Some Clinical and Social Aspects of Lysergic Acid Diethylamide*

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PART II:

The Drug Taking Cult: Transformation of an Experimental Toxic Psychosis into the "Transcendental Reaction", the "Psychedelic Experience", the "Consciousness-Expanding", "Mind-Expanding" Drug, the "New Meaning", the "New Beginning"; "Transpersonal Experience"[21,45,54].

In the pharmacological and clinical summary (Part I of this paper: Psychosomatics 13:165 (May-June) 1972, we have seen how all researchers originally visualized LSD as inducing an experimental toxic psychosis and how it was tried in *limited experimental* psychotherapeutic and therapeutic use.

How then did this *originally "experimental toxic psychosis" or "model psychosis"*[35,36,43] inducing agent become transformed into a "psychedelic", "psychehexic", "psychelytic", "mind-manifestating", "consciousness-expanding", "mind-expanding" or "transpersonal" drug?

Sociological Aspects: The Drug Taking Cult, and the Resulting L.S.D. Problem:

From the work cited (Part I) it is clear that a person, with a well-formed ego in a relatively conflict-free state, and therefore with good impulse control at the time of taking L.S.D.; and who takes it in the context of a benevolent human relationship, or of a positive transference, might well not suffer from a disturbing psychotic experience, with small or moderate doses.[40] Furthermore, using its pharmacological properties (inducing greater awareness of but distorting sensation) and focusing attention and interest (one's observing ego functions) on some aspect of sensation, colour, form or human relationship — for a reality-oriented, even possibly sublimated purpose—one may *feel* able to experience sensation, affect, thought, with greater intensity, or feeling or greater freedom. The psychoanalytic principle—regression in the service of the ego — covers, in the author's opinion, such attempts to use integratively a toxically induced state; (in which sensation and judgement is impaired, through changes in form, structure, memory, perception, and apperception) to focus with "free flow" of association or affects on a particular subject. Many who do this, strongly hold a suggestive a-priori belief that their superego, will "dissolve in the L.S.D.", permitting freer access to unconscious material. The present author does not believe the latter to be true. Others, mystical, with belief in a separate independent soul, *even during life on earth,* or in personification of the potential independence of the "mind" from the body, look upon the "flesh" as an earthy shackle, degrading the freedom of the soul *even in this life* (this is different from a belief in a living soul after death), or (more limitingly) of the "mind". "Soul" and "mind" are emotionally equated with "purity" and "unlimited freedom", if only one could partly shed the limits of the flesh. The philosophical concept of "transcending" or rising above the body to achieve a great height, peace, control or insight, be it nirvana or any other state of special peace, joy, or "transpersonal" fusing, universal communication or understanding, — has special appeal for them. Some of these individuals eagerly seek the L.S.D.-induced toxic state in

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* Continued from Part I (Psychosomatics 13:165. (May-June) 1972)

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this way to attempt to reach a "transcendental", "transpersonal" experience. This author believes they thus erroneously interpret the organically induced toxic change in perception etc. as "a newer freedom", since they feel unable to either concentrate on, or regress to, these levels of their interest in their normal state.

Others, normally unable to concentrate their attention on a particular form or colour, saw it with a "new, greater than before" intensity, believing they had an "expansion of consciousness" and thus a new "improved" form of sensation, "knowledge" or "affect". Here it is clear that pre-existing beliefs in the soul, or in independence of psychic action; or, conviction of their without drug, inhibitions ("hang-ups") — inability in their normal (pre-intoxicated) state to "be free enough" to see form, colour, or concentrate on some aspect of "being" — play a considerable role in determining the nature of the mystical experience.

This is, in the present author's opinion, also a factor in those well controlled, "good ego", obsessional subjects' use of the L.S.D.'s distortion to attempt to be less inhibited in the service of the ego. This explains why some physicians were able to use the L.S.D. experience to achieve "good results" with certain patients[1,2,16,20,23,27,30,34,40-42,46,49]. Thus people with drug induced regression in the service of their ego (having pre-existing beliefs, or a mystical interest in liberating the soul, or believing in newly "liberated" "freer" and "more intense" sensorial experiences) could interpret the drug induced perceptual and apperceptive changes, producing an experimental psychosis as a "mind expansion", a "consciousness-expansion", a "psychedelic", "transcendental", " transpersonal" experience.

The Present Social Field and its Direct Influence[20,37,41,45,54]

Some factors of considerable importance to our subject, in that they heavily favourably influenced the spread of the drug using fashion, are:

1) The availability of mass communication media and its need to immediately and dramatically spread the "new and far our," because "it's new", "the people have a right to know", and "it sells".

2) In the above context, the hedonistic quality of our current North American Society.

3) In reference to 2), the attitude of a large part of the population that life is only current, thus every pleasurable experience has its own validity, and life's major goals are the experiencing of more satisfying sensations.

4) Teenagers fear of "nothingness", in that growing up means to deteriorate, "rot" with death at the end, since they feel that there is no afterlife.[39] The shattering of old ideals and values by many forces including the threat of hydrogen bomb instantaneous annihilation adds to this. The feeling of having the right to their own body links to this here.

5) The "right" to hedonistic life goals is actively fostered by mass advertising, so that seeking new products for increasingly pleasurable needs is a major theme in North American culture.

6) Fewer taboos—sexual and personal.

7) The socially acceptable camouflage for their personal suffering and their revolt at individual, familial, and social trauma (not having received enough love, closeness, human warmth, sense of personal identity and worth, proper self-discipline and mastery) offered by the current social scene (through the above mentioned factors etc.)

Psychotomimetic agents diffused into selected sub-groups seeking answers to their loneliness, alienation, bitterness, anti-authoritarianism and antiestablishmentarianism. Here are the social roots of what became the drug cult, the L.S.D. and marijuana problem. Sanctioned by some of their peers as risk taking social defiance, it has immediate appeal to some adolescents.[5,39] It is here that the mass communication media's diffusion of often inaccurate views that these drugs are "mind-expanders", "consciousness-expanding drugs" or ways of getting outside of yourself and going somewhere, — "to trip"; have spread such concepts onto fertile eyes and ears, leading to such slo-

gans as, "one trip is worth a thousand words" chalked up in Harvard Square some years ago. Where do they really go? Nowhere they could not without the drug if they tried, in this author's opinion, but the delusion of drug liberated, new, unexplored and fascinating world persists, and is progressively fostered as an article of mystical and even religious faith.

Evidence of Mind-Expansion and Enhanced Creativity.

What is the evidence in favour of "mind-expansion", for states of "consciousness-expansion", for "enhanced creativity" under the influence of L.S.D.? What evidence offers clues to the personalities and motives of drugs users?

Bloomquist[4] studying Marijuana users, concluded that they formed a particular sub-culture of the general population in three categories: 1) "the dabblers", 2) "the users", and 3) "the heads". 1) "The dabblers" play with the drug in sporadic use, and feel it is the daring, the "in" thing to do. 2) "The user" takes it more regularly, as a binge with implications of enjoyment for its personal import, and is prepared to like the drug as a mystical or "mind-expanding" experience. It is in this group that the drug culture or mystique often exists. Such people use drugs to "maintain themselves", meaning deferring any pleasurable experience in attempts to further self-understanding and rid themselves of emotional problems ("hangups") and hopefully to arrive at a state of complete personal mastery, something diluted from the concepts of Zen-Buddhism, which state they originally referred to as "cool".

The "lower caste" (Bloomquist) of these subgroups is composed of relatively poorly educated, socially disadvantaged persons who "trip" to experience the desired drug effects. "The tripper" is often anti-social and rebellious towards authority and society, with a vague idealism, but often in revolt against oneself and full of angry, often self-destructive and antisocial behavior. The drug is used as a weapon, often unconsciously, in their personal fight against parents, society and its institutions which they feel they hate or with which they cannot cope. The behavioural expression of these conflicts can be dangerous for the individual and sometimes for others. Some of the disturbed "lower caste" and some of the identity-conflicted people in other groups get recruited into narcotics use, to "try something better because it's stronger".

The chronic user or "head" is one who develops a psychological dependence on the drug. Full of reasons for drug use, they become the leaders of the drug cult. Bloomquist refers to them as "solipsistic", and the drug and its experience is what imports.

Although this classification is applied mainly to Marijuana, the present author believes that it also applies to illicit users of L.S.D.

Adverse Reactions to L.S.D. Use

Kleber[22] reported five cases of prolonged adverse reactions to illicit L.S.D. use in a student population. All had serious pre-existing identification conflicts, with syndromes involving depression, anxiety, paranoid constellations, antisocial behaviour, hallucinosis, and anxiety laden awareness of homosexual conflicts.

Frosch[14] et al., studied 34 patients hospitalized for prolonged psychotic reactions following illegal ingestion of L.S.D. All (but two who believed in its beneficial effects) were hedonistic in their drug use and were largely unaware of their own motivations for using drugs. He was unable to find objective improvement at any level of functioning.

Materson[26] described L.S.D. "mainlining" (self I.V. injection of L.S.D.), as a serious health hazard increasing all L.S.D. effects, in people who most often fall into the drug dependent social group.

Glickman and Blumenfield[18] believe the pre-existing personalities of illicit users to be markedly disturbed, and that they may well have developed serious symptoms without drug use.

Zegans et al.[55] studied L.S.D. effects on creativity. For any creative attempt the subject had to have tolerance for regression, or, as, I would put it, be able to temporarily regress in the service of the ego. There was no evidence in this study for any creative enhancement with drug use in a relatively unselected group of

subjects. In short Zegans' findings support the logical proposition that one is, everything being equal, unlikely to function better while perceptually poisoned.

Millman[28] reported the accidental ingestion of 100 gamma of L.S.D. by a five year old, with resulting long persistent visual-motor disturbances after the cessation of the acute psychosis. There was no evidence of any pre-existing disturbance in the visual motor ability of this child.

Ungerleider et al.[53] reported on a questionnaire survey having a 59% return of psychiatrists, psychiatric residents, internists, general practitioners, and psychologists in Los Angeles county, who were asked to report adverse reactions to L.S.D. Over an 18 month period, two thousand adverse conditions were found, the majority being in males between 15 and 30 years of age. An additional 1887 adverse reaction to marijuana were reported in the same period.

Ungerleider[51] believes that L.S.D. is not a consciousness expanding drug, and that, "It is quite the reverse; it decreases one's ability to select and pay attention. Therefore it decreases conscious functions. Sensations do become intensified, but perception is not enhanced and visual and auditory acuteness are not revolutionized but rather distorted."

Blacker et al.[3] studied chronic L.S.D. users (21 young paid volunteers, 13 men and 8 women aged 15 to 27) using psychiatric interviews cognitive and perception tests, and E.E.G. studies. All had turned to illicit drug usage at a time of personal stress. These authors were unable to demonstrate dramatic test differences between the L.S.D. users and non-drug users, except for computerized E.E.G. analyses where there was an increase in delta, theta, alpha and beta activity. L.S.D. users seemed increasingly sensitive to stimuli, to low light intensities as measured by E.E.G. evoked potentials, and seemed to utilize, "different screening and organizing operations suggesting alterations in central psychological/physiological processes", unusual brain damage or central nervous system dysfunctioning. The subjects were passive individuals angry at people and consciously trying to blot out bewilderment and depression. Their drug experience was influenced by the social environment, and in its turn this influenced their duties and behaviour.

Passive, believing anger to be bad, they had weird beliefs, were interested in fusing with parts or all of the world or others; and liked eccentric cosmologies. (One believed that thoughts could set forest fires miles away. Others felt that they could be mediums etc.) Despite this, these chronic users had involvements with people, had considerable interpersonal skills, and at least some ability for stable object relationships, and as a result, the authors felt that they were not primarily schizophrenic.

Munter reported on abuse of hallucinogenic drugs in a college population.[29] College use varies from 5 to 50% of the student population (it is sometimes made to look greater by an undisciplined press). The student users are particularly antiauthority, using drugs in the service of emancipation, as highly successful expression of revolt against parents and society. Some of Munter's general conclusions are: Hallucinogenic drugs are sometimes used in attempts to resolve problems of intimacy, by people with characterological problems and borderline states. These problems emerged when the patient was under the drug influence. The drug created only phantasies of closeness and disrupted associations, cognitive processes and their social behaviour. An adverse reaction ("Bad trip")[7,10,13,15,50,52] did not of itself discourage future drug use, because the promise of a "trip" and the mysticism of it remained a compelling phantasy for some. The pharmacologic effect is that of an organic toxic reaction. Even when a psychosis is not produced, the organic toxic state is still found, with memory impairment, impairment of judgement, labile affect, reduced comprehension, decreased insight, a clouded sensorium, and in some cases absence of clear thought, difficulty in decision making, inhibition and deterioration of volition and of initiatory and disciplined activity, with reduced energy output and either neutral, dissociated, or depressed affect. There was no

evidence of withdrawal symptoms, but there was evidence of psychological dependency. This is in agreement with other studies reviewed here. Those who suffer in academic performance do so because of toxicity or because of an increased obsession with the drug experience and subsequent inattention to work. Almost all have serious problems with authority, with disruptive revolt, "over-rebellion" against parents and their surrogates. They often use overtly retaliatory behaviour, and angry rejection of the adult world which they feel has rejected them. This leads to over-intellectualization about non-violence, flower power, hippie movements, passive resistance etc. The government, educational institutions, their personnel, policies and actions, are attacked with anger, energy but with little discrimination or flexibility; and with little regard for the rules of evidence. Sex is used as a social facilitator and is viewed as amoral, and they are "strikingly devoid of shame or guilt." The main sexual areas of conflict are overt or latent homosexuality. Polymorphous, perverse inhibited and disinhibited sexual behaviour is reported and the sensorial drug distortion helps some feel that they are having a unique experience.

Unfavorable Reactions and Suicide-Homicide:

Smart and Bateman[44] reviewed 20 reports containing 225 unfavourable reactions to L.S.D. In addition to acute psychotic reactions, prolonged psychotic reactions, recurrent L.S.D. experiences, there were disturbed non-psychotic reactions of the type described above, and less frequently but significantly, cases of suicide (14 attempted, 6 successful, 9 suicide intention), homicide (4 cases of attempt or threat, 1 successful homicide) as well as cases with convulsions. It is also clear that psychic dependence develops in some. This follows from what we have said about exaggeration of the preexisting personality.

Duration of Prolonged Psychotic Reactions:

Ungerleider[50] showed that 68% of their 70 cases required more than one month of hospitalization, and 5 to 6 months were necessary in the occasional case. Bellevue Hospital, New York[44] reported that the majority (30 out of 52) of the prolonged psychotic disturbances became normal within 48 hours, with 11 patients requiring two to seven days, and 6 needed a longer time. Five of the six needing a longer period, had no evidence of previous psychotic disorganization, or of any psychiatric history, i.e. L.S.D. is causing prolonged psychosis in people not diagnosed as psychotic prior to drug use, who have some personality disturbance of a minor sort, or who have none at all. About 77% of the cases of prolonged psychosis from L.S.D. in the Bellevue material could not have been predicted from histories of previous psychotic disturbance.

Another problem is that of a recurrent L.S.D. experience or "spontaneous recurrence." This is the spontaneous return of all or part of the L.S.D. experience. In at least 11 reported cases delusions and hallucinations have reappeared weeks or months following the last L.S.D. ingestion and after a period of normalcy. Six of the eleven cases had taken L.S.D. or similar drugs on 10 to over 200 occasions. This raises the possibility that L.S.D. may accumulate in the body and that frequent use may condition a person to remember the experience or may cause, through accumulation in the tissues, a retriggering of the L.S.D. effect.

Prolonged Non-Psychotic Reactions

Growing attention is now being drawn to non-psychotic reactions, some of which are prolonged.[7,44] Of 63 cases, 39 were acute panic or confused reactions, 17 were depressive, 5 were anti-social or psychopathic behaviour, 1 was a motor-excitatory state and 1 was subject to chronic anxiety. Nearly all of these occurred in people who took L.S.D. while alone. (Some of the suicides however, occurred despite the presence of the so-called anchor-man who was supposed to protect them). The majority had pre-drug personality disturbances.

SUMMARY AND CONCLUSIONS

From this it can be seen that:

1) L.S.D. induces an experimental toxic psychosis with a characteristic prodromal, largely sympathomimetic autonomic phase and on

adequate dosage, a typical psychotic disorder characterized by changes in proprioceptive and exteroceptive sensation and apperception.

2) Judgement, memory and many other functions are markedly impaired, so that even in those who do not show an acute psychosis, but develop an other than psychotic reaction there is memory impairment, poor judgement, labile affect, reduced comprehension, decreased insight and clouded sensorium. There may be lack of clarity of thought, difficulty in decision making, inhibition of volition, initiative and deterioration of disciplined self-control, often with reduced energy output and flattening or exaggeration of affect.

3) The emotional and affective contents of the reactions are determined by the subject's pre-existing personality, and the social setting, by his present constellation of external and internal problems, and by the motives for which the drug is taken.

4) There is no evidence to justify the belief that this drug is, through its pharmacologic action, a specific therapeutic agent.

5) Nor is there clear evidence that in most hands it is a basically good therapeutic agent when used psychotherapeutically or for conditioning therapy.

6) The success of individual therapists, who have reported good results is, in this author's opinion, explicable by their skillful interpersonal and transference relationships with their patients, permitting the patient's regression in the service of his ego, and resulting in exploration of affect and experience for the purpose of problem solving. As a general therapy the author doubts that it is likely to be useful to produce a toxically induced perceptual disorder. Thus, the author feels that L.S.D. does not have general widespread usefulness, but that in selected hands, its peculiar properties can be exploited in the way an experienced therapist can use any situation for therapeutic purposes, with no doubt beneficial therapeutic results in the selected cases.

7) There is really no good evidence that its use enhances creativity.

8) Although L.S.D. seems to increase some aspects of sensorial awareness in a distorted way, there is considerable good evidence that it does not "expand the mind", does not "increase consciousness", does not "increase inner awareness" and does not seem to "enhance creativity". The author has listed some of the psychodynamic and social reasons for some subgroups to eagerly apostatize the cause of a pharmacologic agent, alleged to produce transcendental effects and of the belief in its "psychedelic" "consciousness-expanding", "mind-expanding", "trans-personal", properties. The occurence of this phenomenon is even more striking when it involves a *pharmacologic agent known for years prior* to the "psychedelic revolution", as a drug poisonous to the nervous system, and producing "typical experimental toxic psychosis" or "model psychosis".

9) The social problems of the adolescent and young adult is search of identity, in cultural conflict, in rebellion against overt authority, and of those rejected, rather passive, or passive-aggressive rebellious, acting-out individuals who form a large part of the hippie and drug cults, remain a problem for themselves and others. It is they, aided and abetted by rather large segments of our mass communications media, who foist on an already hedonistic society the alleged glories of hallucinogenic "mind-expanders", which, at least to date, have little or no solid scientific basis in fact.

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REFERENCES (Part I & Part II)

1. Abramson, H. A.: Lysergic Acid Diethylamide (LSD-25)-III: as an Adjunct to Psychotherapy with Elimination of Fear of Homosexuality. *J. Psychol.* 39:127, 1955.
2. Abramson, H. A.: LSD-25-XIX: as an Adjunct to Brief Psychotherapy with special Reference to Ego Enhancement. *J. Psychiol.* 41:199, 1956.
3. Blacker, K. H., Jones, R. T., Stone, G. C., Pfefferbaum, D.: Chronic Uses of LSD. The Acidheads, A.P.A., *Am. J. Psychiat.* 125:341, 1968.
4. Bloomquist, E. R.: Marijuana: Social Benefit or Social Detriment. *Calif. Med.* 106:346, 1967.
5. Buies, R.: Problems of Adolescents as Exemplified by the Present Drug Scene. *Canad. Psychiat. A. J.* 17: Sp. Suppl. 11. SS11-65. 1972.

6. Cholden, L.: Edit *LSD and Mescaline in Experimental Psychiatry,* Grune & Stratton, New York, 1956.
7. Cohen, S., Ditman, K. S.: Prolonged Adverse Reactions to Lysergic Acid Diethylamide. *Arch. Gen. Psychiat.* 8:475, 1963.
8. Cohen, M. M., Marinello, M. J., Back, N.: Chromosomal Damage in Human Leucocytes Induced by Lysergic Acid Diethylamide, *Science* 155: 1417, 1967.
9. Denber, H. C. B., Rinkel, M.: Round Table: Psychodynamic and Therapeutic Aspects of Mescaline and Lysergic Acid Diethylamide, *J. Nerv. Ment. Dis.* 125:423, 1957.
10. Ditman, K. S., Tiatz, W. Prince, B. S., Forgy, E., Moss, T.: Harmful Aspects of the LSD Experience, *J. Nerv. Ment. Dis.* 145:464, 1968.
11. Ey, H.: L.S.D. et Expériences Psychédéliques *L'Evolution Psychiatrique* 2:249, 1969.
12. Fabing, H.D.: A New Blocking Agent Against the Development of LSD Psychoses. *Science* 121:208, 1951.
13. Freedman, D. X.: On the Use and Abuse of LSD. *Arch. Gen. Psychiat.* 18:330, 1968.
14. Frosch, W. A., Robbins, E. S., Stern, N.: Untoward Reactions to LSD Resulting in Hospitalization. *New Eng. J. M.* 273:1235, 1965.
15. Frosch, W. A., Robbins, E., Robbins, L., Stern, M.: Motivation for Self-Administration of LSD. *Psychiat. Quart.* 41:56, 1967.
16. Frederking, W.: Intoxicant Drugs (LSD-25 and Mescaline) in Psychotherapy. *J. Nerv. Ment. Dis.* 121:262, 1955.
17. Fromm-Reichmann, F.: Loneliness. *Psychiat.* 22: 1, 1959.
18. Glickman, L., Blumenfield, N.: Psychological Determinants of the LSD Reaction. *J. Nerv. Ment. Dis.* 145:79, 1967.
19. Hoch, P. H., Pennes, H., Malitz, S., Douglas, S.: Studies in Routes of Administration and Counter-Acting Drugs. *opus cite,* ref. No. 6, p. 8.
20. Hyde, R. W.: Psychological and Social Determinant of Drug Action in *The Dynamics of Psychiatric Drug Therapy* Ed. Sarwer-Foner, G. J., Thomas, Springfield, Ill., 1960, p. 297-312.
21. Huxley, A. I.: *The Doors of Perception.* Harper, N. Y. 1954.
22. Kleber, H.D.: Prolonged Adverse Reactions from Unsupervised Use of Hallucinogenic Drugs, *J. Nerv. Ment. Dis.* 144:308, 1967.
23. Klee, G. D.: Lysergic Acid Diethylamide and Ego Functions, *Arch. Gen. Psychiat.* 8:461, 1963.
24. Knudsen, K.: Homicide after Treatment with LSD, *Acta Psychiat. Scandinav.* 180:389, 1964.
25. Kurland, A. A.: Unger, S., Savage, C., Olsson, J., Pahnko, W. N.: Psychedelic Therapy Utilizing LSD in the Treatment of the Alcoholic Patient — A Progress Report: Read at 124th A.P.A. Mtg., May 17, 1968, Boston, Mass.
26. Materson, B. J., Barrett-Connor, E.: LSD Mainlining: A New Hazard to Health. *JAMA* 200: 1126, 1967.
27. Mechaneck, R. S., Feldstein, S., Dahlberg, C. C., Jaffee, J.: Experimental Investigation of LSD as a Psychotherapeutic Adjunct *Am. J. Ortho-Psychiat.* 37:210, 1967.
28. Millman, D. H.: An Untoward Reaction to Accidental Ingestion of LSD in a 5 yr. Old. Child. *JAMA* 201:821, 1967.
29. Munter, P. K.: Abuse of Hallucinogenic Drugs: Some Observations of a College Psychiatrist. Internat. Psychiat. Clinics: *Mental Health in College, Little Brown,* Boston, Mass. 1969.
30. Osmond, H.: A Review of the Clinical Effects of Psychotomimetic Agents. p. 132-154 in *LSD, the Consciousness-Expanding Drug.* Edit. Solomon, D. Berkley Med. (paperback) Putnam, N. Y. 1964.
31. Rinkel, M., Hyde, R. W., Solomon, H. C.: Experimental Psychiatry III: A Chemical Concept of Psychoses. *Dis. Nerv. Syst.* 15:259, 1954.
32. Rinkel, M.: Biochemical Reflections on the Psychosis Problem *in opus cite* Ref. No. 6, p. 13-18, 1956.
33. Rothlin, E., Corletti, A.: Pharmacology of LSD-25, *in opus cite,* Ref. No. 6, p. 1-7, 1956.
34. Sandison, R. A.: The Clinical Uses of LSD p. 27-34 in *opus cite* Ref. No. 6, 1956.
35. Sarwer-Foner, G.: Corr. On the Alleged Model Psychoses. *Canad. Psychiat. A. J.* 1:176, 1956.
36. Sarwer-Foner, G., Koranyi, E. K.: Clinical Investigation of Azocyclonol Hydrochloride; (Frenquel). *Canad. Psychiat. A. J.* 1:92, 1956.
37. Sarwer-Foner, G.: Psychotherapy in Relation to the Changing Canadian Scene. *Canad. Psychiat. A. J.* 10:98, 1965.
38. Sarwer-Foner, G. Edit.: *The Dynamics of Psychiatric Drug Therapy.* C. C. Thomas, Springfield, Ill. 1960, 640 p.
39. Sarwer-Foner, G.: A Specific Aspect of Late Adolescence — The Denial of Death and the Unconscious Longing for Indestructibility and Immortality. *Canad. Psychiat. A. J.* 17: Sp. Suppl. 11. SS11-51, 1972.
40. Savage, C.: The LSD Psychosis as a Transaction Between the Psychiatrist and the Patient in *opus cite* Ref. No. 6 p. 35, 1956.
41. Savage, C.: The Resolution and Subsequent Remobilization of Resistance by LSD in Psychotherapy. *J. Nerv. Ment. Dis.* 125:434, 1957.

42. Savage, C.: LSD, Alcoholism and Transcendence. Napa State Hosp. Symposium on LSD, 16th Jan. 1960, Napa, Calif. Publ. in *opus cite* Ref. No. 44 p. 183, 1964.

43. Schwarz, B. E., Bickford, R. G., Rome, H. P.: Reversibility of Induced Psychosis with Chlorpromazine. *Prof. Staff Meet. Mayo Clinic* 30: 407, 1955.

44. Smart, R. G., Bateman, G.: Unfavorable Reactions to LSD. A Review and Analysis of Available Case Reports. *Canad. M. A. J.* 97: 1214, 1967.

45. Solomon, D. Edit.: LSD, The Consciousness-Expanding Drug. Berkley Medallion (Paperback) Putnam, New York, 1964.

46. Solursh, L. P.: The Use of LSD-25 Psychotherapy — An Evaluation. *Int. J. Neuropsychiat.* 2:651, 1966.

47. Stoll, A., Hofman, A.: Helvet, *Chim Acta.* 26: 944, 1943.

48. Stoll, W. A.: *Schweiz. Arch. f. Neurol, un Psychiat.* 60:279, 1947.

49. Unger, M. S.: LSD and Psychotherapy. A Bibliography of the English Language Literature. p. 255 in *opus cite* Ref. No. 44, 1964.

50. Ungerleider, J. T., Fisher, D. D., Fuller, M.: The Dangers of LSD. *JAMA* 197:109, 1966.

51. Ungerleider, J. T.: Quoted in *A.P.A. Psychiat.* News, Washington D. C., April 1967.

52. Ungerleider, J. T., Fisher, D. D., Fuller, M., Caldwell, A.: The 'Bad Trip' — The Etiology of the Adverse LSD Reaction. *Amer. J. Psychiat.* 124:1483, 1968.

53. Ungerleider, J. T., Fisher, D. D. Goldsmith, S. R., Fuller, M., Forgy, E.: A Statistical Survey of Adverse Reactions to LSD in Los Angeles County. *Amer. J. Psychiat.* 125: 352, 1968.

54. Watts, A.: A Psychedelic Experience: Fact or Fancy. p. 119-131 in *opus cite* Ref. No. 44, 1964.

55. Zegans, L. C., Pollard, J. C., Brown, D.: The Effects of LSD-25 on Creativity. *Arch. Gen. Psychiat.* 16:790, 1967.

PSYCHOSOMATIC TRAINING PROGRAM

The Medical-Psychiatric Liaison Service of the Downstate Medical Center, under the auspices of the Departments of Medicine and Psychiatry, offers an intensive, NIMH-sponsored training program in the psychologic aspects of physical illness. This teaching program centers on the relationships between body and mind in a wide variety of illnesses and includes correlations between the psychological and physiological and biochemical variables. Special attention is given to the management of patients from a holistic viewpoint. The trainee actively participates in teaching of both medical students and house staff and, as such, holds an appointment in the faculty of the College of Medicine.

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