

## PSYCHODYNAMICS OF CHRONIC LYSERGIC ACID DIETHYLAMIDE USE

### A CLINICAL STUDY OF TEN VOLUNTARY SUBJECTS

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In spite of repeated warnings regarding adverse drug effects (3-5, 13, 14) and more recently concerning possible chromosome changes (10) resulting from the use of hallucinogenic drugs, there exists a group of people who use these drugs, especially lysergic acid diethylamide (LSD), repeatedly. Studying the motivations for such drug use by these people is not easy because the ostracism and illegalities involved in the use of these drugs make it difficult to find a cooperative sample of drug users who will give reliable information concerning these activities. Blum and his associates (2) reported these difficulties in their efforts to make a field study of black market LSD users. As a consequence, our knowledge of the personal lives and psychodynamics of hallucinogen users has primarily been derived from the study of psychiatric patients, usually hospitalized, who have taken these drugs (1, 8, 12). In my position as the psychiatrist in a multidisciplinary research project on LSD effects (7), I had the opportunity to study 10 male chronic LSD users who volunteered as research subjects. It is difficult to know how

representative this sample is of chronic LSD users. Nevertheless, these subjects were willing to undergo psychiatric evaluations and psychological testing which allowed us to study them in some depth. The purpose of this paper is to describe the lives, drug experiences and motivations for hallucinogenic drug use of these subjects. The focus of this report is on these individuals, and not on the social and cultural factors which also contribute to this behavior.

#### SAMPLE AND METHODS

Volunteers for this study were initially recruited through a practicing psychiatrist who had contact with some men who had expressed an interest in LSD research. Once they had been told of our research project, they willingly and rapidly recruited their friends as potential subjects. The criteria for acceptance in the study were that the subjects be males, 21 years of age or older, and not diagnosed as psychotic or borderline psychotic in the screening evaluation. Because of the complex tasks a subject had to perform after ingesting LSD, we required that all subjects had taken LSD at least once previously. Eight of the first 10 volunteers met the above criteria at the time of screening. Data from the screening assessments of the 2 subjects who were not accepted will be included in this report. Since only 8 subjects were needed, several subsequent volunteers were not screened.

All 10 subjects were white and came from middle or upper middle class social backgrounds. They ranged in age from 21 to 31 years with a mean age of 24.6 years. All had siblings. Seven were the last born child, while 3 were the first born. Five came from

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Protestant, 4 from Jewish, and 1 from Roman Catholic religious backgrounds. Five had never married. The other 5 were married; 1 of these had divorced and remarried, while another was legally separated.

All subjects were screened by means of a diagnostic psychiatric interview (with the author) and a battery of psychological tests comprised of the Rorschach, Bender Visual-Motor Gestalt Test and Human Figure Drawings (administered and tape-recorded by Elizabeth Sherwood, M.A. and Sheila Gell, M.A., and interpreted by Winfield Scott, Ph.D.). The eight volunteers who passed the initial screening were studied in more detail for 6 days as inpatients on the normal volunteers' ward. These subjects had four additional 1-hour interviews with the same psychiatrist who had initially evaluated them. During each of these interviews the subject repeated the Human Figure Drawings. Two of these interviews were held while the subject was under the influence of drugs. The schedule of these interviews was as follows: the first, on the 2nd hospital day, 24 hours after admission; the second, on the 3rd hospital day after ingesting 15 mg of dextroamphetamine; the third, on the 5th hospital day after ingesting 50  $\mu$ g of LSD-25; and the fourth, on the 6th hospital day, 24 hours after the LSD ingestion. During the 6 hospital days, the ward behavior of the subjects was observed continuously by the nursing staff and intermittently by the author; these informal observations were recorded.

#### DRUG HISTORIES

These men varied in their duration of LSD use between 6 months and 5 years, with a mean duration of 2 years. The group mean for LSD use was  $37.5 \pm 16.2$  experiences per subject, with a minimum of 6 and a maximum of 100 experiences per subject. Seven subjects had taken LSD between 6 and 30 times, one had taken it about 50 times, and two had taken it approximately 100 times. One subject had first taken LSD

under supervision as an experimental subject; the other nine had been started by friends who procured the drug from black market sources. The typical LSD dose they reported taking was between 200 and 500  $\mu$ g.

The adverse reactions reported by the group conformed to those described by Frosch *et al.* (6) as the acute panic reactions and the prolonged reappearance of symptoms. All subjects experienced occasional panic reactions, with paranoid thoughts, under the effects of LSD; all stated they had learned to expect these reactions and to tolerate their anxiety in response to them. Nearly all reported occasional, transient flashbacks into the psychedelic experience, and three reported the frightening experience of having a prolonged reappearance of symptoms lasting approximately 3 months. The subjects blamed unexpected circumstances and inexperienced "gurus" (leaders) for these prolonged reactions. The most impressive finding was the relative infrequency of adverse reactions to LSD and other hallucinogens considering the degree of personality disturbance in these subjects; their use of these drugs in unsupervised, uncontrolled settings; and their frequent lack of knowledge of the name, quantity or expected effects of the drugs they ingested.

Eight subjects were habitual drug takers. They not only had taken LSD but had tried the whole variety of hallucinogens. They had easy access to these drugs and would often "try out" an unknown hallucinogen for a friend who wanted to gain a market for the drug. All 10 subjects smoked marihuana and 8 of them had extensive experience with the amphetamines. The group complained of a dysphoric "letdown" from the amphetamines and alcohol; they stated that marihuana and the hallucinogens did not produce this reaction. As the accepted intoxicant of society, alcohol was viewed with contempt and its effects were described as very unpleasant by the group. The

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two subjects who had taken LSD most frequently had also tried heroin. Both had disliked the sickness it caused them and had not continued to use it. A clear distinction was made by the subjects between themselves as hallucinogen users and those groups who used narcotics.

#### FAMILY HISTORIES

A characteristic pattern of family relationships emerged from the life histories of these men. Their parents had failed in their efforts to have an intimate relationship with one another. Their fathers had been preoccupied with their work or other interests to the exclusion of interest in their wives, and in two instances had left the family altogether through divorce and desertion. Their mothers, lacking emotional support and care from their husbands, had turned to their sons, the subjects, to compensate for their disappointing marriages. During their childhoods the subjects had been involved in intensely close relationships with their mothers, and the family had divided into rivalrous factions. The subjects and their mothers were on one side against their fathers and siblings on the other. The fathers were viewed as hated and feared rivals who had disappointed their mothers. During their adolescence, two subjects had lost their mothers by death; both continued to feel bitterly toward their fathers for this major disappointment in their lives. As adults, all subjects remained highly critical of their fathers, experienced little emotional closeness to them, and felt that their fathers had rejected them. The only subject who had a close relationship with his father portrayed him more like a peer than a parent; he bragged that he had convinced his father to "turn on" with LSD to celebrate his approaching 50th birthday.

As might be expected, the subjects described their sibling relationships as lacking emotional closeness or else filled with hostile rivalry. In describing their pasts, most subjects presented themselves as though

they were the only child until specifically asked about their siblings. A single exception was one subject who had adored his older sister; she had acted like a second parent to him following the death of his father, whom he hardly knew. He was 11 when his father had died unexpectedly of a heart attack. At 20 this subject required psychiatric hospitalization for a suicidal depression at the time his sister married.

These subjects lived home-bound childhoods, for their intense attachment to their mothers precluded important relationships outside the home. When faced with the task of becoming independent as adolescents and young adults, two characteristic patterns were followed by these men. One group, who were the more constricted and inhibited subjects, had never clearly separated. They had made temporary efforts to go away to college, but had returned to live at or near home to continue their dependent and hostile relationships with their parents. The other group, who were the more impulsive subjects, had defiantly broken away during adolescence through intense involvement with their peer groups. In late adolescence they left home never to return; any subsequent contact with their parents was usually filled with animosity, fighting and resentment for feeling deprived. Whichever pattern they had followed, the subjects continued to feel deprived of something which they had been promised by their mothers and not given and which they had never even started to get from their fathers.

The married subjects had sought to establish with their wives the closeness they had once had with their mothers. Each had hoped to find a wife who would devote herself to taking care of him and would replace the lost sense of intimacy. Predictably, they had been disappointed and had reacted to this letdown with intense anger which they had feared would drive their spouses further away. In an effort to find mutual closeness, the couples had taken LSD together and in these psychedelic

experiences they had shared a sense of intimacy and merging together which the subjects reported to be the most gratifying aspect of their marriages. Most of the non-married subjects had made a similar use of LSD.

#### EDUCATION AND WORK HISTORIES

In spite of their considerable intellectual potentials, the subjects generally had been disappointed in their educational experiences and frustrated in their efforts to be creative or productive at work. All were high school graduates. Their mean educational level was 3.0 years of college, and they ranged in university attendance between  $\frac{1}{2}$  and 8 years. Three had earned bachelor's degrees, and one of them had obtained a Ph.D. Seven had dropped out of college after approximately 2 years' work.

The subjects typically floated in and out of temporary jobs which were far beneath their intellectual potentials. They drove taxis or sorted mail with little sense of commitment to such jobs. They worked just enough to meet financial necessities, and if someone in their families would support them, they did not work. Those still in college demonstrated a similar aimless pursuit of courses. Two notable exceptions were subjects who had pursued specific goals, even including graduate school education, yet both of them were frustrated in their work by the gap between their aspirations and their accomplishments. As a group these men were most deeply committed to their creative endeavors such as composing tape-recorded music, writing short stories or producing psychedelic art through photography.

These men did not fit into the work identities and usual occupational aspirations of our society. They did not envision for themselves careers like those of their fathers in a "mundane and materialistic business world." They saw their fathers not as models to copy, but rather as examples of what not to be. They lacked or struggled against the

identifications that would have helped them consolidate a work identity. Moreover, the nature of the tie to their mothers created in these men a sense of being special. They turned their attention to artistic and creative endeavors where their mothers' interests and frustrated ambitions lay. Nevertheless, their intense involvements with their childhood pasts, their lack of internalized models to sustain them and their omnipotent aspirations left these men able to do little more than dabble in their creative efforts.

#### PSYCHIATRIC HISTORIES, PSYCHOLOGICAL TESTING AND PSYCHIATRIC DIAGNOSES

Prior to the study, five subjects had seen psychiatrists. None had sought help for adverse effects from LSD, although a sixth subject had come to the screening evaluation because he was experiencing the prolonged reappearance of symptoms. One of the five had been an inpatient 2 years prior to the study for a suicidal depressive reaction that occurred prior to his use of LSD. He had terminated treatment shortly after being discharged. The four other subjects had been outpatients. Two had been seen for an evaluation during adolescence; one had been seen at the request of the court for antisocial behavior and the other at the request of his mother because of a poor school performance and homosexuality. A third subject, seeking a prescription for LSD, had gone to a psychiatrist within the last year at his university's health service. A fourth subject had twice pursued psychotherapy for help with problems regarding his fear of marriage and his uncomfortable relationships with colleagues at work. He first entered therapy 5 years ago, previous to his use of LSD, while his second treatment took place 1 year ago, subsequent to his use of LSD. All had been disappointed with the results of their contacts with psychiatrists.

The interpretations of the psychological test results showed every subject to have major problems with his sexual identification. The subjects phobically avoided

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sexuality or showed intense preoccupations with homosexuality and sadomasochism. For several subjects sexuality was associated with markedly aggressive percepts, as for example: "A hole in the wall; it has a sexual thing. Possibly a vagina of a woman during a menstrual period with the red. Here I see what I would say looks like my idea of the devil. Here, possibly a tornado. A gunshot tearing through something, exploding out." Heterosexuality was associated with marked dysphoria in these subjects, and with profound concerns over inadequacy. Both heterosexual and homosexual percepts were accompanied with open wishes for dependency. An example of these preoccupations with dependency was provided by one subject whose very first response to the first Rorschach card was: "Two birds here, seemingly asking for food." In the course of the 10 inkblots he developed such other responses as: "This reminds me of the throat cavity right here; a drum stick from a turkey or chicken; a bowl of jello or not the bowl, just the jello; stomach lining; Indian nuts; a tooth; a stomach ulcer; a slice of ham; squashed bubble gum; scrambled eggs." Some subjects, like overindulged children, expressed directly the expectation that others would provide them with everything they need without any requirement of return on their part except that they be adorable.

In the Human Figure Drawings and in the Rorschach, the subjects depicted men and women as being extremely far apart, inseparably distant from one another, and their relationships were marked by concerns over dominance and submission, superiority and inferiority. The alternative to this, commonly expressed in the drawings under the influence of LSD, was a fusion of the sexes through sexual dedifferentiation and the loss of distinct body boundaries. Not uncommonly the subjects combined both sexes in one figure devoid of any sexual representations.

The most remarkable finding from the

testing was the unusual facility of many subjects to regress into a childlike world of make believe in which they produced highly idiosyncratic, even autistic responses which they did not try to explain or make comprehensible to the testers. While the content of such responses might have indicated the presence of schizophrenia or an organic brain disease, it was clear from the style in which the subjects gave these responses that this was not the case. The subjects did not experience dysphoria or anxiety with these primitive responses but appeared to enjoy them and to approach the Rorschach as though it were a test of imagination in which there was no requirement for reality testing. The following are examples from different subjects of such responses: "Two griffins being devoured by two green heraldic amoebas," and the "The orange figures at the top are very wierd gods doing a dance over a fire which is composed of water, and they themselves are fire. And behind them at the base of the fountain of firewater is a mask, like a death mask. And on either side are these two figures that look like birds smoking meerschaum pipes." In the Human Figure Drawings another example of this propensity for idiosyncratic responses was shown by a subject who used two sheets of paper to complete a male figure; he drew the upper body on one sheet and completed the lower body on another. In the Bender Gestalt some subjects varied their reproductions of the geometric designs from the first, which was miniscule in comparison to the stimulus design, to the last, which was larger than life. The intervening designs were reproduced in a steady size progression between these two extremes.

In making diagnostic assessments, we found it very valuable to have the opportunity for prolonged evaluation during the 6-day hospital study so as not to have to rely, except in two cases, on the outpatient screening evaluation only, for the nonconformity of these men in appearance, values and life styles made the evaluation of them



men yearned. In a previous study of hallucinogenic drug takers, Bowers *et al.* (1) described as a primary motivation for drug use their "wishes for fusion and merging with nature and persons." In our subjects LSD was the catalyst which enabled them to break through their barriers into moments of intense intimacy. Two of the subjects who had taken LSD together on several occasions reported that during these experiences they felt they knew and understood each other as never before, and they could confide in each other personal problems that they could not share once the drug experience had passed.

The subjects appeared to be least conscious of their motivation to take LSD as a means of belonging to a drug group which offered them a tolerable kind of dependency as well as a shared ideology. In describing these informal "black market" groups, Blum *et al.* (2) noted that taking LSD is the *rite de passage* into the group in which continued membership depends on espousing some of the commonly held convictions regarding the value of the drugs. In our study every subject reported that his taking LSD was the most significant or one of the most important events of his life. Many subjects stated that they had volunteered for the study in order to prove the value of LSD to the "establishment." The ethnocentricity of the group was demonstrated by the conviction among the subjects that whoever had taken LSD was with them, and whoever had not was against them. There was no room for moderation. Based on this singular criterion, many subjects actively attempted to proselytize anyone in the hospital who had not taken LSD.

The need to believe in the value of LSD and the psychedelic experience caused these men not only to deny the transience of the drug's effects but also to deny the possibility of adverse effects. The subjects, for example, described the acute panic reactions they occasionally experienced on LSD as helping them to understand themselves better,

whereas similar reactions from the amphetamines did not. When I discussed the possibility of chromosomal changes with the subjects prior to giving them LSD, they characteristically responded that if the drug produced genetic changes, it would make their offspring superhuman, not deformed. Hoffer (9) has described this phenomenon in his study of true believers and mass movements:

It is the true believer's ability to 'shut his eyes and stop his ears' to facts that do not deserve to be either seen or heard which is the source of his unequalled fortitude and constancy. He cannot be frightened by danger nor disheartened by obstacle nor baffled by contradictions because he denies their existence. Strength of faith, as Bergson pointed out, manifests itself not in moving mountains but in not seeing mountains to move.

These groups provided the subjects with a feeling of personal worth and superiority by virtue of their special knowledge from drug experiences. They fostered an intense sense of personal loyalty among the members who readily shared their material possessions with one another. Subjects prided themselves on their mutual self-sacrifice for one another and contrasted it with the selfishness of "straight" society. Loneliness and social isolation were dispelled by belonging to the group. The burden of individuality and finding meaning in life was relinquished in these groups through identification with a common cause and the activity of proselytizing new members. Individuality and selfhood were surrendered through conformity to the group, in return for which the subjects felt accepted and cared about and were relieved of the anxiety of individuation. In brief, these drug groups offered relief to the subjects from their problems with individuation, identity formation and social isolation.

Finally, these groups offered the subjects relief from their feelings of personal despair by placing the blame for the origin of all that was wrong in their lives outside of

themselves and onto society. Relieved of this responsibility, the subjects no longer had to bear the anxiety of their own inadequacies and the depression of their failures. Instead they contrasted the total "goodness" of the group's way of life with the "badness" and hypocrisies of society. Their credo, "You do your thing and I'll do mine," while it supported self-actualization, also served to maintain the separation between their groups and society. No effort was made to work for social change or to reconcile differences, for these efforts would have undermined the position of projecting blame.

#### SUMMARY

Ten chronic LSD users, who volunteered as research subjects, were studied by means of psychiatric interviews and psychological testing. All were white, middle class males with a mean age of 24.6 years; they had taken LSD an average of 37.5 times. All smoked marihuana, and eight had extensive experience with the amphetamines. Their family histories revealed with remarkable consistency that their parents had failed to establish an intimate relationship, and their mothers had become intensively involved with the subjects to compensate. The families had been split into rivalrous factions with the subjects and their mothers on one side and their fathers and siblings on the other. They viewed their fathers as hated rivals who had disappointed their mothers and were not to be imitated. The subjects lived home-bound childhoods and had major difficulties trying to become independent adults. Their marriages and courtships were disappointing efforts to replace their lost intimacy with their mothers. They rejected their fathers as vocational models and focused their attention on artistic and creative endeavors with disappointing results.

Psychological testing showed them to have major difficulties with sexual identification, dependency needs and controlling

aggression. They yearned for fusion with objects through sexual dedifferentiation. Many showed a remarkable facility to regress to primitive, autistic responses which they enjoyed and did not try to reality test or make comprehensible to the testers. At the conclusion of the study, seven subjects were diagnosed to have character disturbances and three to be borderline psychotics.

These subjects used LSD to relieve their chronic despair and to find some meaning in life. Through the drug they hoped to break through all perceptual barriers so as to be open to all sensations. From such intense perceptual experiences they hoped to find the true and the genuine, to be more aware and to become creative. In using LSD to temporarily break down self-object boundaries, they sought to merge with others in experiences of intense intimacy such as they had lost with their mothers. Finally, their LSD use gained them membership in highly ethnocentric drug groups through which they felt cared about and gained not only an ideology but a group identity and a purpose in life: to preach the value of the psychedelic experience and to proselytize converts. Like true believers in a mass movement, they denied any adverse effects from LSD and blamed society as the source of all their problems.

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