, bhang, charas, gangha, dagga, djamba, marijuana, etc.) was described sympathetically by the Chinese Emperor Shen Neng as early as 2737 B.C., and has flourished throughout the world ever since. It presently is used in its varying forms by over 200 million people. By no means is the knowledge of psychedelic drugs confined to the twentieth century.

Nonetheless, the recent "psychedelic explosion" in the United States represents an unprecedented phenomenon and cannot be understood by analogy with the past. Nor can its meaning be explained by reference to the use of peyote by the quarter of a million members of the Native American Church.

In contemporary American civilization, LSD and related drugs are being used in a variety of ways by people from many extremes of cultural heritage who are commonly enmeshed in a swiftly changing, mechanized civilization. The results which ensue from these multitudinous "sets" and "settings" bear little resemblance to those of Indians who sit all night in a teepee, using peyote in a highly ritualized religious ceremony.

In the foregoing chapters the main emphasis has been on LSD and its broad uses in problem solving. But LSD is only the best known of a growing number of psychedelic drugs, and there are many implications for the psychedelics outside of formal problem solving. The following is a brief survey of some of the problems raised by the problem-solving drugs—since the solution of one problem invariably represents the creation of another.

The discovery of and enthusiasm for powerful new mind drugs is raising new questions (and new formulations of old questions) about man's relation to nature, his concept of God and, indeed, his very image of himself. Just as the discovery of atomic power raised issues which formerly had been of concern to only a few philosophers and scientists, so the spreading dissemination of the psychedelics is beginning to raise issues questioning man's relationships to man and his total image of the world and himself.

With readily available psychedelics, a new energy—a potent psychic energy—has entered the world stage and must be reckoned with. Eventually it may have to be integrated into day-by-day existence, just as was the automobile, electricity, television and atomic energy. Despite any nostalgic longings for a return to pre-Huxley days, when the "psychedelic revolution" had not even been conceived, it is as impossible to ignore the psychedelics as it is to wish away the portents of

nuclear warfare. The "psychedelic revolution" has passed through its embryonic stage and within the past year been born.

The "psychedelic revolution" contains untold dimensions and at the same time presents extremely difficult problems of "control." The only way to bring reckless use of the psychedelics under control is to entice the desperate or reckless member of the "psychedelic club" to a center where he can be instructed and observed in the proper (non-destructive) use of the drugs. The sooner society settles down to reviewing the psychedelic reality as it exists, rather than carping about its morbid aspects, the earlier enlightened controls can be put into operation.

One of the primary effects of the psychedelics (as more and more people are discovering) is the changing of personal relationships, and this can and will affect people deeply—even those who never have used and never intend to use these drugs.

Realization of such new realities is beginning to grow, though it will be some time before any of the lines are very definite or before the significance of the psychedelic revolution will be appreciated by a sizable portion of the population. What society faces as a result of recent psychedelic discoveries, and the popular enthusiasm for them, is a tremendous influx of new and for the most part unrelated information on topics that are easily sensationalized, which in the past have been largely ignored. Because developments on the drug front are now coming one on top of another, even those professionally concerned have barely been able to keep up with what has been happening in this field. For a period of five years or so, there is little likelihood that society as a whole will be able to respond appropriately to the astonishing popularity of the mind-changing drugs.

Most LSD research has been done in isolation and researchers have had meager awareness of the work of others. LSD conferences have repeatedly demonstrated that their major contribution is cross-fertilization—and the development in researchers of a sense of their own ignorance, for on almost no point can they agree. Because the state of the drug-administering craft is yet very crude, it is too early to make more than an initial assessment of the role of the psychedelics in the future. However, here are a few likely possibilities.

Other Drugs:

LSD is only the most prominent in a long list of drugs which radically affect the mind. There are over eighty psychedelic substances (both natural and synthetic) which are to be had in the form of pills, powders, leaves, fungi, liquids and seeds. Naturalists and psychopharmacologists are continually adding to the list, and such drugs as bufotenin, DMT, yageime, Ibogaine, desoxyn, Ditran (or JB 329) MLD, ALD and UML are well known in the laboratory and may soon reach the streets.^[1]

Prior to the legal curb which has affected the worthy and unworthy alike, a number of little-known substances—some of which created appreciably different psychedelic performance—were being used in therapy. Dr. Claudio Naranjo, a Chilean psychologist, favors the drug Ibogaine for his patients, for example, because he feels it enables them to integrate the erupted material in their lives more readily than does LSD, and that it can precipitate greater conceptual

understanding of their life situation.[2] As mentioned previously, Dr. Ling and others are of the opinion that an injection of Ritalin facilitates the attainment of "psychedelic experience." Dr. Leuner is another who feels that the psychiatrist should carry a selection of psychedelics in his medicine cabinet:

Psilocybin has proved very valuable to us for a number of years. For a year now we have had similar good results with the psilocybin derivative, CZ74.... Thus, we now have a well-rounded repertoire of three psychotomimetic substances at our disposal, assuring us more control of the therapeutic process.... The short but overwhelming and ecstatic sessions with CZ74, in high dosages within the frame of psycholytic therapy, have been particularly useful in penetrating overly rational and compulsive individuals, often leading to a quickening of the entire therapy.... Psilocybin stands in the middle, while LSD is the strongest and most imposing drug, sometimes made undesirable by overtiring the patient with its slow, torturous decline....

Those familiar with psychedelic history will recall that, in 1963, students discovered that the consumption of "Heavenly Blue," "Flying Saucers," or "Pearly Gates" morning-glory seeds induced effects similar to LSD. Shortly thereafter someone smoked Scotch Broom flowers, and word leaked out that the dried flowers of this hardy, decorative plant (which is grown extensively along highways and in eroding areas) were a good substitute for marijuana. And only recently it was reported that Hawaiian wood-flowers are psychedelic.

The most interesting development in terms of the social consequences of the psychedelics is the discovery by Sandoz Pharmaceuticals of a series of "tryptamines"—drugs which bring about LSD-type effects but which can be spaced for almost any length of time the user desires. At present, the quickest of these—dimethyltryptamine (DMT)—has reached the black market and is increasingly used.

DMT, an acrid drug, is usually supplied evaporated on parsley leaves and is smoked like marijuana. Almost immediately, however, the user is swept into psychedelia. Taking a "drag" of DMT is like stepping onto a moving roller coaster.[3] Effects are intense, usually immensely pleasurable, and last from ten minutes to half an hour.

Because the drug is a quick "Pleasure Drug," it is sometimes referred to as "The Lunch-hour Special," and is used without much forethought. This development qualitatively changes the psychedelic situation, for it means that use of these drugs no longer will be confined to those who have leisure and can devote a day or two to an LSD session. In addition to growing drug use by students, educators, clergymen, the wealthy and those on the margins of society, DMT makes it possible for the busiest or most harried person to try a psychedelic.

There is another socially significant fact about DMT. Although this drug is little understood and may be considerably more dangerous, both physiologically and psychologically, than LSD, it is easily manufactured. LSD can be produced inexpensively (if available commercially, it might wholesale at about half a cent a dose), but the process is intricate and calls for special equipment. DMT, on the other hand, can be made in the kitchen with no more elaborate paraphernalia than a spoon, a stove and filter papers. Furthermore, the ingredients are easily accessible since each has half a dozen industrial uses. Because of its quick action and the relative simplicity with which it can be made, DMT is likely to become a popular psychedelic.

Looking ahead it becomes evident that the next few years will see the introduction of many other new, powerful, mind-altering drugs that do not fall under the "psychedelic" label. Promising results have been reported, for instance, with Cylert (magnesium pemoline), RNA and DNA. One chemist is working on a drug he calls LLL (a "love of learning lozenge"). Some "psychedeliacs" speak of combining LSD with a "memory pill" in order to engrave the LSD effects, and a few "psychederelicts" are experimenting with a wide variety of other substances. Dr. Stanley Yolles, Director of the National Institute of Mental Health, testifying before a Senate sub-committee on the flood of novel drugs emerging from the laboratory, has predicted that "In the next five to 10 years we will have a 100-fold increase in drugs that affect the mind."

There is evidence indicating that science has almost brought mind-control into a reality. As with nuclear power, scientists must confront the immense implications of such a breakthrough, since problems in ethics, politics, international affairs and personal values are generated with these revolutionary discoveries. Dr. David Kretch, professor of psychology at the University of California at Berkeley, recently stressed this point to his colleagues in his keynote speech at the annual meeting of the American Association for the Advancement of Science:

I don't believe that I am being melodramatic, in suggesting that what our research may discover may carry with it even more serious implications than the awful, in both senses of the word, achievements of the atomic physicists. Let us not find ourselves in their position of being caught foolishly surprised, naively perplexed, and touchingly full of publicly displayed guilt at what they had wrought.

Growth of the Blackmarket:

Over half of all Americans are now under the age of twenty-five. Young people are growing up accepting LSD (and related drugs) as simply one more product—perhaps the "ultimate product"—in the "great American supermarket of sensation." In this affluent, uneasy, technological age, in which the spirit of the times is rather hedonistic, whole sectors of the younger generation form, as it were, "an ideal drug-using society."

In the thirties and forties the greatest number of marijuana smokers were found to be in ethnic groups—i.e., Mexicans and Negroes and those frequenting these circles. Therefore the concentration of users of this mild psychedelic was to be found in California, in port cities on the Gulf of Mexico and in the East in large metropolitan centers which had sizable Negro ghettos. It was not until the Second World War when the armed services were integrated that the drug became interesting and available to the young, white middle class. With few exceptions, those who had previously tried marijuana considered the experience to be dangerous and degrading, in a class with opium-smoking and therefore socially unacceptable. Now, however, since countless authorities—biochemists, pharmacologists, doctors, sociologists and psychologists—have pronounced the drug harmless and far more benevolent than alcohol, tobacco and caffeine, it enjoys the same kind of sophisticated popularity that liquor did when the Volstead Act was still in effect. Just as no Jazz Age vamp, out on a blind date with a handsome raccoon-coated "hero," could afford to refuse at least one swig from his hip flask

while riding along in the "flivver," so today's "swinging chick" or "teeny-bopper" cannot turn down at least one drag on a "joint."

But here the analogy (the rebellion pattern) ends, for once both drugs are accepted, the differences between them are as wide as the differences between "spring tonic" and an elixir. The current generation (and probably those to follow) are now acclimatized to the psychedelic ambiance and undoubtedly will insist upon it as a condition of existence.

"Drop-out" is a word of recent vintage, but as a concept, it is as old as youthful non-conformity itself. However, there are two distinct kinds of drop-out. In the Great Society, administrators are primarily concerned about the disadvantaged delinquent who gives up his formal education before he is equipped for independence. He bears little resemblance to the gifted student who simply cannot condone the state of the world, detests the superficiality and ethical fallacies which are larded into textbook learning and leaves school in disgust. The tragedy here too lies in the fact that such people are probably not ready to strike out on their own, and may on doing so, drop to the bottom of society.

Those gifted drop-outs who are resourceful, however, and serious in their intent, sometimes find means for making active and often positive protest against the standards that drove them from conventional society. They may be labeled outlaws by most traditionalists, but by and large they are decent, concerned individuals—not "hoodlums." To these people the psychedelic scene may seem to offer a place where they can find the high, sweet, human values they seek and esteem.

Traditionally, new movements have been led by people old enough and mature enough to have known better. So, too, with the LSD movement which, in Timothy Leary's words, has been led by the "middle-age, middle-class, middle-brow whiskey drinkers." Leary himself, in his late forties, is a former Irish Catholic with a Ph.D. in clinical psychology. The Mexican "magic mushroom" was the discovery of Gordon Wasson, a vice-president of J. P. Morgan, with senior membership in the "Establishment." And it was Aldous Huxley, the distinguished author-grandson of the distinguished scientist-philosopher Thomas H. Huxley, who brought the psychedelics to worldwide attention. Watts, De Ropp, Cohen, Michaux and hundreds of others in the psychedelic vanguard will never see forty again.

We live in a "pill age." Millions of people, with no forethought at all, take tranquilizers, penicillin, birth control pills, cold remedies and energizers—and the attitude that the "pill" is the solution to everything is carried over in subtle confidence to the psychedelics. After all, it's just another miracle drug, isn't it?—so remark the uninitiated. They may try if given the opportunity to belt it down as intrepidly but casually as any other "remedy." These reckless testers have always been in society's midst, sometimes in the least suspected stratas, and they may be the most evangelistic of all. "The white-collar pill party" is not the imagination of Jack Kerouac or Allen Ginsberg or Henry Miller or Anais Nin, but is being given by the "man in the street" who has received the "message."

So, too, for the original alcoholic binge, after distilled spirits were happened upon in the 13th century.^[4] If we wish to assess the dimensions of the future psychedelic blackmarket, we should ask ourselves these questions: "What if, instead of mind-changes, alcohol had just recently been discovered? What projections would we make about its future? Would we expect people to use it

once a month? Once a week? Daily? Would we expect abuses—perhaps involving horrible car accidents? And would it be worth it?" The statistics that answer these questions speak for themselves.

Now that LSD is no longer confined to the "Groves of Academe," a diversity of motivations for drug-ingestion and a cross-section of unprecedented results may be expected. Nearly all the "drug experiences" on record have emerged from the same milieu, despite their seeming diversity: they have all come from the classes who have had "higher education," from those specifically who "read." This fact would indicate they have had prior information on the psychedelic experience, no matter how piously conservative they may appear. The enlightened "pragmatists" of the current population may be meek and silent in matters pertaining to the "soul," but they still quest, and have pondered at length upon the intricacies in the meaning of myth and ritual. As time passes, however, more people undoubtedly will be trying the psychedelics who are totally unprepared for the experience. The outcome will be varieties of experience unlike anything seen to date.

The Psychedelic Style:

"I have never taken LSD," a young physician declared at a recent symposium, "but it has changed my whole life." And so it is for a growing number of people, whether they are yet aware of it or not. In movies, books, fashions, art, popular music and even in advertising, psychedelics are adding bold, bright color to the everyday scene. A co-existing transformation in values is more subtle, but similarly present. Like this young physician, many onlookers have become entranced with some of the vistas in ordinary life which LSD has apparently opened for its enthusiastic users and are increasingly eager to travel along vicariously to the broadened horizons.

Most LSD users find it difficult to define the way in which a session or two has influenced their life view. Their value systems, however, are often cited as having undergone a profound and liberating alteration. Under the drug's "white heat," intensity and persuasiveness, outlook becomes somewhat different for those who respond, and the new view is carried over into "normal reality." This point is expressed with candor and accuracy by one user:

When I say, "Let's see, how do I look at the world, and how do I look at myself," I observe that much of my present viewpoint is the result of memories of drug experiences which I have forgotten are drug experiences. I mean by that, that thoughts which I have had while using LSD have become amalgamated more or less into what I consider my normal experience.

It is now very unclear to me exactly how I've gotten my present values—how I see out of my eye. Ordinarily, for instance, time has a certain, identifiable effect upon the actions of human beings. But suppose as a result of using LSD, time no longer registers for you in the same way it does for other people? You can't say that what you have learned from the psychedelics is better or superior than the pre-LSD experiences, just that it seems more enjoyable and complete. You simply have to accept your new life in a world more acutely sensed than the everyday world.

In one sentence, I suppose what I am saying is that you must accept the fact that your drug experience and your daily experience will become fused, and that

your future perception of reality will be affected by your drug consciousness, and not only in ways which you have control of. This may be better, or it may be worse, but you must accept it. It will happen. It's a terrifying thing, it's absolutely terrifying, to think that a pill you swallow will influence you for the rest of your life. Taking psychedelics is a transforming experience, like getting educated, changing jobs, moving to another country, or falling in love.

The psychedelics bring about the vision of a world that is colorful, adventuresome, decent, open, prismatic, gentle, sweet, stimulating—in short, a sort of fairy tale come alive. It is therefore not surprising that the souvenirs brought back by LSD travelers are accepted as valid—if accepted at all—by many who would not themselves consider taking LSD. Success stories have always carried their own appeal, and the injection of some of the LSD experiencers' spiritual and Dionysian intuitions into America's largely Apollonian society is revitalizing. The upshot is diversified, but the developing "psychedelic style" is bringing a new reverence for life, a kind of humanistic pantheism and a renaissance of belief in the essential goodness in man.

Since this psychedelic style undercuts our 19th century Darwinian conception of the universe and man's place in it, future generations are less likely to grow up inculcated with a sense of basic meaninglessness in life and its buffeting forces, mechanistic behavior made endurable only through scientific advances. In contrast to the present psychedelic movement, which is composed of millions who only vaguely understand LSD, the generation to come may accept as their birthright the humanistic values the world has longed for.

It is hazardous to predict the manner in which such value shifts might take hold. It would be interesting to know if the large scale development of new life styles will have radically changed political systems by the time the century turns. Some spokesmen in the younger generation believe that because of the psychedelics, tolerance will replace extremism on both the left and right; while others feel "harmony" will be established via LSD by an accentuation of the differences between the haves and the have-nots.

Regardless of philosophical speculations about the future role of LSD, there is an abundance of current evidence that the psychedelic movement is well entrenched. Books about the psychedelic drugs are now prominently displayed in bookstores and constitute a sizable proportion of today's psychological literature. These books are not limited to scientific treatises and first-hand accounts of the drug experience, but novels too are now appearing in which psychedelics figure centrally. Thus Huxley contributed *Island*, a psychedelic alternative to his *Brave New World*. *Psychedelic*⁴⁰ takes a strong science-fiction line. John Hersey's Faustian parable, *Too Far to Walk*, has a college setting in which LSD acts as the magic elixir. *Yarborough*, by B. H. Friedman, has a strong sub-plot involving psychedelic drugs. And *The Shepard File* has been called the first "psychedelic thriller."

Life magazine has illustrated the strobe-lighted performance of LSD in art, fashion and entertainment. It is becoming increasingly clear that the whole Op-Pop world of art and design—sculpture, painting, clothes, fabrics, furniture, lighting—borrows heavily from the colors and eidetic images that are encountered in the early stages of the LSD experience.

Serious experimental (or "underground") filmmakers such as Harry Smith, Richard Aldcroft, Francis Lee, Jackie Cassen and Rudi Stern—as well as the group known as USCO—have for years attempted to express the psychedelic feeling and mood

cinematically, and are beginning to be shown in such places as The Riverside Museum. They have devised techniques and theory now being used by those commercial film-makers who have hitched their trailers to the psychedelic trend. The films "Modesty Blaise," "Arabesque" and "Fantastic Voyage" made early use of definite psychedelic elements.[5]

Psychedelic entertainment has further extended itself to discotheques, a Go-Go nightclub and "acid cinematiques." As seen in *Life's* cover story (Sept. 9, 1966), the youth of the country is responding enthusiastically to this "total assault on the senses." Attempts to produce a "drugless trip" often consist of "acid-rock" music played at monumental volume, accompanied by the incessant play of strobe lights, kleig lights, rapidly flickering images in swirling colors, projections from an "infinity machine" and other artificial sensory effects.

These sensory emporiums (one of them is even named "The Brave New World") are packed to capacity and new ones are being opened to accommodate the overflow. On the East Coast, The World, The Cheetah and Andy Warhol's Balloon Farm (with the "Plastic Inevitables") are already famous; on the West Coast "Hippies" of San Francisco jam the Filmore, the Avalon and other such halls in the Haight-Ashbury district. In Los Angeles "teeny-boppers" nightly take over the Strip from the "oldies," installing their own versions of night clubs, and nocturnally they move en masse into such hallowed retreats of daytime business-lunchers as Canter's Delicatessen.

"Far-out" acid-rock groups such as The Grateful Dead, Big Brother and the Holding Company. The Magic Mushrooms and The Quick-silver Messenger Service hold forth with exhilarating frenzy at psychedelic whirligigs, but they are scarcely known outside the "underground," even though they make occasional records. But other musicians, The Beatles, The Fugs, The Byrds and Bob Dylan, are well known for their "acid" songs—many of which have been banned on "popular" radio stations because of an implied encouragement to illicit drug use. "Let's Go Get Stoned," "Rainy Day Woman," "Eight Miles High," "Hey, Mr. Tambourine Man" and "Can't Get High" have all achieved notoriety because they are liked by the young, regardless of how shocking they are to most adults. The Beatles' hit album, "Revolver," contains a song straight out of the psychedelic version of *The Tibetan Book of the Dead*, although few parents probably realize it. (The verses begin: "Turn off your mind, relax and float downstream / This is not dying.") And strange as it may seem, Ravi Shankar, the Indian musician, has become something of a pop hero because of growing interest in Eastern music and the esoteric sounds of such instruments as the sitar, and because of the latest addition to the musical vocabulary, "raga rock."

A number of stores do a thriving business in psychedelically inspired goods: clothes, records, books, arts and crafts and such accessories as candles, incense, bells, mandalas, water pipes, kaleidoscopes, "freak goggles" and gigantic paper flowers. These concerns are called by such unbusinesslike names as the Blown Mind, Underground Uplift Unlimited and the Head Shop—and there are several "Psychedelic Shops." An "Underground Press Syndicate"—UPS—has been established coast to coast. Though its papers and magazines—*East Village Other*, *L.A. Free Press*, *Inner Space*, *Berkeley Barb*, *Psychedelic Newsletter*, *San Francisco Oracle*, *The Paper* and *The Fifth Estate*—attack what they consider the social and political evils of the contemporary scene, they are unmistakable and vociferous mouthpieces for the cause of psychedelics. There are other non-profit organizations and loose federations that exist to serve psychedelic interests. The Psychedelic Peace Fellowship, Solco, and several information centers are

specifically set up along the same lines as Alcoholics Anonymous and offer round-the-clock aid to any LSD user on a bad trip. (One has even issued a directory of psychedelic Good Samaritans.) All of this together adds up to a colossal network of activists; little wonder that the World War II term, the Underground, has been taken over by this movement.[6]

A Capsule Future:

Assuming that the stringent laws against responsible LSD use will be relaxed and that public sentiment will eventually appreciate the psychedelic's positive features, it can be assumed that the quality of life as we now know it has a first-rate chance of changing for the better.

It is safe to predict that if LSD treatment of alcoholics is allowed to resume and is expanded, alcoholism will be dealt a crippling blow, bringing it within bounds as T.B. was curbed with isoniazid and polio with the Salk and Sabine vaccines.

If organized religion decides to avail itself of LSD's efficacy in spiritual matters, the church may once again be a strong spiritual force.

If guidance centers for those struggling with personal and psychological burdens are able to use LSD in restructuring programs, the nation's mental health problem could be vastly reduced.

If gifted people in our schools and industries were allowed to participate in LSD programs aimed at making the most of their creative abilities and stimulating peak production, we could anticipate a Periclean age of achievement in all fields.

The last point deserves elaboration, for of all LSD's powers as a problem solver, the greatest appears to lie in its ability to summon and titillate the creative imagination. In treating alcoholics and neurotics, therapists know what to expect (cure rates, family readjustment, etc.); but regarding the exotic and little known chimera which is creativity, we know only that it roams a shadowy world which is, for the most part, closed to conscious exploration.

We have long been aware that the creative instinct is man's most priceless gift. As Huxley observed:

Perhaps the men of genius are the only true men. In all the history of the race there have been only a few thousand real men. And the rest of us—what are we? Teachable animals. Without the help of the real men, we should have found out almost nothing at all. Almost all the ideas with which we are familiar could never have occurred to minds like ours. Plant the seeds there and they will grow; but our minds could never spontaneously have generated them.

There have been whole nations of dogs... whole epochs in which no Man was born. From the dull Egyptians the Greeks took crude experience and rules of thumb and made sciences. More than a thousand years passed before Archimedes had a comparable successor. There has been only one Buddha, one Jesus, only one Bach that we know of, one Michelangelo.

But we are also becoming aware that creative abilities can be nurtured, that under auspicious conditions they may flourish, and that deliberate cultivation of creativity pays off handsomely in hardheaded commercial terms.

In 1944 a group of talented men from differing academic disciplines dramatically proved this practical point when they sat down to systematically dissect the creative principle—which they felt would yield its sacrosanct secrets if properly approached. Their aim was to "rationalize" creativity and set themselves up a problem-solving unit, available for industrial trouble-shooting and consultation. The success of the original group, formed in Cambridge, Mass. under the title Synectics,^[7] Inc. was unexpectedly prodigal, so much so that despite the complexity of their approach, other Synectics branches were soon formed to accommodate the growing demand for their services. Such industrial giants as Kimberly-Clark, Singer Sewing Machine, Johns-Manville and RCA-Whirlpool were early and enthusiastic customers. IBM, General Motors, General Electric, Esso, Monsanto, Du Pont, Gillette, Remington and the Pentagon have since been among the most distinguished clients.

Realizing the economic importance of "cultivated creativity" as a result of the practical money-saving improvements and original ideas which have come out of Synectics sessions, such companies have in many instances set about developing their own problem-solving groups, modeled after the Synectics "brainstormers." At a cost of about \$3000, less enterprising firms can hire the Cambridge Synectics group to work on its unresolved (or even undefined) problems over a three- or four-day period. For the going price of \$10,000, a great number of companies have also sent key personnel through a ten-week, half-a-day-a-week training program in Synectics theory. Because requests are now coming in by the hundreds each month, a Synectics branch has been opened in Mexico, in addition to those in the United States, and others are being set up in Japan, Germany and France.

A Synectics group is not a task force. Indeed, any similarity to the task force make-up—similar backgrounds, relevant competence and abilities, and a "team" approach—is deliberately avoided. Instead the object is to bring together as scrambled a group of opposite personalities as can operate purposefully. Furthermore, a Synectics group is often not so much interested in solving given problems as in "creating problems" which when solved will net the client new revenue from an unsuspected source, or open up opportunities for expansion.

The basic precept in this approach is to synthesize ideas which on the surface and in a rational sense seem in diametrical opposition. Analogies from nature, the elaboration of personal metaphors and a search for evocative questions are the primary tools used for locating new, untried solutions or developing overlooked possibilities—and the wilder and more disparate the collective thinking, the better. By emphasizing emotional and irrational intuitions and playing them off against analogies from various branches of learning, the Synectics group tries to reproduce consciously the unconscious inspirations that have come to men of genius. Surprisingly, their practice of entertaining far-fetched notions and refusing to reject anything on the grounds that the wildest absurdities might prove serviceable, prods imagination to unusually lively levels of productivity. In repeated instances such irreverent teasing of the creative unconscious gets useful results.^[8]

The Synectics rough-and-tumble approach to creative problems is important here because it is a well-understood, systematic method which demonstrated

itself. It proved also that there are many ways to skin a cat, and that a creative individual working alone may actually be limiting himself and inadvertently standing still if he adheres to the traditional front-door entrance.

As discussed in chapter III, LSD also takes an unconventional side-door path to technical and creative problem-solving, and like Synectics groups, it too calls forth unexpected intuitive material which may develop into an answer. In fact, the two processes can be viewed as essentially the same—if one thinks of LSD as a catalyst that primarily arouses *in a single mind* a torrent of conflicting ideas, a good deal of unconsciously repressed relevant material, and preposterous yet tolerated irrelevancies. Sufficiently mulled over and considered, these can bring to life an as yet unhatched synthesis. Looked at in this way, which is a fairly reasonable explanation of the drug's action when "programmed," LSD woos creativity in much the same style as does the Synectics method—though, of course, in its unfettered fashion it pursues in minutes the range of possibilities which might preoccupy a Synectics group for a lengthy period with little gain.

In a properly prepared and motivated subject, there is reason to believe that programmed use of psychedelics can provoke a level of insight at least as suggestive as that brought into being by practicing Synectics.^[9] Since Synectics groups are difficult to establish and require concerted attention, while LSD makes very few demands, the use of the psychedelic drugs in the realm of technical and creative problem solving should grow rapidly and be at least as incisive as was the introduction of Synectics theory. Thus LSD as a problem solver might multiply for untold numbers the satisfactions known to our creative minority; economically and culturally, such an advance could be tremendous; and socially, the promise is great, but of an impact impossible yet to assay. In terms simply of man's quest for new knowledge and innovation, it is now time for the funding of extensive research projects involving the psychedelics, and for the accumulation of information on what exactly the psychedelics can and cannot do when presented with a problem.

Synectics shares something of the uncanny ability of LSD to open new creative avenues, but the psychedelics can delve deeper into the unknown tissue of the unconscious and bring to the surface very curious flotsam and jetsam—much more than can any verbalized cerebral encounter. These drugs are also a superior agent in that they can enable an artist or technician to "visualize" his project as a prototype and perhaps examine or test it; help a scientist crystallize a vague hypothesis; or take an overly rigid conception apart, and reassemble it for inspection in a more workable way.

In addition to all this, the psychedelics yield still another prize, one rarely found to any pronounced degree with Synectics or any other creativity-enhancing medium. After having tried psilocybin, an artist commented on what is perhaps the most valuable aftermath of the drug:

I think that the most important part of what has happened to me since the experiment is that I seem to be able to get a good deal more work done.... When painting it generally takes me an hour and a half to two hours to really get into the painting and three or four hours to really hit a peak. Tuesday I hit a peak in less than a half hour....

Sunday afternoon I did about six hours work in two hours time. I did not worry about what I was doing—I just did it. Three or four times I wanted a particular color pencil or a triangle and would go directly to it, lift up three or four pieces of

paper and pull it out. Never thought of where it was—just knew I wanted it and picked it up. This of course amazed me but I just relied on it—found things immediately. My wife was a little annoyed at me on Sunday afternoon because I was so happy, but I would not be dissuaded.[10]

The impact of the psychedelics upon society depends less in the long run upon the number of users and the nature of their value shifts than it does upon whether or not the highly creative and the highly specialized users learn the advantages of reevaluating their work through an LSD lens. It is significant, therefore, that *Progressive Architecture*, a journal subscribed to by some 47,000 architects and designers, presented in its August, 1966, issue four lengthy testimonials to the architectural magic of LSD and followed it the next month with another LSD article, "Expanding Architecture." As time passes and the basic principles of session programming become commonplace, other professions may follow suit.

The future is rich with promise for all creative people and all who would aspire to become creative. Creative or technical problem solving need not be confined to the lofty regions of art or in the occupations that require years of academic training and painstaking practice before there is the possibility of original thinking or experimentation. The broad reaches of society—where talent is often smothered by shyness, or atrophied from lack of exercise—may eventually provide the richest, hardest and most substantial successes.

The achievement of small tasks, or coveted goals, is so personally enriching to the individual involved that it becomes as consequential as the solution of any problems—technical, personal, or artistic. Through the positive use of LSD, the true essence of each individual can be revealed in a mind-lighting fashion. With LSD, mankind can at last be released from an accumulation of illogical customs and traditions, and Everyman can become a prime problem solver.

AFTERWORD

WHEN EUROPEAN explorers and settlers set foot on the North American continent, they encountered a number of Indian tribes in which there existed the custom of sending adolescents on solitary trips into forests or deserts. The youths returned from these retreats with exciting stories of dramatic visitations from their guardian spirits. Whether these visions were the result of imagination, expectancy, physical privation, a sparse diet or the accidental ingestion of psychedelic plants is not known; however, a tradition was firmly established which dealt with mystical experience. Other Indian tribes induced visions by using psychedelic cactus buttons, morning glory seeds or mushroom caps in their religious ceremonies.

The European missionaries were horrified at these practices and attempted to stamp them out, referring to the Indians' visions as "fantasies of the Devil." The Europeans did not object to mind-dulling substances, as they permitted the natives to use narcotics (such as coca leaves) and tobacco. In addition, they introduced distilled whiskey, a substance which produced high percentages of alcoholics among American Indian tribes, as there existed no cultural tradition among these tribes in the use of "fire water." Psychedelic plants, which stimulated mental processes rather than dulling them, were denounced and suppressed because—according to one sixteenth-century friar—"their users see visions and are provoked to lust" These are precisely the same arguments being used 400 years later by

Establishment figures who have concentrated their efforts on suppressing LSD usage rather than on encouraging research.

The general American culture lacks a tradition in visionary experience, and there is a distrust of any insight obtained during a psychedelic session, a hypnotic trance, a dream period or any other altered states of consciousness. Exemplifying this attitude, Dr. Donald Louria, in a book entitled *The Nightmare Drugs*, warned parents that "unusual statements concerning awareness of unity with the universe or with God, or indicating a sudden comprehension of the meaning of life and love, should all cause one to consider that the individual is reacting to a potent hallucinogen." Before the arrival of Europeans on the continent, most Indian parents would have praised their children for the very reports that Louria and his colleagues now brand as pathological. One may observe how far the pendulum has swung and may judge for oneself which of the two positions is more conducive to the development of human potentials.

Professional as well as public tradition has omitted serious consideration of creativity, religious development and problem solving during reveries, daydreaming or other unusual conscious states. In fact, there is a basic disinterest in the fields of psychiatry and psychology as regards the entire topic of consciousness. Contemporary psychiatry is dominated by psychoanalytic theory as expounded by Sigmund Freud and his followers. Contemporary psychology is strongly influenced by the behaviorism of J. B. Watson and the neo-behaviorism of B. F. Skinner. Psychoanalysts emphasize the power of unconscious forces, minimizing the effect of conscious activity on human behavior. Behaviorists assert that "mind" and "consciousness" do not exist, while neo-behaviorists display little interest in subjective reactions of the human organism.

Both Freud and Skinner devoted some attention to creative processes, but neither described them as a potential to be developed by the fully functioning human being. Freud's interpretations of creative products by Michelangelo and Leonardo da Vinci stressed the unconscious, pathological, repressed aspects of personality. Freud once interpreted a short story by Fyodor Dostoevsky as "fundamentally a wishful fantasy... that his mother should herself initiate him into sexual life in order to save him from the dreadful injuries caused by masturbation." Skinner described the sonnets of William Shakespeare in terms of the poet's ability to resist "formal strengthening," a characteristic of "normal verbal behavior." Both Freud and Skinner explained creative processes in terms of their deviance from "normality" rather than as positive, healthy processes to be encouraged and developed. It is not surprising that most American psychiatrists and psychologists are baffled by the reports of LSD activity, puzzled by the subjective reports of LSD users, and skeptical about the value of LSD in man's efforts to understand, describe and change his behavior.

LSD, mescaline and psilocybin are often accused by psychoanalysts of inducing "toxic schizophrenic reactions." The action of psychedelic chemicals is not easily explainable in terms of the Freudian model of man, which was influenced by nineteenth-century physics. Many psychiatrists think of the human personality as a hydraulic pump; if sexual energy (or "libido") is repressed in one area, it will burst forth in another area. The psychoanalyst serves as a master plumber who steers the sexual flow into socially acceptable channels. The perceptual fluctuations and conceptual innovations which characterize the psychedelic experience are difficult to locate on the blueprint of the hydraulic pump and so are thought by many psychiatrists to mimic a psychotic reaction.

Psychologists who are influenced by behaviorism and neo-behaviorism assume that laws of learning can be determined which will provide a solid and reliable basis for psychological science. The human being is viewed as a complex computer with various inputs and outputs. These psychologists note that the LSD experience is unpredictable and suggest that it creates a short circuit in the computer. The results of this short circuit deviate from normal, expected behavior and are to be studied as something apart from the mainstream of the computer's performance.

It is in light of this regrettable situation concerning the twentieth century's image of man that the present book assumes a special importance. The book's contents challenge the hydraulic-pump model of personality as well as the computer model. In addition, the book is filled with material which reveals the shortcomings of the American culture's general avoidance of altered conscious states.

Hopefully, the data in this book will stimulate in some way a resurgence of scientific research with LSD. A careful reading of the experiments described by the authors demonstrates the promise of psychedelic drugs as well as the improvements needed in future research designs. Control groups must be organized, double-blind experiments must be set up, and the variables of set and setting must be more adequately considered. Once the officials of the National Institute of Mental Health have given their approval to additional research, the proposed experiments should be of the highest quality; future investigators can profit from the mistakes of the pioneers. In addition, the directors of future research projects should make every attempt to insure the safety and well-being of their subjects. There is no question that LSD can precipitate psychotic reactions among certain unstable people if used improperly or that the psychedelics can cause physiological complications among users with certain types of liver and kidney dysfunctions. However, the dangers of ill-advised LSD use must not overshadow the potentials of wise psychedelic usage and careful experimentation.

Peter Stafford and Bonnie Golightly have examined the experimental results and the clinical reports concerning LSD which have emerged from the fields of psychiatry, psychopharmacology, clinical psychology, parapsychology, religion and education. The fruits of their quest are a rich repast for the discerning reader. The currently available data suggest that, under the proper conditions, psychedelic drugs can enable the individual to cultivate those creative and spiritual facets of his personality that so often remain unexplored. In presenting this point of view, the book will be welcomed by those members of the medical arts, the behavioral sciences and the public at large who are concerned with the total self-actualization of human beings. These people will direct their attention more to the work of competent investigators than to the alarmists from medical and political Establishments who currently share the publicity spotlight with those "psychedelic prophets" encouraging illegal LSD usage. Despite the provocative social criticism that has been made by the "psychedelic prophets," their activities have contributed little of value in the way of scientific research.

Stafford's and Golightly's book will not win unanimous approval. Even the most carefully collected data in it will be questioned by the representatives of those psychiatric, business and legal Establishments eager to maintain the status quo. The book also will be dismissed by those persons who distrust spontaneity, imagination, unorthodoxy and evolution—the forces which have, in the past, resulted in humanism, progress, invention and mutation. The situation in regard to

psychedelic drugs, the present book and human development in general was well stated by Frank Lloyd Wright who once wrote, "Creation is not only rare but always hazardous... The soul of any civilization on earth... is Art and Religion, but neither has ever been found in commerce, in government or the police."

— STANLEY C. KRIPPNER, PH.D.

Footnotes

1. The immense psychedelic growth follows the pattern of other drugs developed since the early fifties. The tranquilizer-amphetamine-barbiturate boom began at that time and resulted in wide proliferation of drugs and patents (over 2500 were filed for barbiturates alone). Progress in other areas of medicine has kept pace so that it is now necessary to revise pharmacology texts constantly. After only three years, Andres Goth found he had to preface his new 1964 edition of *Medical Pharmacology* with the following: "When the first edition of this book was written, many drugs, now widely used, were still unknown. Many important concepts, currently widely held, were not yet recognized or understood." As it was, this re-issue too was out of date within a year.

2. "In contrast with the outcome of LSD experiences which are so often purely experiential and can hardly be translated into words," writes Dr. Naranjo, "Ibogaine seems to lend itself better to the development of intellectual insight.... I only know of one drug that lends itself better to the manipulation of the therapeutic experience, and this is MDMA, but the differences between the two are great. Whereas MDMA lends itself ideally to the probing into the ongoing situation in the 'here and now,' the analytic quality of the Ibogaine experience is useful in understanding the 'there and then'.... I would suggest that MDMA and Ibogaine may complement each other well in successive experiences, and both are in turn complementary to the non-analytical and often impersonal or a-personal experience of LSD."

3. Said one user upon trying the drug: "I took a puff and my arms and legs fell off. And then the garden of God opened up."

4. One of the most enthusiastic proselytizers for the joys of liquor was the alchemist Raymond Lully, who is often credited with the discovery of distillation. Although the art in his time was most rudimentary, calling, for instance, for wine, fermented in horse dung, Lully was so impressed with *aqua vini* that he thought its discovery meant that the millennium was at hand.

5. LSD-movie buffs would date the influence of psychedelics on commercial movies earlier. "La Dolce Vita," is considered "psychedelic" in feeling by many, and few would deny that "Juliet of the Spirits," and other superior imports—"Breathless," "Sundays and Cybele," "Help," etc.—bear the marks of the psychedelic style. Films made by screenwriters and directors who have tried to include some elements of the psychedelic experience in their portrayal of the human tragedy-comedy should be distinguished from those which use LSD itself as a dominating theme. There is just the barest outside chance that one of the latter films might succeed artistically and honestly, but indications at the moment do not favor such a possibility. As Lawrence Lipton has written in this regard, "If Hollywood's treatment of the Beat was any indication (and TV's and radio's) we can expect the worst."

6. That is not to say that there isn't a psychedelic "Overground." In New York and Los Angeles, there are courses offered to the public on LSD and its social implications. At San Francisco State one can arrange to audit a class at the Experimental College on "Cybernetics and LSD: A Study of the Application of Consciousness-Expanding Drugs to Technology." Perhaps the most amazing development in the "Overground" (in this case, the academic front) was the resolution by the National Student Association recommending revision of federal statutes against the use of the psychedelics, including marijuana. The NSA also called for the creation of inter-disciplinary centers for the integration of psychedelic experience and for monies to establish and maintain a Drug Studies Desk. (This resolution was issued in March, 1966, just before the explosion of LSD hysteria).

7. Synectics, from the Greek, meaning "the joining of seemingly diverse elements."

8. A good, illustrative Synectics session concerned the search for a new product which would have an earning potential for its manufacturer of \$300,000,000 per year. To warrant such financial expectations, it was evident that this product would have to be unique and of permanent value. An early suggestion was that maybe there might be a way to construct a road which would never wear out. Living coral was at first recommended, but soon dismissed as impractical, however self-replenishing. Then one of the group remarked that in the Arctic extremely hardy lichens grow on top of the snow, and that as a highway surface material they might be more suitable. Because no one had specific information on lichens, an encyclopedia was consulted, and it was discovered that lichens—which are part algae and part fungi—will grow on any surface, the atmosphere sufficing as the only necessary nutritional source.

Soon someone suggested that lichens might be added to paint, then canned and sold for dressing cement surfaces such as road dividers on super highways (to eliminate the expense and bother of grass) or to beautify desert areas. The group at this point was extremely excited and called in an expert. Though sympathetic, he pointed out various technical flaws in their thinking, and this possibility was gradually dropped. Nonetheless, the seemingly insurmountable difficulties were eventually overcome, for in the summer of 1966 a similar product, was put on the retail market.

In this instance, the Synectics group did not work out their idea in the laboratory. But in most cases they are concerned to realize the various products they conjure up, at least in prototype. Says one of their number: "You've got to dirty your hands and see that the thing works, otherwise, even the most brilliant inspiration can amount to nothing." Some of the realized innovations coming out of the Cambridge group include a better gasoline pump, a mineral fertilizer with a cement base, a water supply for Pakistan, an electric can opener and in the words of one journalist, "the feeding programme of American astronauts."

9. This raises the question, of course, as to whether or not there have been any Synectic sessions carried out under the influence of LSD. To date nothing has been published to answer this question a fact not surprising considering the paucity of literature on psychedelic problem solving until recently.

In the future such experiments undoubtedly will be undertaken if the group is

composed of LSD amateurs, probably most will be unable to handle the session effectively because of the enormous number of things happening to each one individually. On the other hand, it is not improbable that a group of serious psychedelic adepts can make much of such an opportunity. The pilot study into group problem-solving sessions carried out by the Institute for Psychedelic Research of San Francisco State College was inconclusive in this regard, although there were some group members both times it was tried "who felt there was enhancement of their individual creative abilities some of the time." On the whole, the use of psychedelics in a group did not seem as promising as did personal and individual explorations.

10. This case was presented by Frank Barron in his *Creativity & Psychological Health*.