Dream Becomes Nightmare: Adverse Reactions to LSD

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Lysergic acid diethylamide (LSD) was first synthesized in 1938, but it was not until 1943 that the drug's profound psychological effects were first discovered. In that year, shortly after Enrico Fermi initiated the earth's first nuclear chain reaction for the Manhattan Project, Dr. Albert Hofmann, who was involved in the discovery of LSD at Sandoz Pharmaceuticals in Basel, Switzerland, accidentally ingested some of the compound and experienced visual alterations and difficulty in riding a bicycle. At the time, he was looking for an analeptic with stimulant properties similar to those of nikethimide, which LSD resembles in molecular configuration (Wesson & Smith 1978). Instead of discovering a new analeptic, he had—after a five-year gestation—given birth to the most controversial chemical compound of the mid-twentieth century.

Hofmann recognized that the effects he had experienced were due to the LSD and later purposely ingested 250 micrograms (μg), an amount that he considered to be a small dose. The effects were most profound; later studies confirmed that doses in the range of 30 to 50 μg were sufficient to produce hallucinations. Hofmann (1970) realized that LSD was one of the most potent psychoactive compounds known.

During the next two decades, LSD underwent a social and medical evolution characterized by shifting professional and lay models of the drug's function. According to Metzner (1978: 138), "the first was the *psychotomimetic*, the psychiatric-pharmacological model, that treated the drug experience like a psychosis." This was followed, though not necessarily superseded, by the *hallucinogenic* model that employed LSD as a tool for studying the mechanisms of perception; the *therapeutic* model, which represented rather an about-face for a psychotomimetic; and then the *psychedelic* model that proposed that under proper conditions (Metzner 1978: 138) "the experience will be enlightening, productive and consciousness expanding."

As each of these models was developed, intriguing information filtered down to the general public, especially to the not-so-quiet silent generation. This dissemination of information became a flood when creative people in both the arts and sciences underwent the psychedelic experience through the Leary, Alpert and Metzner project at Harvard (or other philosophically similar projects around the country), and then wrote about their experiences in books and articles or discussed them on radio and television.

With the psychedelic model, LSD began to take on a religious-mystical cast, as evidenced by the theme and content of the first manual written by the three principals in the Harvard project, *The Psychedelic Experience: A Manual Based on the Tibetan Book of the Dead* (Leary, Metzner & Alpert 1964). The book was dedicated to Aldous Huxley. There follows a tribute to Walter Yeeling Evans-Wentz, the California-born Oxford anthropologist, who with Lama Kazi Dawa-Samdup made the first English translation of the *Bardo Thodal* as the *Tibetan Book of the Dead*. There are also tributes to Carl

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Gustav Jung and to Lama Anagorika Govinda, the highly cosmopolitan spokesman for Tibetan Buddhism in the United States.

The Harvard project's publication of related articles, interviews with and presentations by Leary, Alpert and Metzner as well as others of like mind undoubtedly added to the mystical shaping of the acid culture. However, it did not initiate the nonclinical use of LSD. Acid was already on the streets by 1964.

LSD IN THE HAIGHT-ASHBURY

At first there was a general sense of trust in the drug, which was echoed in the acid culture's trust in the universe itself. In the eyes of the user, acid could do no wrong. Through the summer of 1965, the number of people in the U.S. who had ingested LSD took a quantum leap and proceeded to accelerate. Commercial LSD had become more and more difficult to obtain, but individual entrepreneurs—conscious of the demand—began producing LSD, of variable quality, in quantity. By January 1967 the acid culture had grown large enough to bring together 40,000 acid users for a Tribal Be-In in San Francisco's Golden Gate Park. Media and grapevine coverage of the growing culture in San Francisco's Haight-Ashbury district, where many early acid users had congregated, gave rise to soon-to-be-confirmed speculation that the area would be flooded with young people from across the nation by the summer of 1967. It was labeled the Summer of Love by the evolving counterculture in San Francisco.

It was during this proliferation that the problem of LSD-induced negative reactions became acute. During the clinically supervised stage of LSD's sociopharmacological development, adverse reactions were rare. Sidney Cohen (1960), one of the pioneer investigators of LSD, reported that the incidence of psychotic reactions lasting more than 48 hours was 0.8 per 1,000 in experimental subjects and 1.8 per 1,000 in mental patients. However, by June 1967 when the Haight-Ashbury Free Medical Clinic first opened its doors on the corner of Haight and Clayton Streets negative acid trips or bummers, as the acid culture called them, were frequent.

Writing in the spring of that year, David E. Smith (1967), founder and medical director of the Haight-Ashbury Free Medical Clinic, identified the adverse effects of LSD as "largely psychological in nature," dividing them into acute immediate effects and chronic aftereffects. The acute effects occurred during the direct acid experience and were commonly called bad trips. These aberrations could take many forms. Often individuals would knowingly take the drug and find themselves in a state of anxiety as the powerful psychedelic began to take effect. They were aware that they had taken a drug, but felt that they could not control its effects and wanted to be taken out of their state of intoxication immediately. This condition is similar to that of becoming self-conscious in the midst of a threatening dream, but being unable to awaken from it. Acid users on a bad trip sometimes try to flee the situation that they are in, giving rise to possible physical danger. Others may become highly paranoid and suspicious of their companions or other individuals. They suspect that these other people are doing, or may be doing, something to them.

It should be noted that psychedelics other than LSD can produce bad trips. After eating a number of peyote buttons, one informant spent several excruciating hours firmly convinced that his wife and his best friend had plotted for years to kill him while he was helplessly intoxicated by the cactus buds.

Not all bad trips are based on anxiety or loss of control. Some people taking LSD display decided changes in cognition and demonstrate poor judgment. They may have the feeling that they can fly, and jump out of a window. Some users are reported to have walked into the sea, feeling that they were "part of the universe." Such physical mishaps have been described within the acid culture as "being God, but tripping over the furniture." Susceptibility to bad trips is not necessarily dose related, but does depend on the experience, maturity and personality of the user as well as the external environment in which the trip takes place. Sometimes the individual will complain of unpleasant symptoms while intoxicated and later speak in glowing terms of the experience. Negative psychological set and environmental setting are the most significant contributing factors to bad LSD trips.

A parallel to psychedelic bad trips may be seen in the multicultural annals of mystical religion, which describe a collection of phenomena encountered in deep meditation and yogic altered states of consciousness. These phenomena, variously called Guardians of the Gate or the Dweller of the Threshold, are personified in Eastern iconography as semihuman monsters of ferocious mien and demeanor who literally guard the entrance to heaven or nirvana and frighten away the unprepared. Much care is taken in mystical circles to prepare initiates for dealing with these forces.

TREATMENT

Acute Adverse Reactions to LSD

Techniques originally developed in free clinics and community-based self-help programs, as reported by Smith and Shick (1970), are based on the findings that most LSD bad trips are best treated in a supportive, nonpharmacological fashion through the restoration of a

positive, nonthreatening environment. Facilities, such as those occupied by the Haight-Ashbury Free Medical Clinic, in a residential setting with little to mark them as *medical*, with a quiet space (described as the Calm Center) set aside for drug crises and with casually dressed staff dedicated to a nonjudgmental attitude were admirably suited for such treatment. Talkdowns of most acute adverse LSD reactions may be accomplished without medication or hospitalization. Paraprofessionals with psychedelic drug experience are particularly effective. Amelioration of such states has even been accomplished by long-distance telephone calls (Alpert 1967).

In the talkdown approach, one should maintain a relaxed, conversational tone to assist in putting the individual at ease. Quick movements should be avoided. One should make the patient comfortable, but not impede their freedom of movement. Let them walk around, stand, sit or lie down. At times, such physical movement and activity may be enough to break the anxiety reaction. Gentle suggestion should be used to divert patients from any activity that seems to be adding to their agitation. Getting the individual's mind off the frightening elements of the bad trip and onto positive elements is the key to the talkdown.

An understanding of the phases generally experienced in an LSD trip is most helpful in treating acute reactions. After orally ingesting an average dose of 100 to 250 μg, the user experiences sympathomimetic responses, including elevated heart rate and stimulated respiration. Adverse reactions in this phase are primarily anxiety reactions that occur in novices and generally are managed by reassurances that the observed experiences are normal and expected effects of LSD. This is usually sufficient to change a potentially frightening situation into a pleasurable experience.

From the first to the sixth hour, visual imagery becomes vivid and may take on frightening content. The patient may have forgotten taking the drug, and given acute time distortion, may believe this retinal circus (Michaux 1963) will go on forever. Such fears can be dispelled by reminding the individual that these effects are drug induced, by suggesting alternative images and by distracting the individual from those images that are frightening.

In the later stages, insights and philosophical ideas predominate. Adverse experiences here are most frequently due to recurring unpleasant thoughts or feelings that can become overwhelming in their impact. The therapist can be most effective by being supportive and by suggesting new trains of thought.

The therapist's attitude toward psychedelics and their use is very important. Empathy and self-confidence are essential. Anxiety and fear in the therapist will be perceived in an amplified manner. Physical contact with the individual is often reassuring, but can be misinterpreted. The therapist should rely on intuition.

Wesson and Smith (1978) noted that medication may be necessary and should be given either after the talkdown has failed or as a supplement to the talkdown process. During the first phase of intervention, oral administration of a sedative, such as 25 mg of chlordiazepoxide or 10 mg of diazepam, can have an important pharmacological and reassuring effect.

During the second and third phases a toxic psychosis or major break with reality may occur, in which one can no longer communicate with the individual. If the individual begins acting in such a way as to be an immediate danger, antipsychotic drugs may be employed. Only if the individual refuses oral medication and is out of behavioral control should antipsychotics be administered by injection. Haloperidol (2.0-4.0 mg administered intramuscularly every hour) is the current drug of choice. Any medication, however, should only be given by qualified personnel. If antipsychotic drugs are required, hospitalization is usually indicated. However, it has been found at the Haight-Ashbury Free Medical Clinic that most bad acid trips can be handled on an outpatient basis by talkdown alone.

As soon as rapport and verbal contact are established, further medication is generally unnecessary. Occasionally an individual fails to respond to the above regimen and must be referred to an inpatient psychiatric facility. Such a decision must be weighed carefully, however, as transfer to a hospital may of itself have an aggravating and threatening effect. Hospitalization should be used only as a last resort if all else has failed.

Chronic Adverse Reactions to LSD

Chronic toxicity presents situations wherein a condition that may be attributable to the ingestion of a toxic substance occurs or continues long after the metabolization of that substance. With the use of LSD, four recognized chronic reactions have been reported (Wesson & Smith 1978): (1) prolonged psychotic reactions; (2) depression sufficiently severe so as to be life-threatening; (3) flashbacks; and (4) exacerbations of preexisting psychiatric illness.

Some people who have taken many LSD trips, especially those who have had acute adverse reactions, show what appears to be serious long-term personality disruptions. These prolonged psychotic reactions have similarities to schizophrenic reactions and appear to occur most often in people with preexisting psychological difficulties: primarily prepsychotic or psychotic personalities.

LSD-induced personality disorganization can be quite severe and prolonged. Appropriate treatment often requires antipsychotic medication and residential care in a mental health facility followed by outpatient counseling.

The counseling center at the Haight-Ashbury Free Medical Clinic, which operated from 1967 through 1973, was developed to deal with the special aspects of these LSD-induced chronic psychotic reactions (Smith & Luce 1969). Clinic staff found that some of the clients self-medicated their LSD-precipitated psychotic episodes with amphetamines, a technique that was initially successful. However, often the self-administered amphetamine dose became too high and patterns of amphetamine abuse developed, followed by secondary heroin, barbiturate or alcohol abuse patterns to ameliorate the side effects of the amphetamines. Thus, in certain patients, chronic psychological problems induced by LSD led to complicated patterns of polydrug abuse that required additional treatment approaches (Smith & Wesson 1975).

FLASHBACKS

By far the most ubiquitous chronic reaction to LSD is the flashback. Flashbacks are transient spontaneous occurrences of some aspect of the psychedelic drug effect occurring after a period of normalcy that follows the original intoxication. This period of normalcy distinguishes flashbacks from prolonged psychotic reactions. Flashbacks may occur after a single ingestion of a psychedelic, but more commonly occur after multiple psychedelic drug ingestions. The flashback experience has also been reported following the use of marijuana (Brown & Stickgold 1976). Flashbacks have been reported to occur during times of stress, relaxation or everyday activities; during intoxication by alcohol, barbiturates or marijuana; and during ingestion of antihistamines.

Flashbacks are a symptom, not a specific disease entity. They may well have multiple etiologies, and many cases called flashbacks may have occurred although the individual had never ingested a psychedelic drug. Some investigators have indicated that flashbacks may be due to a residue of the drug released into the body at a later time. However, there is no direct evidence of retention or prolonged storage of LSD. By and large, health professionals whose training is oriented toward psychology usually invoke psychological explanations for flashbacks, whereas those who are physiologically oriented attempt to explain the phenomenon in physical terms. Moreover, there is no agreement as to whether flashbacks in and of themselves are positive or negative occurrences. Given the intensity of the states of altered consciousness encountered during a psychedelic experience, an individual may become aware of natural changes in visual, perceptual or bodily sensations that do not usually reach conscious awareness. Once the sensation has been noticed, however, future recurrences may be reminiscent of the psychedelic state. If the individual attaches a negative connotation to the experience and believes that the experience is a flashback, anxiety or fear is then produced by the belief that a flashback is occurring. This circular reasoning process can escalate to panicked proportions.

The following is a report of chronic flashbacks, resulting from a single LSD ingestion, by a 29-year-old graduate student:

> On August 1, 1966, I ingested approximately 1,400 micrograms of LSD, produced by Sandoz Pharmaceuticals, in two 700 microgram doses spaced 45 minutes apart. Although the setting was not clinical, the trip was controlled by an experienced acid guide. Consequently, though the trip was profound in both a psychological and philosophical sense, I experienced no acute reactions. For a week following ingestion, I was in a state of digesting what I had experienced. Then, on the night of the full moon, I reexperienced many of the visuals and feelings I had encountered on the acid trip. These kept me awake throughout the night and left me exhausted and somewhat shaken in the morning. For a period of months thereafter, I experienced a variety of what appeared to be spontaneous psychedelic happenings, the intensity of which seemed to wax and wane with the moon. These included shifts in color and form perception; slides appearing to be movies with bodies of water and people in motion; buildings leaning inward as though I looked down streets through a fish-eye lens. Every evening at twilight, the walls of my cottage moved in and out as though the room were breathing. Most trying, however, were nights of the full moon. I seemed to slip back into the acid trip at the height of its intensity.
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> This period coincided with the beginning of a media blitz on the adverse long-range effects of LSD, and these newspaper and radio horror stories intensified my fear and discomfort. In time, I came to realize that what I was experiencing was nothing to be feared. I launched into an intensive study of primary sources in Eastern psychology and mystical religion, and learned that what was happening to me was understandable in a mystical context and not unique to chemical psychedelics. The full moon experiences faded and I accepted what remained as legitimate awareness that had not been available to me prior to ingesting LSD, but could be reached or expanded by other and nonchemical means.

It is difficult to assess the role of apocryphal media stories in the dramatic rise in incidents of chronic LSD toxicity from 1966 through the early 1970's. The human mind is highly suggestible, and people faced with daily allegations that something they have done (be it drug taking or masturbation) will have a lurid variety of drastic results, could be expected to panic at any indication of nonordinary thoughts or perceptions in themselves. An example of this susceptibility can be seen in the Haight-Ashbury Free Medical Clinic experience. Several years ago, while providing medical coverage for rock music concerts at the Oakland Coliseum, the practice of flashing specific drug warnings on the scoreboard was initiated. The result was similar to that reported earlier by Wavy Gravy (Rosenbaum 1979: 38), a long-time representative of the counterculture: "It was like at Woodstock when they started screaming over the mike, 'Anyone who took the purple—you have just been poisoned. You have eaten some strychnine . . . . So, suddenly, I was working the freakout tent at Woodstock, and I was buried in purple freakouts and there were 37 different shades of it." Under like circumstance, the Clinic's practice was quickly amended to giving general warnings of the presence of phencyclidine (PCP) and other unpredictable drugs of deception in the stadium, and the number of bad LSD reactions diminished.

Individuals who have used psychedelic drugs several times a month have indicated that fleeting flashes of light and afterimage prolongation occurring in the periphery of vision commonly occur for days or weeks after ingestion. Members of the acid culture tend to accept these occurrences as part of the psychedelic experience, are unlikely to seek medical or psychiatric treatment and frequently view them as free trips. It is the inexperienced user and the individual who attaches a negative interpretation to these visual phenomena who are likely to be disturbed by them and seek medical or psychiatric treatment. While emotional reactions to the flashback is generally contained within the period of the flashback itself, prolonged anxiety states of psychotic breaks have occurred following a frightening flashback.

Flashback phenomena have attracted considerable attention since 1966 and public interest was heightened in 1970 by the widely publicized suicide of Diane Linkletter, daughter of television personality Art Linkletter. Her death was blamed on an LSD flashback and focused public attention on the possible dangers of flashbacks. However, it was a series of sensational murders that galvanized fear of the possible social ramifications of psychedelic drug use.

THE MANSON EPISODE

After the highly publicized investigation of two group murders in the Los Angeles area, including that of actress Sharon Tate, the menacing face of Charles Manson, self-styled god and devil, burst upon the nation's front pages as the evil genius behind the murders. As Manson and his followers had spent time in the Haight-Ashbury district and had taken LSD, the media lost little time in characterizing Manson's group as an "LSD drug cult." The acid culture, however, was as much horrified by Manson's crimes as the general public.

Charles Manson did not just spring into existence with the solving of the Tate and LaBianca murders. His passage through the Haight-Ashbury and subsequent founding of a rural "group marriage" commune were documented (Smith & Rose 1970; Smith & Luce 1969). Charlie, as he was called, first arrived in San Francisco in the fall of 1967 at the age of 32, a parolee from McNeil Island who had spent most of his adult life behind bars. His parole officer was Roger Smith, Director of the Haight-Ashbury Free Medical Clinic's Amphetamine Research Project, which was established to study the growing speed culture in the Haight-Ashbury district. Smith found Charlie to be "one of the most hostile parolees I've ever known." For his own part, Manson seemed convinced that he could not adjust to the outside world and was destined to spend most of his life in prison.

By the time of his arrival, the Summer of Love had passed and most of the original acid culture had fled Haight-Ashbury. Manson met enough remaining susceptible and receptive young men and women to absorb at least a litany of oceanic belief and to be transformed by LSD. The women were known as Charlie's Girls at the Clinic and they believed Charlie had magical powers. Manson used LSD in his group to facilitate and reinforce belief in his supernatural powers. Roger Smith commented on his transformation (Smith & Luce 1969: 257): "Charlie never lost his touch as a con man, and you could always tell there was something manipulative going on in the back of his mind. But that was to be expected, considering his background. What I didn't expect was that he lost almost all of his overt hostility. Suddenly, this poor guy who had been kicked around all his life seemed to accept the world. He would say, if you love everything, you don't have to think about what bothers you; whatever hand you get handed, you just love the cards you have."

Although Manson was now taking acid on a daily basis, it is difficult to tell how much his new life was influenced by the drug and how much by the ideas of a politically conservative retired naval officer whom he probably never met. This man was Robert Heinlein (1961)

whose science fiction novel *Stranger in a Strange Land*—with its rendition of a group marriage society created by a human foundling who had been raised and given superhuman powers by Martians—influenced many acid heads, but probably no one as much as Charles Manson.

So much has been said and written about Manson's psychopathology that there seems little need to repeat it here, beyond noting that Ernest Dernburg, who was Chief of Outpatient Psychiatric Services for the Haight-Ashbury Free Medical Clinic at that time, suspected that Manson was a paranoid schizophrenic with an encapsulated psychosis who denied reality by surrounding himself with others who were similarly, though perhaps not so extremely, inclined (Smith & Rose 1970). Be that as it may, Manson fitted his own fantasies to the plot of *Stranger in a Strange Land*. He soon began collecting his clutch of impressionable, maternal and/or groupie-like young women, creating his own version of a Martian family with himself as patriarch. In so doing, he helped establish the model that has led in recent times to such monolithic groups as the People's Temple, once headed by the now deceased Reverend Jim Jones.

Manson's nest began on Cole Street, near the Haight-Ashbury Free Medical Clinic, where Clinic staff were able to observe them from time to time. In May 1968, apparently frightened by the increasing violence inspired by speed freaks and hoodlums in the Haight-Ashbury district, they left the city and eventually moved to the Spahn Movie Ranch, a former location for filming Westerns, on the outskirts of the San Fernando Valley. There they ostensibly remained until their arrests after the murders.

It has been hinted that LSD played a major role in the initiation of Charlie's Girls and was largely responsible for their acceptance of his phenomenological world and their blind obedience to his wishes. At least during the Cole Street period, the group was reported to have used acid extensively. However, recent attention to similar cult groups indicates that LSD may not have been the only precipitating ingredient in preparing their consciousness for the violence that followed the unquestioning obedience to Manson's delusions and instructions. This possibility seems at least somewhat substantiated by Alan Rose, a former administrator of the Haight-Ashbury Free Medical Clinic, who stayed with the Manson family at the Spahn Ranch for a period of time and wrote of their collective drug use (Smith & Rose 1970: 116-17): "The group usually gathered together after dinner and smoked marijuana while singing or talking. Drug use, however, was primarily recreational and had little to do with the central philosophy of the group. . . . This commune was not a 'vegetarian commune' nor was it involved in Eastern religion. LSD-induced psychedelic philosophy was not a major motivational force."

The Manson delusion that led to mass murder came neither from LSD ingestion nor from *Stranger in a Strange Land*. Rather, it was formed during his prison years at McNeil Island as an apocalyptic belief that the Blacks, whom he distrusted, would one day rise up and slaughter the Whites. It was this delusion that formed a probable motive for the murders, which were accomplished in a most brutal manner and made to appear as though they had been committed by Blacks (Bugliosi & Gentry 1974), in order to promote an overreaction by Whites that would hasten Manson's version of Armageddon.

While echoes of similarity to the Manson family and its activities may be found in events that range from brainwashing in the Korean War to the paranoia and isolation in the Nixon White House, Manson's ability to control the lives of his followers, and his followers' ability to perform atrocities on the basis of casual command, still present an enigma. This is true even now on the far side of the Jonestown tragedy, wherein Jim Jones took his followers a step further, from taking the lives of others to taking their own.

In a revealing memoir (Watkins & Soledad 1979), one of Manson's few long-term male followers spoke of the group members' need for a home except "Charlie [who] had the joint." Ungerleider and Wellisch (1979), writing on religious cults and deprograming, noted that their case studies indicated a "strong ideological hunger" and that "these cults appear to provide, at least for a time, nourishment for these ideologic hungers as well as relief from the internal turmoil of ambivalence." They also noted that many cult members arrive with a strong sense of hostility, extending even to their own cult leaders, and concluded that "this denied or repressed hostility might be projected onto figures outside the cult."

Love? Hate? Jonestown? Massada? Patriotism? Madness? Speculation on cult behavior seems to lead more to speculation on basic human and cultural values than to any certitude of drug-induced aberration. It is as difficult to clearly assess the extent of the role played by LSD in the Manson family's exploits as it is to clearly assess the psychological and physical effects of LSD, be they euphoric, curative or dysphoric, on any individual. For the past two decades, meaningful research on LSD at the clinical level has been blocked by a governmentally sanctioned and legally enforced climate of fear.

LSD TODAY

What progress has been made in understanding LSD in the last 20 years has been made in the street and not in

the laboratory. Smith's contention that the drug community had learned how to handle bad trips without attracting the attention of medical or police authorities (Metzner 1978) is echoed in data gathered by Newmeyer and Johnson (1979) at rock concerts from 1973 through 1977. Their findings indicated that while treatment incidents involving LSD accounted for only 5.9 percent of all drug treatment at concert sites, and alcohol accounted for 60.2 percent, there was a much higher proportion of LSD use without complications. Furthermore, Newmeyer and Johnson (1979: 236) stated that "for these people, acid-tripping with the Grateful Dead may be an occasional weekend diversion in the time-honored tradition equivalent to tailgate, whiskey-lubricated parties at football games, or six-packs and hot dogs at baseball games. Such public drug use may correspond to what Harding and Zinberg (1977) have identified as rituals of controlled drug use, involving social sanctions which structure and limit the experience."

Recent ethnopharmacological and ethnomycological studies, most notably those of Wasson, Ruck and Hofmann (1978), have indicated that the Hellenic, classical Greek and Roman cultures knew of psychedelics, such as ergot, that would have given an experience similar to that of LSD, and used them culturally and ritually as a means to achieve expanded awareness and spiritual fulfillment. Perhaps the street use of LSD is undergoing a similar evolution, within which adverse reactions have met with a dramatic decrease. From a clinical point of view, however, such enculturation may be seen as Alcibiadean profanation of what really needs to be done: a resumption of legal research on the nature and uses of LSD and other psychedelic substances.

It is entirely possible that much of what has been seen as adverse effects of LSD are as much a product of a climate of official fear as it is the abrogation of research efforts over the past two decades. With the exception of the exacerbation of preexisting psychiatric illness, many chronic reactions may be attributed to improper setting, impurities and adulterants in street concoctions, anxiety produced by misguided medical and law enforcement attitudes as well as government and media scare tactics. With a sane and knowledgeable approach to LSD, the presence of potential adverse effects could be reduced even more than they have been by an accumulation of street wisdom concerning the drug.

Even the somewhat ubiquitous flashback can be defanged when removed from a context of fear. As Metzner (1978: 139) has pointed out, "Flashbacks have often been considered one of the great dangers of LSD. It has been overlooked that to flashback to an experience of heightened awareness and intuitive perception could be a very salutary thing."

REFERENCES

Alpert, R. 1967. Psychedelic drugs and the law. *Journal of Psychedelic Drugs* Vol. 1(1): 7-26.

Brown, A. & Stickgold, A. 1976. Marijuana flashback phenomena. *Journal of Psychedelic Drugs* Vol. 8(4): 275-283.

Bugliosi, V. & Gentry, C. 1974. *Helter Skelter*. New York: W.W. Norton.

Cohen, S. 1960. Lysergic acid diethylamide: Side effects and complications. *Journal of Nervous and Mental Disease* Vol. 130: 30-40.

Harding, W.M. & Zinberg, N.E. 1977. The effectiveness of the subculture in developing rituals and social sanctions for controlled drug use. In: Du Toit, B.M. (Ed.). *Drugs, Rituals and Altered States of Consciousness*. Rotterdam: A.A. Balkema.

Heinlein, R.A. 1961. *Stranger in a Strange Land*. New York: G.P. Putnam's Sons.

Hofmann, A. 1970. The discovery of LSD and subsequent investigations on naturally occurring hallucinogens. In: Ayd, F.J., Jr., & Blackwell, B. (Eds.). *Discoveries in Biological Psychiatry*. Philadelphia: J.B. Lippincott.

Leary, T.; Metzner, R. & Alpert, R. 1964. *The Psychedelic Experience: A Manual Based on the Tibetan Book of the Dead*. New Hyde Park, New York: University Books.

Metzner, R. 1978. Reflections on LSD—ten years later. *Journal of Psychedelic Drugs* Vol. 10(2): 137-140.

Michaux, H. 1963. *Miserable Miracle*. trans. L. Varese. San Francisco: City Lights Books.

Newmeyer, J. & Johnson, G. 1979. Drug emergencies in crowds: An analysis of "rock medicine," 1973-1977. *Journal of Drug Issues* Vol. 9: 235-245.

Rosenbaum, R. 1979. Interview: Wavy Gravy. *High Times* February: 36-99.

Smith, D.E. 1967. Editor's note. *Journal of Psychedelic Drugs* Vol. 1(1): 1-5.

Smith, D.E. & Luce, J. 1969. *Love Needs Care*. Boston: Little, Brown.

Smith, D.E. & Rose, A.J. 1970. The group marriage commune: A case study. *Journal of Psychedelic Drugs* Vol. 3(1): 115-119.

Smith, D.E. & Shick, J.F.E. 1970. Analysis of the LSD flashback. *Journal of Psychedelic Drugs* Vol. 3(1): 13-19.

Smith, D.E. & Wesson, D.R. 1975. Editors' note. *Journal of Psychedelic Drugs* Vol. 7(2): 111-114.

Ungerleider, J.T. & Wellisch, D.K. 1979. Coercive persuasion (brainwashing), religious cults and deprograming. *American Journal of Psychiatry* Vol. 136(3): 279-282.

Wasson, R.G.; Ruck, C.A.P. & Hofmann, A. 1978. *The Road to Eleusis: Unveiling the Secret of the Mysteries*. New York: Harcourt, Brace, Jovanovich.

Watkins, P. & Soledad, G. 1979. *My Life with Charles Manson*. New York: Bantam.

Wesson, D.R. & Smith, D.E. 1978. Psychedelics. In: Schecter, A. (Ed.). *Treatment Aspects of Drug Dependence*. West Palm Beach, Florida: CRC Press.