NATURE AND FREQUENCY OF CLAIMS FOLLOWING LSD[1]

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Because much comment regarding the d-lysergic acid diethylamide (LSD-25) experience has appeared in both the lay and professional press, and some extraordinary claims have been made (1, 2), we consider it relevant to report a systematic study of the personal statements of 74 of 87 subjects who had one or more LSD experiences six months to three and one-half years previously.

METHOD

The subjects had originally been given 100 micrograms of LSD-25 orally in a permissive but non-treatment setting in order to compare the LSD experience with that of delirium tremens (4). Because of numerous subsequent claims of benefit from *Ss* following these experiences, we decided to make a survey of their reports. The same 12-page questionnaire of 76 items covering social, economic and psychological areas was given or sent to each. The questions were based on spontaneous comments of *Ss*, and were often phrased in their own sometimes vague and nebulous terms, additional items being added to cover areas we wished to explore. Twenty-two of the *Ss* who completed the questionnaire were also personally interviewed. Two years later a second, shorter questionnaire was sent to some *Ss* to learn if their claims might have changed during this time.

Our *Ss* received no intended psychotherapy during the LSD experience. In general, the atmosphere was relaxed and permissive, with *Ss* well-protected from outside disturbances. They underwent the experiences in a darkened room, and were allowed various sensory stimuli such as music, paintings, and exposure to sunlight in a garden setting. Usually, the LSD was given to groups of three to five *Ss*. At least one "sitter" was constantly present who himself had experienced LSD. The supervising physician made periodic observations.

SUBJECTS

Our population was varied: it included colleagues, acquaintances, and patients. Three-quarters of the group had one or more years of college. About half were classified by us as being in a patient category, *i.e.*, they were in some form of psychological or psychiatric treatment, including drug therapy. The rest were clinically "normal," *i.e.*, they were neither in treatment nor did they exhibit overt psychiatric disorder. About a third of the normal group were psychotherapists, while the remainder was diversified, and included some lawyers, physicians and writers. A large number of the patient group classified themselves as alcoholics (27 of 74 *Ss* who responded to the first questionnaire). The second questionnaire was sent only to alcoholic *Ss*, and on this occasion only 16 responded (four had died—three from drinking—and the others could not be located).

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RESULTS

In the first questionnaire most *Ss* reported having enjoyed their LSD experience. Many of the patients and some of the normal *Ss* said they felt in some way benefited by it. See Table 1 for principal areas of claimed improvement.

Twenty per cent said they were doing work more to their liking as a result of their LSD experience. In response to questions regarding changes in symptoms (aches, pains, headaches, skin lesions, anxieties, allergies, insomnia, stomach trouble, etc.) existing before the LSD experience, 30 per cent claimed improvement lasting for three weeks to several months. Undesirable effects (anxiety, depression, headache) were reported by a few *Ss*, and 15 per cent reported the occurrence of new symptoms after their LSD experience. These lasted from one day to three weeks.

TABLE 1

Principal Areas of Claimed Improvement Attributed to LSD

Item	Percentage of 74 Respondents
Improvement noted by person closest to you	42
More ability to relax	40
More comfort with people	37
More initiative since LSD	36
More able to be oneself	36
Less anxiety	34
Increased interest in: Nature	38
Art	34
Music	33
Changes in "perspective"	
Deeper significance to things	46
Things seem more real	40
Problems less important	39
Colors brighter	39
Favorable general comment	38
Changes in attitudes	
More tolerant	40
More accepting of ideas and viewpoints formerly rejected	38
More broadminded	37
Less irritable or easily annoyed	33
Changes in sense of values	47
Problems such as emotional, financial, drinking, legal, etc., improved	33
Improvement in income, living quarters and body weight	15
Increased sex satisfaction	14

TABLE 2

*"Looking Back on Your LSD Experience, How Does it Look to You Now?"**

Item	Percentage
A very pleasant experience	72
Something I want to try again	66
An experience of great beauty	66
A happy experience	66
Greater awareness of reality	64
A noteworthy experience, but difficult to describe	63
Temporary benefit to me	55
Gave me great understanding into myself and others	54
Feel was of lasting benefit to me	50
The greatest thing that ever happened to me	49
Temporarily freed from all worry	42
Like traveling to a far-off land	39
Very much like being drunk	33
A religious experience	32
Feeling I'd like to have all the time	29
Return to feelings of childhood	28
Very unpleasant experience	19
Upsetting experience	18
Physical discomfort and illness	17
Very much like a hangover	11
Experience of insanity	7
A disappointing experience	7
Experience I regret having	3
A horrible experience	1
Did me harm mentally	1

* Percentages are the responses in the first two of the following four categories: "Quite a bit", "Very much", "A little" or "Not at all."

Ss were asked to look back upon their LSD experience and to tell us how it seemed to them now. Eighteen per cent felt their experience was upsetting to some degree, while about 80 per cent recalled it, to at least some extent, as beautiful, happy, beneficial or worth trying again. Table 2 reviews the *Ss'* responses to this question. We also asked them to tell us what effects their LSD experience left them with at the time of their reporting: these are summarized in Table 3.

Those who had a religious orientation, particularly those with a mystical orienta-

TABLE 3

*"How Were You, Or What Were You Left With After Your LSD Experience?"**

Item	Percentage
Sense of relaxation and freedom from anxiety and tension	56
A new way of looking at the world	48
A greater understanding of the importance and meaning of human relationships	47
A new understanding of beauty and art	43
A greater awareness of God, or a Higher Power, or an Ultimate Reality	40
A better understanding of the cause and source of my troubles	41
A set of new decisions and new directions for my life	39
A new sense of fun and enjoyment	39
A sense of greater regard for the welfare and comfort of other human beings	38
A sense of now knowing what life is all about	27
A realization that I need psychotherapy	17
An anxious feeling about nothing in particular	14
An increased desire for relief from my troubles through pills, tranquilizers, or alcohol	11
New aches and pains which I didn't notice before	8
A sense of futility and emptiness	7
A frightening feeling that I might go crazy or lose control at any time	3

* Figures are the total percentages for the two categories: "Quite a bit" and "Very much."

TABLE 4

*Comparison of Patients With Normal Subjects**

	Patients (%)	Normals (%)
Claims of improvement: (subjective)	60	32
Claims of improvement: (external factors—income, abode, etc.)	40	6
Experience of lasting benefit	53	35
Experience of temporary benefit	55	44
Pleasant experience	65	76
Increased understanding into self and others	60	41
Greater understanding into the importance and meaning of human relationships	48	38
A religious experience	30	29

* Percentages are the total percentages in the categories: "Quite a bit" or "Very much."

tion, claimed the most benefit from the experience and found it the most pleasant. Few with a psychoanalytic orientation made such claims. There was some trend toward pleasantness being correlated with claimed benefit. Conversely, those who reported themselves worse as a result of the experience described it as unpleasant and upsetting. A number of *Ss* said they would like to repeat the experience about every three or four months, while more than half said that they would like to repeat it, but not oftener than once a year. Those who wished to repeat the experience said that it was because they liked it or because they thought it would help them.

Table 4 compares the responses of the normal and patient groups. More in the patient group claimed improvement and greater understanding of self. Items on which the patients claimed benefit dealt mainly with "lessening of anxiety," "new life goals," "greater regard for others" and a "greater awareness of God." Normals chose items which dealt with "esthetic appreciation," "greater awareness of reality" and a "new way of looking at the world."

In the first questionnaire many of the alcoholic *Ss* reported excessive drinking behavior as considerably improved. Table 5 shows a comparison between the reports of alcoholic and non-alcoholic subjects.

However, the 16 alcoholics who returned

TABLE 5

Claimed Changes: Alcoholics vs. Non-Alcoholics

	Non-Alcoholic (%)	Alcoholic (%)
Claims of improvement: (subjective)	62	67
Claims of improvement: (external factors—income, abode, etc.)	23	63
Decreased or stopped drinking	2	67
No change in drinking	92	30
Increased drinking	6	4
Binges decreased	—	67
Less anxiety	28	56
Problems improved	17	52

the second questionnaire, approximately three and one-half years after their original LSD experience, made fewer claims than they had on the first questionnaire. About two-thirds still claimed periods of abstinence ranging from one to one and one-half years, as they had on the first questionnaire, and three-fourths of these alcoholics still claimed some lasting benefit (fewer arrests, increased self-understanding and esthetic interest). None of the *Ss*, however, had maintained their sobriety to the time of the second questionnaire.

DISCUSSION

The claims of a group of normal and patient *Ss* have been presented after their exposure to, usually, a single LSD experience. A considerable number (66 per cent) reported some degree of benefit. What could be operative to produce such an incidence of claims?

From personal interviews and other investigations, we believe it unlikely that the claims were consciously fabricated. Rather, we believe these reports of improvement are accepted to a great extent by our *Ss*, who claimed an unusual and, for the most part, a pleasant experience.

The mechanism of action of LSD, from either the somatic or psychological points of view, is as yet unclear. The nature of the claims of these *Ss* and clinical observations give rise to the formulations which follow.

Many patients experienced the LSD reaction in a religious manner, *i.e.*, they spoke of a "greater awareness of God or a Higher Power, or an Ultimate Reality." This raises the possibility that their claims are the results of a religious-like conversion secondary to the effects of LSD. Our religious and mystically-oriented *Ss*, presumably disposed to acknowledge or surrender to a Higher Power, make relatively more claims of benefit than the non-religious. The mechanism of this conversion is certainly not clear, but it could be akin to the conversion reactions as described by Leon Salzman (12) and William James (7). Conversion, according to James, is one of many phrases to "denote the process, gradual or sudden, by which a self hitherto divided and consciously wrong, inferior and unhappy becomes unified and consciously right, superior and happy in consequence of its firmer hold upon religious realities." Certainly, some of the LSD descriptions are similar to reports of the experiences (8, 9) of many of the great mystics of the past. Thus, some state of suffering (possibly a neurosis) is a prerequisite to conversion. During the agony is seen a ray of hope, often religious in nature, to which the sufferer surrenders as has many a religious convert. For example, one *S* had the experience of "seeing the White Light of God coming to me." This occurred in a very intense experience that was held as having a reality value at least six weeks following the LSD exposure. For other *Ss* the pleasantness or beauty of the experience could have been their "ray of hope." Such religious converts usually feel improved, but this may be of limited duration, as was also true of some of our LSD subjects.

In more modern garb is the theory of Anthony Wallace (15, 16), which might account for changes in the *Ss*. Wallace sees the conversion that certain prophetic leaders undergo (his examples are Siu-Tehuen of the Taiping Rebellion and Handsome Lake of the New York State Indians) as a process in which there occurs a "massive and sudden mental resynthesis of a therapeutic or adaptive character, under more or less extreme stress—a wholesale resynthesis that transforms intellectual insight into appropriate motivation, reduces conflict by partial or total abandonment of certain values and acceptance of others, and displaces old values to new, more suitable objects." Leaning heavily on Hoffer and Osmond's biochemical theories and Selye's general adaptation syndrome, Wallace postulates that resynthesis occurs spontaneously in certain persons under stress as a

result of physiochemical alterations. He adds that a process thereby occurs within the brain that produces fundamental changes in *S*'s systems of perceptual organization.

Although our *S*s by no measure had as profound a change of consciousness as Wallace's examples, there are similarities in the descriptions of the experiences. Also, LSD is indolic in structure, as are the substances postulated by Hoffer and Osmond to be active in psychotic states. Thus, in terms of Wallace's theory, one could postulate that LSD, even in reasonably stress-free environments, produces a biochemical alteration that in certain susceptible individuals results in a resynthesis or reformulation of their system of life. We have found that many of our neurotic or alcoholic subjects spoke of "finding themselves" or being "reformed characters." One even became a minor prophet of sorts, which might be construed as a resynthesis or reformulation even if clinical disorder accompanied it.

From the psychoanalytic point of view we postulate the action of LSD as follows: There are libidinal ties with a love object (this can be an object, a person or a concept such as religion, science, or a political ideology, or some other "ism") which have been loosened as a result of disappointment or disillusionment. This may be the equivalent of the agony of which William James speaks. Perhaps there has already been a casting about for new objects upon which the libido could fasten. With the LSD experience there is a welter of thoughts, fantasies, and feelings from various epochs of life. The libidinal energies now focus or become attached to some of these, perhaps regressive in nature, which is expressed in consciousness as a sudden revelation or insight. This then persists following the actual LSD experience. One might say that the patient who saw "the White Light of God" had a reinvestment of libido to previous religious values.

These data can also be considered from other psychodynamic points of view. It is noted that 80 per cent of the *S*s found the experience pleasant. An intensely pleasant experience, even in fantasy, perhaps could provide a new perspective. It could probably affect the emotionally disturbed and even normal individuals, inducing a change to an optimistic view of the world. Many of our LSD subjects reported a new way of looking at the world, a new sense of fun and enjoyment, and a greater understanding of the importance and meaning of human relationships. Many experienced an alteration in subjective values and feelings, and this correlated with the degree of pleasantness of the experience.

There is frequently, at intervals during the LSD experience, a relatively clear consciousness. This is one of the most striking features of the effect of the drug, and permits *S* to observe what is happening to him, *i.e.*, thoughts, feelings and fantasies which appear from different levels of consciousness can perhaps be viewed more objectively than in the ordinary state. This process may be similar to the splitting of the ego into an experiencing and observing part which occurs during the course of psychotherapy, or psychoanalysis. This may enable one to observe a bit of behavior or fantasy more objectively, and so to develop insight into it. As an example, one *S* recollected experiences with four different women, each of whom he had treated in a cruel and sadistic manner. He was apparently able to observe himself in those situations in an objective and self-critical manner while under the influence of LSD. This is an area of the LSD experience which might merit a more intensive study.

Psychic defenses, especially in neurotic states, may alter or inhibit perception. The diminution in their strength which results from the LSD experience may permit the individual to become aware of both internal and external perceptions. With the disruption of this selectivity of perception, even temporarily, the individual has an oppor-

tunity to observe and assess new or previously repressed modalities of feeling and sensation. This particular release phenomenon is common to many other drugs. It permits affective experiences to both normal and neurotic individuals. This affect discharge, in itself, may relieve the tension of the organism with resultant feelings of well-being. This is the cathartic action or abreaction referred to by many therapists.

On the other hand, the fantasy aspects of the experience may sometimes be carried over as if they were real. The more externally or "reality" oriented the person, the less likely it is that such fantasy material would be so treated. Such an orientation possibly would account for relatively greater claims of improvement by introverts than by extroverts in our study, and by the mystically-oriented as compared with the non-religious. Certainly, there is a preponderance of subjective over objective claims by our *Ss*.

The factor of suggestibility has been mentioned by many authors, including Hoch (6), Savage (13), and also Lewis and Sloan (10). This may be obvious or extremely subtle. Some of our volunteer *Ss*, for example, had been made aware of reports of effects of LSD from other *Ss* and from articles on LSD or other hallucinogens by such writers as Aldous Huxley. Several *Ss* came to the experience after reading Huxley's *Heaven and Hell* or *Doors of Perception*. There was even an indication of such suggestive influences in some of the enthusiasm surrounding the taking of LSD. The many factors of the LSD setting that could have important influences on *Ss*' responses include the personalities of the investigators, their attitudes, purposes, and their instructions to the *Ss*. Also, the wording of our rather comprehensive questionnaire may possibly have influenced some of the responses.

A psychological "stress" theory, analogous to Selye's physiological theory, is interesting to contemplate. Deniker (3) has reported the physiological stress reaction precipitated by one of the hallucinogens (mescaline); this may be paralleled by psychological stresses. In such cases the more mature psychological defenses may be first intensified, *i.e.*, repression, reaction-formation, rationalization. As the reaction becomes more intense, more primitive psychological defenses, such as denial, projection and narcissistic withdrawal may become more apparent. Should the stage of exhaustion supervene, we might have a typical schizophrenic state. Changes in defense mechanisms may be interpreted as a "new outlook" or a "greater awareness of reality." Lindemann and Clark (11) speak of excessive efforts to integrate elusive perceptual material, and successful integration may result in claims of new insight.

Stevenson (14) emphasizes that LSD may be therapeutic in that it opens up a wider range of possibilities to *S* by alteration of his present-time perceptions. He says the LSD *S* has a different perception of the world around him and asks if this is necessarily a false perception. He postulates that in such altered mental states one may sometimes experience a new and better vision of external reality. Stevenson asks, "If the subject sees beauty where he did not see it before, is this not therapeutic?" Stevenson is one of a group of writers and investigators who utilizes mystical, transcendental, or esthetic viewpoints in interpreting the LSD experience.

Finally, it should be considered that LSD may have a direct chemical influence on areas of the brain, producing a sustained euphoria or altered mood as is the case with some of the newer antidepressants.

CONCLUSION

Claims of therapeutic value of the LSD experience of 74 *Ss* have been presented, analyzed and discussed. If these claims are valid it would indicate that the LSD experience is psychotherapeutic in itself. Further, it is noted that the early claims of *Ss*

under the circumstances described are comparable to some of the most optimistic claims of other LSD investigators (1) who often utilize it with intensive and prolonged psychotherapy. The vexing problem of criterion of psychiatric improvement, however, is as yet unsolved, and all too often the efficacy of a treatment is judged principally on the unsupported claims of patients. Claims of relief of symptoms and improved social effectiveness are only two of the denominators of therapeutic progress (5). Therefore we cannot conclude that the reports of our *Ss* represent improvement. We have noted that claims of improvement are higher for the first six months after the experience than after longer intervals. For one and one-half years after exposure to LSD a very high percentage of alcoholic patients claimed to have decreased their drinking, and about 36 per cent claimed complete abstinence. However, three and one-half years after exposure to LSD there remained only claims of slight improvement, and none of the alcoholic *Ss* had maintained their sobriety.

Perhaps LSD is unique in that it prompts so many claims, not only from *Ss* and patients, but from investigators themselves.

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