

# LSD before Leary

## Sidney Cohen's Critique of 1950s Psychedelic Drug Research

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### ABSTRACT

In 1962 Sidney Cohen presented the medical community with its first warning about the dangers of the drug LSD. LSD had arrived in the United States in 1949 and was originally perceived as a psychotomimetic capable of producing a model psychosis. But in the mid 1950s intellectuals in Southern California redefined LSD as a psychedelic capable of producing mystical enlightenment. Though LSD was an investigational drug, authorized only for experimental use, by the late 1950s psychiatrists and psychologists were administering it to cure neuroses and alcoholism and to enhance creativity. Cohen's 1960 study of LSD effects concluded that the drug was safe if given in a supervised medical setting, but by 1962 his concern about popularization, nonmedical use, black market LSD, and patients harmed by the drug led him to warn that the spread of LSD was dangerous. The subsequent government crackdown and regulation of LSD preceded the 1960s drug movement and was prompted by medical, not social, concerns.

IN CONGRESSIONAL HEARINGS ON LSD held in 1966, Timothy Leary asserted that the drug was "remarkably safe," citing a key 1960 article by Dr. Sidney Cohen. When Cohen himself testified, however, he contradicted Leary. He told Congress that LSD was safe only if administered under strict medical supervision and that in the wrong hands it was "a dangerous drug."<sup>1</sup>

The conflict between Cohen, a physician, and Leary, a layman, prefigured subsequent divergent historical interpretations. There are no historiographical schools on the drug movement, but both critics and partisans of LSD have embraced Cohen's 1960 article. The medical establishment criticized overzealous 1960s enthusiasts like Leary for meddling in medical affairs: "In 1960, ten years after [LSD] was introduced into psychiatry, its therapeutic prospects were still considered fair and the dangers slight. Then the debate

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<sup>1</sup> U.S. Senate Subcommittee on Executive Reorganization, 24, 25, 26, May 1966, *Organization and Coordination of Federal Drug Research and Regulatory Programs: LSD* (Washington, D.C.: Government Printing Office, 1966) (hereafter cited as *Federal LSD Research*), pp. 139, 145, 155.

received an infusion of irrational passion from the psychedelic crusaders and their enemies. . . . Twenty years after its introduction it was a pariah drug, scorned by the medical establishment and banned by the law."<sup>2</sup> On the other hand, proponents of LSD have attributed the medical profession's opposition to the wire-pulling of the CIA or to doctors' fear of social change. Thus one account blasted an anti-LSD editorial by saying, "[Roy S.] Grinker cited no data to back up these rather serious charges. He cited no data for the simple reason that there were none—Sidney Cohen's 1960 study on adverse reactions was still unchallenged in the literature. What Grinker was doing was projecting his own professional biases."<sup>3</sup>

To illuminate this debate, this article, based on new archival material and oral history interviews, analyzes Cohen's pioneering studies of the safety of LSD. Through this lens one can obtain a behind-the-scenes look at the tensions between physicians and intellectuals in defining LSD's meaning, plot the shift of LSD research from a scientific investigation into a cultural crusade, map the spread of LSD in the 1950s, and elucidate the medical profession's alarm over LSD, which led to government passage of tighter regulations of psychedelic drugs. Before Timothy Leary, who first took LSD in 1961, catapulted to the national scene by being fired from Harvard in 1963, Sidney Cohen had sounded the alarm that LSD was being abused and hurting people.<sup>4</sup>

#### THE MAKING OF A PSYCHOPHARMACOLOGIST

Cohen came to LSD research with a strong background in pharmacology. Born in 1910, in New York City, he was one of seven children of a Lithuanian-Jewish shoe shop owner. He majored in pharmacology at City College of New York and Columbia University, then earned an M.D. in 1938 from the University of Bonn. During World War II he served in the Army Medical Corps in the South Pacific. After his discharge he took a residency at the Wadsworth Veterans Administration Hospital in Los Angeles, adjacent to the University of California, Los Angeles, and then accepted a position as an internist across the street at the Brentwood VA Hospital for mentally ill servicemen.<sup>5</sup> When Wadsworth and Brentwood affiliated with the new UCLA School of Medicine, Cohen became an assistant clinical professor, supervising interns and graduate students. Handsome and prematurely gray, he gained a reputation as a popular teacher with an infectious enthusiasm for research. (See Figure 1.)

Cohen's interest in mental illness stemmed from his responsibilities at Brentwood. He puzzled over how to diagnose the physical ailments of his mute, catatonic, irrational patients. As he sought to explore the patients' physical symptoms, his first publications dealt

<sup>2</sup> Lester Grinspoon and James B. Bakalar, *Psychedelic Drugs Reconsidered* (New York: Basic, 1979), on p. 232 (see p. 229 for Cohen's study). See also Roy F. Baumeister and Kathleen S. Placidi, "A Social History and Analysis of the LSD Controversy," *Journal of Humanistic Psychology*, 1983, 23:30–32; and Robert F. Ulrich and Bernard M. Patten, "The Rise, Decline, and Fall of LSD," *Perspectives in Biology and Medicine*, 1991, 34:572–575.

<sup>3</sup> Jay Stevens, *Storming Heaven: LSD and the American Dream* (New York: Atlantic Monthly Press, 1987), pp. 181 (quotation), 173. On the role of the CIA see Martin A. Lee and Bruce Shlain, *Acid Dreams: The CIA, LSD, and the Sixties Rebellion* (New York: Grove, 1985), pp. 89–95; and John Marks, *The Search for the "Manchurian Candidate": The CIA and Mind Control* (New York: Times Books, 1979), pp. 118–121.

<sup>4</sup> The first notice of Leary in the *Reader's Guide to Periodical Literature* is "LSD and All That," *Time*, 29 Mar. 1963, pp. 72–73.

<sup>5</sup> Dorothy Cohen interview, 27 Feb. 1993. Unless otherwise noted, all interviews were conducted by the author and all interview tapes and notes are in his possession. I am grateful to Cohen's daughter for providing me with information about her father, photographs, and access to his personal papers (hereafter cited as **Cohen Papers**).



**Figure 1.** Sidney Cohen in 1957. (Courtesy of Dorothy Cohen.)

with diagnostic physical probes. Next he shifted toward biochemistry, publishing a case study on Cushing's syndrome in which he warned that the overproduction of adrenal cortical steroids that caused the disease was often undetectable and that patients should be given frequent "urinalysis, blood chemistry studies, renal function and glucose tolerance tests."<sup>6</sup>

Cohen grew intrigued by the mental and behavioral side effects of diseases and drugs. In 1951, after an accidental overdose left a patient "acutely psychotic" and paranoid, he undertook a study of the effects of Banthine. Cohen also wrote a survey of toxic psychoses, temporary breaks with reality due to disruption of the body's biochemical homeostasis. He observed that toxic psychoses were "unexpected and almost unpredictable" and could result in "catatonic stupor, manic excitement, paranoid agitation, or a vivid hallucinosis." His toxic psychosis research led to his interest in LSD. In his 1953 survey he first mentioned other investigators' research on LSD, a drug that at this time he said caused "a transient psychosis in all subjects."<sup>7</sup>

<sup>6</sup> Sidney Cohen, "Cushing's Syndrome: Report of a Case," *Annals of Western Medicine and Surgery*, 1950, 4:288–293, on p. 289. For Cohen's earliest publications see Leonard M. Asher and Cohen, "Gastroscopic Perforation of the Esophagus and Stomach," *Gastroenterology*, 1949, 12:966–969; and Cohen, "The Management of Massive Esophageal Hemorrhage with Tamponade," *ibid.*, 1949, 13:141–151.

<sup>7</sup> Sidney Cohen, "The Toxic Psychoses and Allied States," *American Journal of Medicine*, 1953, 15:813–828,

## LSD AS A MODEL PSYCHOSIS

LSD-25, lysergic acid diethylamide, was a new investigational drug available only to physicians for research purposes. It had been synthesized in 1938 at the Basel, Switzerland, laboratories of Sandoz Pharmaceuticals, by the chemist Albert Hofmann. Hofmann discovered its mind-altering properties in 1943 when he accidentally ingested a minute quantity and thought he was going mad. For years psychiatrists had searched for a chemical cause of insanity but had failed to find measurable abnormalities in the blood or urine of psychotics. What made Hofmann's discovery so exciting was that LSD worked in almost infinitesimal doses. Other drugs were measured in milligrams, thousandths of a gram, but LSD was measured in micrograms, millionths of a gram. Hoping that LSD might have clinical applications, Sandoz brought it to the attention of scientists, and samples reached the United States in the fall of 1949.<sup>8</sup>

Though the idea that LSD per se caused insanity was soon abandoned, researchers began to experiment with LSD to induce a model psychosis in subjects. They sought to use it as a means of temporarily replicating the effects of mental illness, as a so-called psychotomimetic, like hashish and mescaline, which psychiatrists had previously employed. By the mid 1950s, LSD research was being conducted in major American medical centers as well as in Canada, England, and Europe. In the background of this research was the alleged "brainwashing" of American prisoners during the Korean War. Popular accounts of brainwashing claimed that "some drug or 'lie serum' may possibly be used to speed up collapse."<sup>9</sup> To determine whether LSD might be a truth serum or a form of chemical warfare, the Central Intelligence Agency secretly began to fund LSD research in 1953 and the Army Chemical Corps started its own tests in 1955.<sup>10</sup> Because LSD was originally perceived as hazardous, the subjects of the early experiments were often soldiers, mental patients, prisoners, conscientious objectors, animals, medical school staff members, and physicians themselves.<sup>11</sup> A few early investigators refused to take LSD, while others who

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on pp. 813, 817. Cohen attributed his interest in LSD to his research on toxic psychosis; he is quoted in Harold A. Abramson, ed., *The Use of LSD in Psychotherapy* (New York: Macy Foundation, 1960), p. 11. The Banthine overdose is described in Leonard Asher interview, 23 Feb. 1993; for the resulting publication see Leonard M. Asher and Cohen, "The Effect of Banthine on the Central Nervous System," *Gastroenterology*, 1951, 17:178–183.

<sup>8</sup> Albert Hofmann, *LSD, My Problem Child: Reflections on Sacred Drugs, Mysticism, and Science* (Los Angeles: Tarcher, 1983). The significance of LSD's microscopic dosage is emphasized in Humphry Osmond, "Chemical Concepts of Psychosis," in *Chemical Concepts of Psychosis*, ed. Max Rinkel (New York: McDowell, Obolensky, 1958), pp. 3–26, on pp. 10–11. A survey of the medical research with psychedelic drugs is Abram Hoffer and Humphry Osmond, *The Hallucinogens* (New York: Academic, 1967).

<sup>9</sup> "Washed Brains of POW's: Can They Be Rewashed?" *Newsweek*, 4 May 1953, p. 37. See also Edward Hunter, *Brain-washing in Red China: The Calculated Destruction of Men's Minds*, 2nd ed. (New York: Vanguard, 1953), foreword; and Jean Rolin, *Police Drugs* (New York: Philosophical Library, 1956).

<sup>10</sup> Marks, *Search for the "Manchurian Candidate"* (cit. n. 3); and U.S. Army Medical Department, *LSD Follow-up Study Report* (Washington, D.C.: U.S. Army Medical Department, 1980). The army gave LSD to 4,826 soldier volunteers between 1955 and 1975. This research was supposed to be covert and was not fully revealed until the 1970s, but a few records were published by the end of the 1950s. See U.S. House Committee on Science and Astronautics, *Chemical, Biological, and Radiological Warfare Agents: Hearings before the Committee on Science and Astronautics*, 86th Cong., 1st sess., 16 and 22 June 1959 (Washington, D.C.: Government Printing Office, 1959); and Subcommittee on Disarmament of the United States, U.S. Senate Committee on Foreign Relations, *Chemical-Biological-Radiological (CBR) Warfare and Its Disarmament Aspects*, 29 Aug. 1960 (Washington, D.C.: Government Printing Office, 1960).

<sup>11</sup> Studies on LSD and schizophrenics include Gordon R. Forrer and Richard D. Goldner, "Experimental Physiological Studies with Lysergic Acid Diethylamide," *American Medical Association Archives of Neurology and Psychiatry*, 1951, 65:581–588; W. Mayer-Gross et al., "Further Observations on the Effects of Lysergic Acid Diethylamide," *Journal of Mental Science*, 1953, 99:804–808; Bruce Sloane and John W. Lovett Doust,

tried it said they experienced only unpleasant or inconsequential effects.<sup>12</sup> To guard against untoward reactions, doctors conducted experiments in clinics and laboratories. Subjects were monitored by EEG machines and polygraphs, had their words tape-recorded, and were given lengthy psychological and intelligence tests.

Though reactions varied, the usual LSD session included visual illusions, luminous, intense colors, undulating lines and multiple images in geometric patterns; dissociation, loss of ego boundaries, distorted body image; an elongated sense of time; synesthesia—"seeing" sound or "hearing" sights; emotional lability, giggling and weeping, anxiety and detachment; and a tantalizing sense of portentousness or incompleteness. The question was what—if anything—these symptoms signified.

The early LSD researchers concluded that their subjects went through a temporary psychosis, most commonly categorized as schizophrenia or paranoia. Subjects performed poorly on tests, made perceptual errors, and exhibited loss of concentration and regressive behavior.<sup>13</sup> Even the euphoria sometimes present was defined as manic and hebephrenic.<sup>14</sup> Researchers had anticipated deleterious effects. The widely used questionnaire devised by the Harold A. Abramson lab in New York presented all of its questions in negative terms.

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"Psychophysiological Investigations in Experimental Psychoses: Results of the Exhibition of D-Lysergic Acid Diethylamide to Psychiatric Patients," *ibid.*, 1954, 100:129–144; Louis S. Cholden *et al.*, "Clinical Reactions and Tolerance to LSD in Chronic Schizophrenia," *Journal of Nervous and Mental Disease*, 1955, 122:211–221; and Herbert S. Cline and Harry Freeman, "Resistance to Lysergic Acid in Schizophrenic Patients," *Psychiatric Quarterly*, 1956, 30:676–683.

For LSD research on drug addict prisoners at the National Institute of Mental Health Addiction Research Center in Lexington, Kentucky, see Harris Isbell *et al.*, "Studies on Lysergic Acid Diethylamide, I: Effects in Former Morphine Addicts and Development of Tolerance during Chronic Intoxication," *Amer. Med. Ass. Arch. Neurol. Psychiat.*, 1956, 76:468–478; Isbell *et al.*, "Studies on the Diethylamide of Lysergic Acid, II: Effects of Chlorpromazine, Azacyclonol, and Reserpine on the Intensity of the LSD-Reaction," *ibid.*, 1957, 77:350–358; and Isbell, "Comparison of the Reactions Induced by Psilocybin and LSD-25 in Man," *Psychopharmacologia*, 1959, 1:29–38. For LSD research on prisoners in the federal penitentiary in Atlanta, Georgia, see Edmund W. J. DeMaar *et al.*, "Effects in Man of Single and Combined Oral Doses of Reserpine, Iproniazid, and D-Lysergic Acid Diethylamide," *Clinical Pharmacology and Therapeutics*, 1960, 1:23–30.

Charles Savage administered LSD to Mennonite conscientious objectors at the NIMH; see Abramson, ed., *Use of LSD in Psychotherapy* (cit. n. 7), pp. 193–194.

<sup>12</sup> For Paul Hoch's refusal to try LSD see Sanford Unger, "The Psychedelic Use of LSD: Reflections and Observations," in *Psychedellic Drugs*, ed. Richard E. Hicks and Paul Jay Fink (New York: Grune & Stratton, 1969), pp. 199–209, on p. 200; for Milton Greenblatt's refusal see Milton Greenblatt interview, 5 Nov. 1991. Unpleasant reactions are noted in Murray F. Jarvik interview, 24 Mar. 1992; Nicholas A. Bercel interviews, 29 June, 24 Aug. 1991; Max Rinkel, "Experimentally Induced Psychosis in Man," in *Neuropharmacology: Transactions of the Second Conference*, May 25, 26, and 27, 1955, Princeton, N.J., ed. Harold A. Abramson (New York: Macy Foundation, 1956), p. 236; H. Jackson DeShon *et al.*, "Mental Changes Experimentally Produced by L.S.D.," *Psychiat. Q.*, 1952, 26:33–53, on p. 41; Abramson, ed., *Use of LSD in Psychotherapy*, p. 236; and John M. Macdonald and James A. V. Galvin, "Experimental Psychotic States," *American Journal of Psychiatry*, 1956, 112:970–976, on p. 975.

<sup>13</sup> Nicholas A. Bercel *et al.*, "Model Psychoses Induced by LSD-25 in Normals, I: Psychophysiological Investigations, with Special Reference to the Mechanism of the Paranoid Reaction," *Amer. Med. Ass. Arch. Neurol. Psychiat.*, 1956, 75:588–618; DeShon *et al.* "Mental Changes," pp. 41–48; Max Rinkel *et al.*, "Experimental Psychiatry, III: A Chemical Concept of Psychosis," *Diseases of the Nervous System*, 1954, 15:259–264, on p. 260; Harold A. Abramson *et al.*, "Lysergic Acid Diethylamide (LSD-25), I: Physiological and Perceptual Responses," *Journal of Psychology*, 1955, 39:3–60, on p. 34; Murray E. Jarvik *et al.*, "Lysergic Acid Diethylamide (LSD-25), VIII: Effect on Arithmetic Test Performance," *ibid.*, pp. 465–473; A. Levine *et al.*, "Lysergic Acid Diethylamide (LSD-25), XVI: The Effect on Intellectual Functioning as Measured by the Wechsler-Bellevue Intelligence Scale," *ibid.*, 1955, 40:385–396; W. M. Hirsch *et al.*, "Lysergic Acid Diethylamide (LSD-25), XVIII: Effect of LSD 25 and Related Drugs upon Handwriting," *ibid.*, 1956, 41:11–21; and Rinkel, "Experimentally Induced Psychosis," p. 236.

<sup>14</sup> DeShon *et al.*, "Mental Changes," pp. 37–42; J. Elkes *et al.*, "The Effect of Some Drugs on the Electrical Activity of the Brain and on Behaviour," *J. Mental Sci.*, 1954, 100:125–128, on p. 125; Bercel *et al.*, "Model Psychoses Induced by LSD-25," pp. 588–618; and Rinkel, "Experimentally Induced Psychosis," p. 236.

Forty-eight percent of Abramson's subjects said they felt unsteady, 41 percent weak, 40 percent peculiar, 27 percent anxious, and 26 percent nauseous. By the mid 1950s, when this first wave of LSD research reached the public in popular magazines, undergoing the effects of LSD was portrayed as a harrowing experience.<sup>15</sup>

#### LSD AS A PSYCHEDELIC EXPERIENCE

That LSD produced a model psychosis was taken for granted when Cohen first took the drug on 12 October 1955. He expected to feel catatonic or paranoid, but instead, he wrote, "I was taken by surprise. This was no confused, disoriented delirium, but something quite different." His subsequent report described feeling an elevated peacefulness, as if "the problems and strivings, the worries and frustrations of everyday life vanished; in their place was a majestic, sunlit, heavenly inner quietude. . . . I seemed to have finally arrived at the contemplation of eternal truth."<sup>16</sup>

Cohen immediately launched his own LSD experiments. He sponsored three doctoral dissertations by UCLA graduate students in psychology that measured the effects of LSD on eighty-one members of the academic community.<sup>17</sup> The dissertations followed the standard model psychosis methodology of conducting extensive tests, and the results replicated prior studies: subjects showed impaired intellectual ability, lowered IQ, inability to concentrate, and breakdown of ego functioning. Afterward, they reported that under LSD they felt emptiness, loneliness, and isolation. Cohen was disappointed by these reactions, which differed from his own. At the 1959 Princeton LSD conference, he said, "Though we have been using the available measuring instruments, the check lists, the performance tests, the psychological batteries, and so forth, the core of the LSD situation remains in the dark, quite untouched by our activities."<sup>18</sup>

<sup>15</sup> The percentages are from Abramson *et al.*, "Lysergic Acid Diethylamide (LSD-25)" (cit. n. 13), p. 34. On the questionnaire see Harold A. Abramson, ed., *Neuropharmacology: Transactions of the First Conference, May 26, 27, and 28, 1954* (Princeton, N.J.: Macy Foundation, 1955), pp. 263–264; Isbell, "Comparison of the Reactions" (cit. n. 11), p. 30 n. 2; and Abramson, "Lysergic Acid Diethylamide (LSD-25), XXX: The Questionnaire Technique with Notes on Its Use," *J. Psychol.*, 1960, 49:57–65, on p. 57. For reports in popular magazines see Sidney Katz, "My Twelve Hours as a Madman," *Maclean's*, 1 Oct. 1953, pp. 9–11, 46–55; Robert M. Goldenson, "Step into the World of the Insane," *Look*, 21 Sept. 1954, pp. 30–35; and Robert M. Yoder, "Help for the Living Dead," *Saturday Evening Post*, 22 Oct. 1955, pp. 41–43, 64, 66, 71.

<sup>16</sup> Sidney Cohen, quoted in Abramson, ed., *Use of LSD in Psychotherapy* (cit. n. 7), p. 11; and Cohen, *The Beyond Within: The LSD Story* (New York: Atheneum, 1964), p. 107. Cohen's reactions were initially recorded in Sidney Cohen LSD Report, 13 Oct. 1955; Leonard Asher provided me with a copy of this document. The bulk of the report was reprinted anonymously, and undated, in Cohen, *Beyond Within*, pp. 106–111. One of Cohen's friends wrote, "The Gunz family were all fascinated by your Lysergic Acid experiment": Martin K. Gunz to Sidney Cohen, 29 Oct. 1955, Cohen Papers. See also Oscar Janiger interview of Sidney Cohen, 6 June 1978, Albert Hofmann Foundation, Santa Monica, California (hereafter cited as **Hofmann Foundation**).

<sup>17</sup> Lionel Lazarus Fichman, "Psychological Effects of Lysergic Acid Diethylamide as Reflected in Psychological Test Changes" (Ph.D. diss., UCLA, 1957); Leonard Korot, "The Application of the Semantic Differential to a Drug-Induced 'Dissociative State'" (Ph.D. diss., UCLA, 1959); and Eugene Morley, "Some Differences between the Lysergic Acid Diethylamide State and Three Naturally Occurring Psychoses on Rating Scales of Ego-Functioning" (Ph.D. diss., UCLA, 1960). Cohen wrote, "There is considerable interest among the younger people training in psychology in lysergic acid": Cohen to Ewing W. Reilly, 7 Mar. 1958, Cohen Papers.

<sup>18</sup> Sidney Cohen, quoted in Abramson, ed., *Use of LSD in Psychotherapy* (cit. n. 7), p. 11. Ronald Sandison concurred: "I agree that psychological tests are singularly ineffective in helping us to define this response" (*ibid.*, p. 15). The psychologist William McGlothlin, who worked on LSD experiments with Cohen in the early 1960s, later said, "We make absolutely no demands on the subjects. . . . They can do anything they wish. . . . They have no tests to take": William McGlothlin, quoted in Harold A. Abramson, ed., *The Use of LSD in Psychotherapy and Alcoholism* (Indianapolis: Bobbs-Merrill, 1967), p. 42. For the model psychosis test results see Fichman, "Psychological Effects" pp. 85, 98–99, 105–106; for subjects' reported reactions see Sidney Cohen, Lionel Fichman, and Betty Grover Eisner, "Subjective Reports of Lysergic Acid Experiences in a Context of Psychological Test Performance," *Amer. J. Psychiat.*, 1958, 115:30–35.

Rather than accept the dissertation findings as an accurate picture of the effects of LSD, Cohen took the crucial step of altering his approach. He shifted the focus of his LSD research to men of letters. The idea of filtering LSD reports through refined psyches was suggested by the Canadian psychiatrist Humphry Osmond, who first gave mescaline to Aldous Huxley. At a 1956 conference, Osmond said that one of the problems with LSD research was that there was a “dearth of subjects skilled in self-observation.”<sup>19</sup>

Hoping for more articulate reports, Cohen tried LSD on psychoanalysts, supposed experts on the unconscious, but they either blocked the drug effects or had bad reactions. Next he turned to his friend Gerald Heard, an English expatriate freelance writer whose special interests were mysticism and popular science. In 1957 Heard wrote a friend that he was one of the “human guinea pigs in the lysergic acid research.” He described the effect as “a shift of consciousness” that was “so clearly similar to the accounts given by the mystics that none of us feel able to deny that this is in fact the experience which we undergo.”<sup>20</sup>

Cohen also collaborated with Heard’s friend Aldous Huxley, whom he met in late 1955. The famous author of *Brave New World* was the literary lion of Los Angeles, where he had settled in 1937 to write for Hollywood.<sup>21</sup> (See Figure 2.) Owing to his near blindness, which dated from his youth, Huxley was unable to engage in active scientific research himself, but he compensated by cultivating his talents as a conversationalist and stylist. Rather than explore the broad paths of thought, he searched the odd byways—hypnotism, ESP, flying saucers, and reincarnation.

Long before Cohen met him, on 4 May 1953, Huxley had persuaded Osmond to give him a dose of mescaline, an experience that inspired him to write *The Doors of Perception* (1954) and *Heaven and Hell* (1956). In both books Huxley mentioned LSD, though he did not actually try it till December 1955, after the books were written.<sup>22</sup> Huxley redefined taking mescaline and LSD as a mystical religious experience. He claimed that these drugs allowed one to transcend the mundane world and enter the elevated state of consciousness usually reserved to poets, artists, and saints.

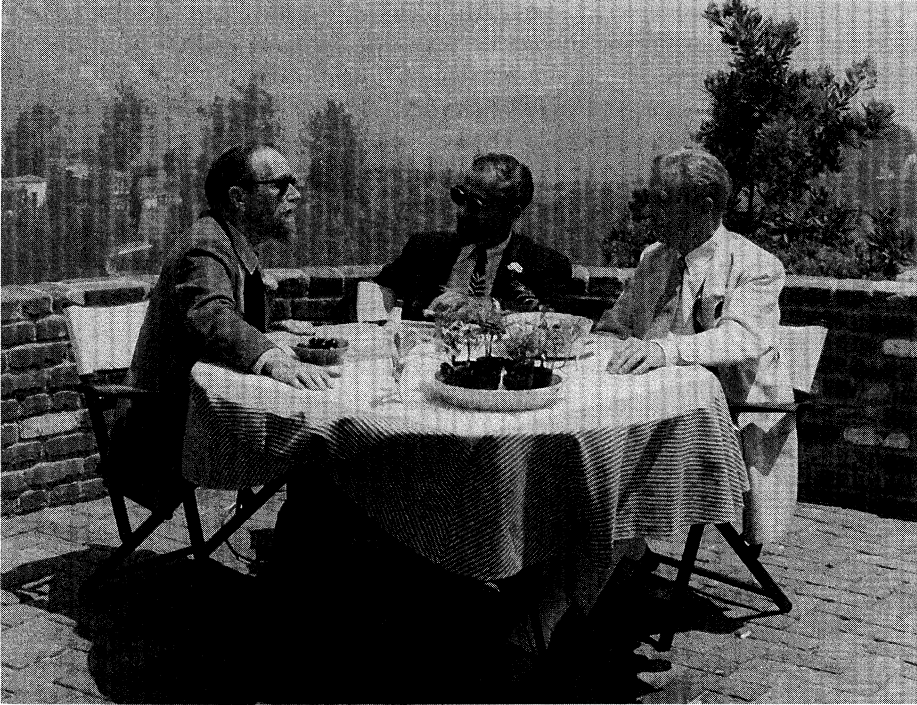
A few medical researchers questioned the validity of Huxley’s account. Louis Lasagna considered *Doors of Perception* the result of “unusual . . . romantic proclivities.” Ronald Fisher remarked that the book contained “99 percent Aldous Huxley and only one half gram mescaline.” Joost A. M. Meerloo found Huxley’s reactions “not necessarily the same

<sup>19</sup> Humphry Osmond, “A Review of the Clinical Effects of Psychotomimetic Agents,” *Annals of the New York Academy of Sciences*, 14 Mar. 1957, 66:418–434, on p. 422.

<sup>20</sup> Gerald Heard to Ernest Hocking, 1 July 1957, Heard Papers, Collection 1054, Box 29-1, Department of Special Collections, University Research Library, UCLA, Los Angeles, California (hereafter cited as **Heard Papers**). On psychoanalysts’ experience of LSD see Cohen to Alfred M. Hubbard, 13 Sept. 1956, Cohen Papers; and Janiger interview of Cohen, 6 June 1978, Hofmann Foundation. Aldous Huxley wrote in 1957, “The only people who don’t get anything from LSD or mescaline are psycho-analysts. There are 2 experimenters here who have given it to several Freudians. None of them got anything positive”: Aldous Huxley, *Letters of Aldous Huxley*, ed. Grover Smith (New York: Harper & Row, 1969), p. 813.

<sup>21</sup> “Your visit with Aldous Huxley sounds like a most interesting experience”: Gunz to Cohen, 16 Jan. 1956, Cohen Papers. On the influence of Huxley and Heard in general see David Robb, “Brahmins from Abroad: English Expatriates and Spiritual Consciousness in Modern America,” *American Studies*, Fall 1985, 26:45–60. Ironically, when *Life* magazine wanted to celebrate Los Angeles’s intellectual coming of age, three of the four figures they selected—Huxley, Heard, and Christopher Isherwood—were English expatriates deeply involved in LSD; see “A Warm Climate for Cultural Life,” *Life*, 20 June 1960, p. 89.

<sup>22</sup> Huxley to Humphry Osmond, 23 Dec. 1955, in Huxley, *Letters*, ed. Smith (cit. n. 20), pp. 778–779; Aldous Huxley, *The Doors of Perception* (London: Chatto & Windus, 1954); and Huxley, *Heaven and Hell* (London: Chatto & Windus, 1956).



**Figure 2.** Left to right: Gerald Heard, UCLA professor of philosophy Abraham Kaplan, and Aldous Huxley, at Huxley's home in the Hollywood Hills, during filming of the television special *Focus on Sanity*, 1957. (Heard Papers, Collection 1054, Box 32:F5, Department of Special Collections, University Research Library, UCLA, Los Angeles, California.)

as . . . other people experience.”<sup>23</sup> Yet Huxley's critics were ignored, and his books became counterculture classics.

In redefining the meaning of the LSD experience, Huxley declared war on academic psychiatry. Despite accepting honors at psychiatric conferences, he privately scorned what he called “the Electric Shock Boys, the Chlorpromaziners and the 57 Varieties of Psychotherapists.” Huxley converted Osmond and Albert Hofmann to the idea that taking LSD provided a transcendental experience, and possibly Cohen's own first reaction was shaped by a prior reading of Huxley.<sup>24</sup>

<sup>23</sup> Louis Lasagna and John M. von Felsinger, “The Volunteer Subject in Research,” *Science*, 1954, 120:359–361, on pp. 360–361; Ronald Fisher, quoted in Louis Cholden, ed., *Lysergic Acid Diethylamide and Mescaline in Experimental Psychiatry* (New York: Grune & Stratton, 1956), p. 67; and Joost A. M. Meerloo, “Medication into Submission: The Danger of Therapeutic Coercion,” *J. Nervous Mental Dis.*, 1955, 122:353–360, on pp. 358–359.

<sup>24</sup> Huxley to Osmond, 11 May 1955, in Huxley, *Letters*, ed. Smith (cit. n. 20), pp. 742–743. Huxley's address, “Mescaline and the ‘Other World,’” was published in Cholden, ed., *Lysergic Acid Diethylamide*, pp. 46–50. Humphry Osmond wrote me that his attitude toward the use of mescaline changed after observing Huxley's drug taking, reading *The Doors of Perception*, and talking with Huxley and his (first) wife Maria, which helped him understand that the “door in the wall” might give access to various kinds of experience: Osmond to Steven Novak, 1 Mar. 1993. Hofmann explained his change of mind by writing, “In *The Doors of Perception* and *Heaven and Hell*, Huxley's newly-published works, I found a meaningful exposition of the experience induced by hallucinogenic drugs, and I thereby gained a deepened insight into my own LSD experiments”: Hofmann, *LSD, My Problem Child* (cit. n. 8), p. 172.



To make the public receptive to mescaline and LSD, Huxley sought to provide a new label for the drugs: "It will give that elixir a bad name if it continues to be associated, in the public mind, with schizophrenia symptoms. People will think they are going mad, when in fact they are beginning, when they take it, to go sane." With Huxley's help, Osmond discarded his former term for describing these experiences—*hallucinogenic*, which connoted mental illness—and in 1956 coined the word *psychedelic*, which signified "mind-manifesting." Osmond introduced the new term at a 1956 conference at which he declared that LSD's effects were not a model psychosis but, rather, a psychedelic experience. "For myself," he said, "my experiences with these substances have been the most strange, most awesome, and among the most beautiful things. . . . These are not escapes from but enlargements, burgeonings of reality."<sup>25</sup>

That physicians like Osmond and Cohen would turn to nonmedical thinkers like Huxley and Heard was partly due to psychiatry's lack of an adequate model of mental illness, such as the germ theory provided for infectious disease. At first Cohen deferred to these prominent intellectuals. He treated them more as collaborators than as subjects and trusted them with samples of LSD for self-experiments and to administer to others. He wrote in a posthumous tribute to Heard, "We learned from Gerald that, just as in some psychological experiments animals are inappropriate test subjects, so in certain experiments with the psychedelics *ordinary men are inadequate subjects*. . . . He was a skilled, articulate observer in entering into an indescribable, surging state, which could fragment some with its intensity and divert others with its entertaining visual displays."<sup>26</sup>

#### LSD AND PSYCHOTHERAPY

Besides turning to intellectuals, Cohen revised the reasons for giving LSD. He explored whether LSD might have a helpful effect in facilitating psychotherapy, curing alcoholism, and enhancing creativity. To test LSD in psychotherapy, he collaborated with Betty Eisner, a recent UCLA doctorate in psychology. The rationale underlying their study was the Freudian belief that the roots of maladjustment lay in trauma buried in the unconscious. Where Freud had used talk therapy to explore the unconscious, other psychiatrists tried to enter the subconscious by injecting their patients with drugs such as sodium amytal or causing them to inhale carbon dioxide.<sup>27</sup> This so-called narcoanalysis was much discussed in the 1950s. An English psychiatrist described LSD as "assisting the unconscious to reveal its secrets," though other psychiatrists were skeptical of its therapeutic potential.<sup>28</sup>

<sup>25</sup> Huxley to Osmond, 3 Feb. 1955, in Huxley, *Letters*, ed. Smith, p. 729 ("going sane"); and Osmond, "Review of Clinical Effects" (cit. n. 19), p. 428. For *psychedelic* see Huxley, *Letters*, ed. Smith, p. 795n.

<sup>26</sup> Sidney Cohen, unpublished, undated, untitled draft of an essay for a commemorative volume planned after Heard's death, Cohen Papers (emphasis added). On 29 Nov. 1959 Huxley asked Osmond, "And talking of LSD—would it be possible for you to send me half a dozen doses of it? . . . I don't want to bother Sid Cohen too often": Huxley, *Letters*, ed. Smith, p. 882.

<sup>27</sup> Erich Lindemann, "Psychological Changes in Normal and Abnormal Individuals under the Influence of Sodium Amytal," *Amer. J. Psychiat.*, 1932, 88:1083–1091; S. J. Horsley, *Narco-analysis* (London: Oxford Univ. Press, 1943); Roy R. Grinker and John P. Spiegel, *Men under Stress* (Philadelphia: Blakiston, 1945), pp. 170–171, 394–395; Paul H. Hoch, "The Present Status of Narco-diagnosis and Therapy," *J. Nervous Mental Dis.*, 1946, 103:248–259; and L. J. Meduna, *Carbon Dioxide Therapy: A Neurophysiological Treatment of Nervous Disorders* (Springfield, Ill.: Thomas, 1950).

<sup>28</sup> R. A. Sandison, "Psychological Aspects of the LSD Treatment of the Neuroses," *J. Mental Sci.*, 1954, 100:508–515, on p. 514; Sandison *et al.*, "The Therapeutic Value of Lysergic Acid Diethylamide in Mental Illness," *ibid.*, pp. 491–507, esp. p. 497; Walter Frederking, "Intoxicant Drugs (Mescaline and Lysergic Acid Diethylamide) in Psychotherapy," *J. Nervous Mental Dis.*, 1955, 121:262–266, esp. p. 263; and Ian Stevenson,

Cohen and Eisner sought to maximize LSD's potential by taming its terror. Cohen wrote Osmond, "We are going to study how and whether the LSD experience can be more 'healing.' . . . We are putting Betty Eisner to work on the development of an optimal technique and will see whether anything comes of it." They consulted with Al Hubbard, who first gave Huxley LSD and was using the drug in therapy in Canada. Hubbard was a mysterious figure, a charismatic, flamboyant entrepreneur with an extravagant lifestyle.<sup>29</sup> Huxley and the Canadian researchers hoped that Hubbard would finance LSD research, not realizing that he planned to make his fortune with the drug. Though not even a college graduate, Hubbard purchased a diploma-mill Ph.D., wore an Aesculapian tiepin, and, on his own, administered LSD, even though he was not a physician. To soften LSD's harsh effects, Eisner and Hubbard devised techniques such as starting with low doses, providing a domestic setting for "treatment," and establishing close rapport with patients before giving them the drug. Cohen was impressed by Hubbard's techniques but suspected that much of the effect was due to suggestion, which might not produce lasting improvement. He also worried that if subjects were merely reacting to the setting, the drug itself was not exposing their unconscious.<sup>30</sup>

In April 1957 Cohen and Eisner began giving LSD to psychotherapy patients. Over the next year and a half they treated twenty-two patients suffering from minor personality disorders. Unlike the model psychosis subjects, these patients expected that the drug would be therapeutic. Aware that evaluating therapy was subjective, Cohen and Eisner waited six months and then measured progress in the patients by behavioral criteria such as holding a job, sustaining a relationship, or giving up drinking. Working with these criteria, they reported a remarkable 73 percent improvement rate.

Their paper attributed these gains to giving patients what they called an "integrative experience, . . . a state wherein the patient accepts himself as he is. . . . There is a feeling of harmony with his environment." This mystical thrust was largely Eisner's doing. Like Huxley and Heard, she studied Eastern religions. She visited Heard's Vedanta monastery, Trabuco College, and had her personality analyzed by Krishnamurti. Even before their LSD experiment began, she confided, "I feel, and think that Sid does too, that the best possible therapeutic LSD experience is one in which a subject glimpses the unity of the cosmos."<sup>31</sup>

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"Comments on the Psychological Effects of Mescaline and Allied Drugs," *ibid.*, 1957, 125:438-442. For some more skeptical views see Charles Savage, "Lysergic Acid Diethylamide (LSD-25): A Clinical-Psychological Study," *Amer. J. Psychiat.*, 1952, 108:896-900, esp. p. 899; James P. Cattell, "The Influence of Mescaline on Psychodynamic Material," *J. Nervous Mental Dis.*, 1954, 119:233-244, esp. pp. 240, 243; and Paul H. Hoch, "Remarks on LSD and Mescaline," *ibid.*, 1957, 125:443-444.

<sup>29</sup> Cohen to Osmond, 11 Jan. 1957, Cohen Papers. On the first contacts with Hubbard see Cohen to Gunz, 8 Dec. 1956, Cohen Papers: "This week I spent a lot of time with an Al Hubbard, a wealthy engineer from Vancouver. This chap has been using LSD and mescaline for the last couple of years up there as therapy for bottom-scraping alcoholics, muddled people, etc., with 'astounding' success. He sets up a sort of semi-religious situation, gives his 'friends' massive support and suggestion, and is able to turn problem alcoholics into social drinkers." Hubbard spun so many tall tales about himself that it is difficult to know what to believe about his life. I rely on the Oscar Janiger interview of Al Hubbard, 13 Oct. 1978, Hofmann Foundation; extensive Hubbard correspondence in the Hoffer Papers, Saskatchewan Archives Board, University of Saskatchewan, Saskatoon (hereafter cited as **Hoffer Papers**), and in the Myron Stolaroff Papers, privately held; and Todd Brendan Pahey, "The Original Captain Trips," *High Times*, Nov. 1991, pp. 38-40, 54-65.

<sup>30</sup> Huxley described Hubbard as "a millionaire business man-physicist, scientific director of the Uranium Corporation"; Huxley to Eileen J. Garrett, 31 Jan. 1955, in Huxley, *Letters*, ed. Smith (cit. n. 20), p. 729; see also pp. 722-723. For a later perspective see Osmond to Abram Hoffer, 26 Aug. 1963, Hoffer Papers; for Cohen's reservations see Cohen to Gunz, 8 Dec. 1956, Cohen Papers.

<sup>31</sup> Betty Grover Eisner and Sidney Cohen, "Psychotherapy with Lysergic Acid Diethylamide," *J. Nervous*

The second new thrust of Cohen's work with LSD was treating alcoholism, one of the most intractable forms of neurosis. The model for this approach came from Alcoholics Anonymous, founded in 1935 by Bill Wilson after he had "hit bottom" in Towns Hospital in 1934 and then had undergone a religious experience. There were two ideas about how LSD might cure alcoholism. In 1954, at Saskatchewan Hospital, Osmond and his partner, the psychiatrist Abram Hoffer, began giving alcoholics LSD on the theory that the traumatic drug experience resembled the delirium tremens (DTs) of hitting bottom.<sup>32</sup> On the other hand, their associate Al Hubbard believed that LSD brought alcoholics to awareness of the higher power to which AA said one must surrender one's will. The latter view gained support from Bill Wilson himself. Wilson was a friend of Heard's and through him met Osmond and Huxley and was drawn into trying LSD. Wilson's first LSD session took place in Los Angeles on 29 August 1956, with Cohen in attendance. Wilson took LSD again in February 1957 at Betty Eisner's house, along with her husband, Cohen, and an AA associate. Wilson dabbled in LSD for two years, comparing its effects on occasion to his mystical experience at Towns Hospital.<sup>33</sup> He started a private LSD group in New York, with LSD samples supplied by Cohen and Dr. Keith Ditman.

Ditman, one of Cohen's former Brentwood residents, was director of the UCLA Neuropsychiatric Institute's Alcoholism Research Clinic, where he tested LSD on alcoholics. A number of prominent figures passed through the clinic. Besides Wilson, Ditman gave LSD to Chuck Dederich, founder of the antidrug commune Synanon, and Alan Watts, the popularizer of Zen. News of Wilson's involvement in LSD caused a scandal in AA, and Wilson accused Ditman of leaking his name. Ditman denied the charge but admitted that "when the word about LSD and our . . . studies got to one or two of the A.A. meetings, things became pretty lively."<sup>34</sup>

In his research Ditman gave LSD to seventy subjects. They received a single dose, without therapy, in a nonthreatening setting. Later, subjects rated three hundred card-sort statements. Ditman's first published finding was that LSD did not resemble the DTs. Whereas the DTs were marked by "anxiety, horror, depression, irritation, and paranoid

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*Mental Dis.*, 1958, 127:528-539; and Betty Eisner to Reilley, 13 Feb. 1957, Eisner Papers. Information on Eisner's interests comes from Betty Eisner interviews, 9 Aug. 1991, 20 Jan. 1993. Eisner allowed me to read her unpublished memoirs and to review her correspondence (hereafter cited as **Eisner Papers**).

<sup>32</sup> "It is believed by Alcoholics Anonymous and by many alcoholics that alcoholics begin to recover after they have reached a state of existence called 'hitting bottom' "; Hoffer and Osmond, *Hallucinogens* (cit. n. 8), p. 154. On the founding of AA see Bill Pittman, *AA: The Way It Began* (Seattle: Glen Abbey, 1988), pp. 163-172. Wilson told of his experience in Bill W., *Alcoholics Anonymous: The Story of How Many Thousands of Men and Women Have Recovered from Alcoholism* (New York: Works, 1939); and Bill W., *Twelve Steps and Twelve Traditions* (New York: Harper, 1953). Added detail is found in Ernest Kurtz, *Not-God: A History of Alcoholics Anonymous* (Center City, Minn.: Hazelden, 1979); [Alcoholics Anonymous], *"Pass It On": The Story of Bill Wilson and How the A.A. Message Reached the World* (New York: Alcoholics Anonymous World Services, 1984); and Nan Robertson, *Getting Better: Inside Alcoholics Anonymous* (New York: Morrow, 1988).

<sup>33</sup> The fullest account of Wilson's LSD experiences is in [Alcoholics Anonymous], *"Pass It On,"* pp. 368-377. See also Bill Wilson to Cohen, 26 Sept. 1956, Cohen Papers; Janiger interview of Cohen, 16 June 1978, Hofmann Foundation; Thomas E. Powers to Eisner, 16 Feb. 1957, Eisner Papers; and Thomas E. Powers interview, 13 Feb. 1995. For Wilson's comparison of the effects of LSD and his earlier mystical experience see Wilson to Cohen, 26 Sept. 1956.

<sup>34</sup> Keith Ditman to Wilson, 16 Dec. 1957 (quotation), 4 Feb. 1958, Ditman Papers. Wilson's distress that his taking LSD had become public knowledge is from Wilson to Cohen, 16 Dec. 1957, Cohen Papers. See also Elizabeth Dixon interview of Chuck Dederich, 1962, in *Seven Voices from Synanon* (UCLA Oral History Program, 1964), Department of Special Collections, University Research Library, UCLA, pp. 24-25; and Alan Watts, *In My Own Way: An Autobiography, 1915-1965* (New York: Pantheon, 1972), pp. 342-344. Dederich looked at his drug trip in terms of Huxley, noting that Huxley had been taking LSD for a long time, though he said he did not have the enhanced color sense or the distorted perspective described in Huxley's *Heaven and Hell*.

thoughts," the LSD experience had been "typified by euphoria, humor, relaxation, and a nebulous sense of wonderment."<sup>35</sup>

Next Ditman published a full breakdown of the card-sort responses. When subjects were asked, "Looking back on your LSD experience, how does it look to you now?" 72 percent replied "a very pleasant experience," 66 percent "something I want to try again," and 66 percent "an experience of great beauty."<sup>36</sup> One would hardly think that this was the same drug used in the model psychosis research of the early 1950s. LSD was like a barometer measuring cultural change and preconceptions, and its subjective "meaning" was a social construct. Obviously, Ditman's subjects were having what Huxley had called a "psychedelic" experience.

By the end of the 1950s LSD was known as a miracle cure for alcoholism. In 1960 Huxley lectured at Harvard and met Leary, whom he regaled with LSD anecdotes: "Humphry Osmond curing alcoholics in Saskatchewan. Keith Ditman's plans to clean out Skid Row in Los Angeles." Likewise, the psychologist Abraham Maslow pointed to LSD research on alcoholics as proof of the therapeutic value of "peak experiences."<sup>37</sup>

The third new area of LSD research was testing its effect on the creative process. Model psychosis researchers had occasionally given mescaline or LSD to artists in order to track their mental deterioration, but psychedelic researchers like Huxley expected the drugs to enhance creativity.<sup>38</sup> The prevailing aesthetic of the day traced the origins of creativity to the unconscious. The reason people failed to be creative was that their conscious minds were encrusted by dull conventionality. Artists romanticized people who supposedly lived close to the unconscious—children, natives, outcasts, and the mentally ill.<sup>39</sup> The popular equation of art and neurosis was so strong that in the 1950s therapists complained that patients resisted getting well because of the "culturally noxious assumption . . . that one

<sup>35</sup> Keith S. Ditman and John R. B. Whittlesey, "Comparison of LSD-25 Experience and Delirium Tremens," *American Medical Association Archives of General Psychiatry*, 1959, 1:47–57, on p. 48; see also Ditman interviews, 8 and 29 Apr. 1991.

<sup>36</sup> Keith Ditman, Max Hayman, and John R. B. Whittlesey, "Nature and Frequency of Claims Following LSD," *J. Nervous Mental Dis.*, 1962, 134:346–352, on p. 347.

<sup>37</sup> Timothy Leary, *High Priest* (New York: College Notes & Texts, 1968), pp. 66 (quotation), 111–112; and Abraham Maslow, *Religions, Values, and Peak-Experiences* (Columbus: Ohio State Univ. Press, 1964), pp. 27 (quotation), 76. See also Richard J. Lowry, ed., *The Journals of A. H. Maslow* (Monterey, Calif.: Brooks/Cole, 1979), pp. 205, 269; and Colin Wilson, *New Pathways in Psychology: Maslow and the Post-Freudian Revolution* (New York: Taplinger, 1972), pp. 189–195.

<sup>38</sup> Huxley, *Doors of Perception* (cit. n. 22), p. 25 and passim. Compare model psychosis research: W. S. Maclay and E. Guttmann, "Mescaline Hallucinations in Artists," *Amer. Med. Ass. Arch. Neurol. Psychiat.*, 1941, 45:130–137; Rinkel, "Experimentally Induced Psychosis" (cit. n. 12), pp. 252–253; and Rinkel, ed., *Chemical Concepts of Psychosis* (cit. n. 8), p. 78.

<sup>39</sup> John D. Graham, one of the apostles of modernism, wrote that "the unconscious mind is the creative factor and the source and the storehouse of power and of all knowledge, past and future. The conscious mind is but a critical factor and clearing house. Most people lose access to their unconscious at about the age of seven. By this age all repressions, ancestral and individual, have been established and free access to the source of all power has been closed. This closure is sometimes temporarily relaxed by such expedients as danger or nervous strain, alcohol, insanity, and inspiration. Among primitive people, children, and geniuses this free access to the power of the unconscious exists in a greater or lesser degree": John D. Graham, "Primitive Art and Picasso," *Magazine of Art*, 1937, 30:236–239, 260, on p. 237. This discussion owes much to John M. MacGregor, *The Discovery of the Art of the Insane* (Princeton, N.J.: Princeton Univ. Press, 1989); and W. Jackson Rushing, *Native American Art and the New York Avant-Garde* (Austin: Univ. Texas Press, 1995). See also Wolfgang Born, "The Art of the Insane," *Ciba Symposia*, 1946, 7:202–236; Margaret Naumburg, *Schizophrenic Art: Its Meaning in Psychotherapy* (New York: Grune & Stratton, 1950), pp. 1–37; Francis Reitman, *Psychotic Art* (London: Routledge & Kegan Paul, 1951); Ernst Kris, *Psychoanalytic Explorations in Art* (New York: International Univ. Press, 1952); and William Phillips, ed., *Art and Psychoanalysis: Studies in the Application of Psychoanalytic Theory to the Creative Process* (New York: Criterion, 1957).

must be sick to be creative.” A University of Chicago physiologist wrote that “from the young, the naive, the dreaming, *the drug users*, come a great spate of fresh imaginings.”<sup>40</sup>

Cohen never published his findings regarding creativity, but he accepted for a time that LSD stimulated originality. The major figure testing LSD on artists was the psychiatrist Oscar Janiger, who often shared office space with Cohen. Janiger tested LSD on more than a hundred painters, writers, and composers between 1958 and 1962 and on a thousand subjects overall. Though his plan had been to test a cross-section of the population, “the artists began to come in a flood. Then I realized my demographic structure was going to be shot out the window,” forcing him to turn artists away.<sup>41</sup>

To some psychiatrists, the fantastic claims being made for LSD seemed incredible. Investigators in the rest of the nation wondered why their subjects had not had transcendental experiences. They charged that West Coast investigators were biased in favor of LSD. Louis Jolyon West asserted that “either LSD is the most phenomenal drug ever introduced into treatment in psychiatry, or else the results were evaluated by criteria imposed by enthusiastic, if not positively prejudiced, people.” Since it seemed “unlikely that subjects on the West Coast are organically different from those on the East Coast,” Jonathan O. Cole hypothesized that the differences must have resulted from “a therapist-induced mystical experience similar to religious conversion.”<sup>42</sup>

#### POPULARIZING LSD

In 1959, as LSD was at its peak of medical acceptance, Cohen’s antennae began to pick up danger signs. One disturbing trend was that researchers were growing lax in controlling the drug. They began to share LSD in their homes with friends. A 1958 article on experiments at the nearby Long Beach VA Hospital let slip that researchers were having “LSD-25 social parties.” Sessions were held at Huxley’s house in the Hollywood Hills and that of the Hollywood producer Ivan Tors. Ditman recalled that “LSD became for us an intellectual fun drug.” By the late 1950s such socializing spread to the East Coast. On Long Island, Abramson began holding Friday-night LSD soirees in his home and was “besieged by people who wanted to take the drug.” Cohen tried to avoid such gatherings; by 1968 he had taken LSD only seven times.<sup>43</sup>

<sup>40</sup> Lawrence S. Kubie, *Neurotic Distortion of the Creative Process* (Lawrence: Univ. Kansas Press, 1958), pp. 4 (quotation), 38, 46–47, 53, 142; R. W. Gerard, “The Biological Basis of Imagination,” *Scientific Monthly*, 1946, 62:477–499, on p. 498 (emphasis added); and Karen Horney, *Neurosis and Human Growth: The Struggle toward Self-Realization* (New York: Norton, 1950), pp. 331, 13.

<sup>41</sup> Oscar Janiger interviews, 26 Aug. 1991 (quotation), 15 Dec. 1992. See also Oscar Janiger, “The Use of Hallucinogenic Agents in Psychiatry,” *California Clinician*, 1960, 56:222–224, 251–259; and Janiger and M. de Rios, “LSD and Creativity,” *Journal of Psychoactive Drugs*, 1989, 21:129–134. Janiger’s files on over a thousand LSD study participants form the core of the Hofmann Foundation collection. See also “The Uncanny Art of Twenty-seven Drugged Painters,” *Maclean’s*, 16 Dec. 1961, pp. 22–23. Cohen presented examples of paintings made under the influence of LSD in Time, Inc., *The Drug Takers* (New York: Time-Life, 1965), pp. 104–105; see also Cohen, *Beyond Within* (cit. n. 16), pp. 80–81. Among Cohen’s subjects were the theologian John Courtney Murray and the playwright and diplomat Clare Boothe Luce.

<sup>42</sup> Louis Jolyon West, quoted in Abramson, ed., *Use of LSD in Psychotherapy* (cit. n. 7), p. 185 (see also pp. 51, 76, 90, 132, 186, 215–216, 227, 236–238); and Jonathan O. Cole, quoted in Seymour M. Farber and Roger H. L. Wilson, eds., *Man and Civilization: Control of the Mind* (New York: McGraw-Hill, 1961), p. 117 (see also pp. 116–118).

<sup>43</sup> Myron Feld, Joseph R. Goodman, and John A. Guido, “Clinical and Laboratory Observations on LSD-25,” *J. Nervous Mental Dis.*, 1958, 126:176–183; Ditman interviews, 8 and 29 Apr. 1991; and Abramson, ed., *Use of LSD in Psychotherapy*, p. 33. In 1965 Abramson said, “It was all I could do to prevent all of Brookhaven, people in the school system, friends, and so on, to come to dinner with us on Friday evenings to take LSD”: Abramson, ed., *Use of LSD in Psychotherapy and Alcoholism* (cit. n. 18), p. 475. See also Jarvik interview, 24 Mar. 1991. On Cohen’s limited self-experimentation see Cohen to Lisa Biberman, 22 May 1968, Cohen Papers.

Cohen was also concerned that LSD research was being mixed with pseudoscience. Almost from the start, he and Eisner clashed about interpreting their therapy results. "I think that the material we have been getting makes him uncomfortable," she wrote. "In fact, he has said as much." By "material" Eisner meant the vivid sense subjects sometimes had that they were revisiting ancient Egypt, India, or Greece. Huxley, Heard, Hubbard, Eisner, and other researchers considered these impressions to be actual memories of past lives—proof of reincarnation.<sup>44</sup> What brought reincarnation to mind was the best-selling book *The Search for Bridey Murphy* (1956), in which an amateur hypnotist claimed to have uncovered the prior identities of his subject. Heard served as a consultant on the book and advised the author that the memories were authentic.<sup>45</sup>

In addition to reincarnation, pseudoscientists claimed that LSD facilitated extrasensory perception. Huxley and Heard popularized paranormal psychology and published their accounts of LSD experiences in journals of psychical research. Eileen Garrett, founder of the Parapsychology Foundation, experimented with LSD in the 1950s and funded LSD research.<sup>46</sup> Her foundation sponsored conferences on psychedelics and ESP in New York City in 1958 and in France in 1959. Insofar as ESP, like reincarnation, lacked academic respectability, Cohen realized that being coupled with ESP would lessen LSD's credibility. He hoped to find a "middle ground" between scientific positivism, on the one hand, and "the Huxleys and Heards, . . . the Hubbards and witch doctors and the medicine men," on the other. LSD, he wrote, had "opened a door from which we must not retreat merely because we feel uncomfortably unscientific at the threshold."<sup>47</sup>

Yet Cohen did feel "uncomfortably unscientific." In 1960 he wrote his sponsor, "I deplore some of the fringy goings on with this group of drugs." By then he had distanced himself from some of his associates. He first rejected Hubbard. To gain credibility, Hubbard had created a mock institute called the Commission for the Study of Creative Intelligence. Huxley and Heard were board members, and Hubbard asked Cohen to join. In

<sup>44</sup> Eisner to Osmond, 1 Jan. 1958, Eisner Papers. On LSD experiences as evidence for reincarnation see Thelma Moss interview, 29 Nov. 1992; Maurice Rapkin interview, 24 Mar. 1993; Herman C. B. Denber to Eisner, 3 Jan. 1958; and Osmond to Eisner, 2 Oct. 1956, Eisner Papers. See also Ian Stevenson, *Twenty Cases Suggestive of Reincarnation* (New York: American Society for Psychical Research, 1966); Stevenson, *Cases of the Reincarnation Type*, 4 vols. (Charlottesville: Univ. Press Virginia, 1975–1983); and Stevenson, *Children Who Remember Previous Lives: A Question of Reincarnation* (Charlottesville: Univ. Press Virginia, 1987).

<sup>45</sup> Morey Bernstein, *The Search for Bridey Murphy* (Garden City, N.Y.: Doubleday, 1956); "Hypnotic Adventure," *Time*, 9 Jan. 1956, p. 48; Sigfried Mandel, "The Story behind 'The Search for Bridey Murphy,'" *Saturday Review*, 10 Mar. 1956, pp. 18–19; Ralph Daigh, "The Mysteries of Hypnosis," *Look*, 10 July 1956, pp. 21–26; Milton V. Kline, ed., *A Scientific Report on "The Search for Bridey Murphy"* (New York: Julian, 1956); and Gerald Heard, "The Great 'Bridey Murphy' Furor," *Fortnight*, Mar. 1958, pp. 25–26.

<sup>46</sup> R. Laurence Moore, *In Search of White Crows: Spiritualism, Parapsychology, and American Culture* (New York: Oxford Univ. Press, 1977), p. 206. Garrett's LSD experiments in the 1960s, conducted in Palm Beach, Florida, are documented in the Hoffer Papers. Aldous Huxley, "The Case for ESP, PK, and PSI," *Life*, 11 Jan. 1954, pp. 97–98. Huxley published the first version of *Heaven and Hell in Tomorrow, the Quarterly Review of Psychical Research*, Summer 1956, 3:7–35. See also Humphry Osmond, "Aldous Huxley's 'Doors of Perception,'" *ibid.*, Spring 1954, 2:27–35; J. R. Smythies, "Our Transcendental World," *ibid.*, pp. 36–39; Ian Stevenson, "The Uncomfortable Facts about Extrasensory Perception," *Harper's*, July 1959, 219:19–25; Cedric W. M. Wilson, "The Physiological Basis of Paranormal Phenomena," *International Journal of Parapsychology*, Spring 1962, 4:57–96, esp. pp. 74–75; and Duncan Blewett, "Psychedelic Drugs in Parapsychological Research," *ibid.*, Winter 1963, 5:43–74.

<sup>47</sup> Cohen to Robert Lynch, 4 Sept. 1959, Cohen Papers. On the conferences in New York and in France see *Proceedings of Two Conferences on Parapsychology and Pharmacology* (New York: Parapsychology Foundation, 1961). See also Ellen Huxley, "The Search for Ecstasy," *Tomorrow*, Autumn 1959, 7:28–36; Ellen Huxley, "Parapsychology and Psychedelics," *ibid.*, Winter 1959, 7:65–70; and Roberto Cavanna and Emilio Servadio, *ESP Experiments with LSD 25 and Psilocybin: A Methodological Approach* (New York: Parapsychology Foundation, 1964).

1956 Cohen said yes, telling Hubbard, "I feel it an honor to be associated with them." But in 1957 he abruptly resigned.<sup>48</sup> His public reason was that the commission served no function and was merely "a letter-head for AI to use to impress his correspondents." He may also have been influenced by a shouting and shoving match between Ditman and Hubbard in the late spring of 1957, when Ditman vainly tried to stop Hubbard from acquiring a supply of LSD on the grounds that he was not a physician. Eisner admonished Hubbard, "I don't know what the Canadian laws are, but I do know that in the U.S. . . . no drug may be prescribed or administered except under the supervision of an M.D. And you and I, no matter what our training, experience, and background, are not M.D.'s. . . . If you give it to someone for philosophic or religious reasons, you are still prescribing a drug."<sup>49</sup> Only physicians were by law authorized to experiment with drugs, especially investigational drugs.

Next Cohen broke off from Eisner. At the end of their psychotherapy experiment she wanted to start another round of patients, but he begged off. Actually, he planned to launch a more strictly controlled study, but he confided that "it does not seem to me that Betty is the ideal therapist for an investigation of this sort. Her personal investment in the success of LSD therapy tends to reduce the validity of her results."<sup>50</sup>

Cohen even began to keep Heard at arm's length. They had written drafts of a book on LSD together, entitled "Journey into Consciousness," and submitted it for publication. When the manuscript was rejected, Heard hoped to revise it, planning to stress the beneficial effects of LSD, but Cohen ended the collaboration. According to Heard, Cohen "felt it would be wiser for him not to be identified with so positive an approach. . . . He feels any reference that would go beyond recording the psychotomimetic side of the medication's action is 'unscientific.'" Cohen not only retreated from their joint projects but even refused to write an introduction for Heard's proposed volume, explaining that Heard's manuscript was "intemperate in its hope for LSD." When Cohen's book *The Beyond Within: The LSD Story* appeared, Heard chided him for playing "public prosecutor."<sup>51</sup>

While Cohen grew nervous about the excesses of LSD zealots, a second wave of publicity presented LSD effects not as a model psychosis but as a panacea. Cohen himself took part in the publicity. He served as technical consultant on a 1957 television special entitled *The Lonely World*. He wrote a friend, "It is about LSD. . . . I'm not too proud about the story, but it is not completely incredible. It's the old compromise between fact and drama." The media's tendency to exaggerate plagued LSD researchers. Later that year Cohen served as an advisor on the eight-part *Focus on Sanity*, which again brought LSD to television. As the audience watched one of Cohen's attractive female subjects undergoing an LSD experience, Heard told viewers, "For most . . . it's an outstanding event in their lives." On 12 March 1958 Cohen gave LSD to Paul Saltman, a young University of Southern California biochemist, whose reaction was filmed for local television. Saltman hammed it up for the journalists, exclaiming, "It's wild, man, wild!"<sup>52</sup> (See Figure 3.)

<sup>48</sup> Cohen to Reilley, 20 Dec. 1960; and Cohen to Hubbard, 13 Sept. 1956, Oct. 1957, Cohen Papers.

<sup>49</sup> Cohen to Lynch, 4 Sept. 1959, Cohen Papers; and Eisner to Hubbard, 30 Apr. 1957, Eisner Papers. See also Eisner to Hubbard, 16 Nov. 1957, Eisner Papers; and Osmond to Hoffer, 23 Nov. 1957, Hoffer Papers.

<sup>50</sup> Cohen to Reilley, 7 Mar. 1958, Cohen Papers.

<sup>51</sup> Heard to Lucille Kahn, 17 Aug. 1959, Heard Papers, Box 36; Cohen to Reilley, 3 Feb. 1961, Cohen Papers; and Heard to Cohen, 13 Oct. 1963, Heard Papers, Box 38.

<sup>52</sup> Cohen to Ganz, 8 Dec. 1956, Cohen Papers. Scripts of the *Focus on Sanity* series are in the Heard Papers, Box 19-4A. Saltman's reactions are reported in Harry Nelson, "Fantastic Sensations Gained with New Drug," *Los Angeles Times*, 13 Mar. 1958, Sec. 3, pp. 1, 8; and Omar Garrison, "New Explorations of the Human Mind," *Los Angeles Evening Mirror News*, 13 Mar. 1958, Sec. 2, pp. 1, 3. See also Paul Saltman interview, 2 Feb. 1992;



Figure 3. USC Professor Paul Sallman undergoing an LSD experience. (Harry Nelson, "Fantastic Sensations Gained with New Drug," Los Angeles Times, 13 March 1958, Section 3, p. 1. Copyright 1958, Los Angeles Times. Reprinted by permission.)



Newspaper coverage was similarly overdramatic. In June 1958, when Cohen and Eisner presented their LSD therapy findings at the American Medical Association convention in San Francisco, their talk caused such a stir that it led to a TV appearance and a front-page story. The *San Francisco Chronicle* reported that five LSD treatments, at a dollar per session, were more effective than “the standard sessions of psychoanalysis, which often require hundreds or thousands of hours, and many thousands of dollars.” Traditional therapists were appalled by the account. Eisner wrote that while being on TV had been “fun,” the newspaper’s “garbled” article had made her “ambivalent about publicity.” That fall, Ditman gave reporters a glowing account of the UCLA Alcoholism Research Clinic. “Many subjects who have undergone LSD experiences think highly of the beneficial effects of the drug,” he declared. Janiger lectured frequently on LSD to art institutes. A newspaper declared, “Most exciting finding: apparently all of us have a creative faculty, and LSD shows there may be ways to unlock it at will.”<sup>53</sup>

The biggest splash came in 1959, when Cary Grant told Hollywood gossip columnist Joe Hyams that he had taken LSD over sixty times in therapy since 1958. Grant bragged that because he took LSD “young women have never before been so attracted to me.”<sup>54</sup> As might be expected, people clamored for the drug. Hyams recalled, “After my series came out, the phone began to ring wildly. Friends wanted to know where they could get the drug. Psychiatrists called, complaining their patients were now begging them for LSD. . . . In all, I got close to eight hundred letters.” Historical accounts of media coverage of LSD have missed this pre-1960s publicity.<sup>55</sup> Obviously, by the end of the 1950s the public was well aware of LSD.

In addition to his concern about overzealous LSD apostles and widespread publicity, Cohen shared the medical profession’s worries about the problems created for medical ethics by exploding pharmaceutical research. Physicians feared that drug companies were introducing too many new drugs, too fast, turning doctors into drug company advance men and their patients into guinea pigs.<sup>56</sup> Participants in a 1956 conference concluded that,

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and Harry Nelson interview, 16 Nov. 1991. Three weeks before Saltman’s filmed LSD experience a UCLA professor of pharmacy had announced that LSD “does make everything seem beautiful”: “Hallucinatory Drugs Defended by Doctor,” *Los Angeles Times*, 21 Feb. 1958, Sec. 1, p. 14.

<sup>53</sup> *San Francisco Chronicle*, 26 June 1958, Sec. 1, pp. 1, 4; Eisner to Osmond, 17 July 1958, Eisner Papers; Harry Nelson, “UCLA Experts Searching for Way to Free Alcoholics,” *Los Angeles Times*, 7 Sept. 1958, Sec. 2, pp. 1, 2 (quoting Ditman); and “More on LSD,” *This Week* (Sunday supplement), *Los Angeles Times*, 3 Jan. 1960, p. 12. See also Palmer Chase, “Psychiatrist Lauds Savage Tribe Drugs,” *San Diego Evening Tribune*, 12 May 1959, A-1.

<sup>54</sup> Laura Berquist, “The Curious Story behind the New Cary Grant,” *Look*, 1 Sept. 1959, pp. 57–59, on p. 58; Joe Hyams, “What Psychiatry Has Done for Cary Grant,” *New York Herald Tribune*, 20 Apr. 1959, p. 16; Hyams, “Grant Tells Why Marriage Failed,” *ibid.*, 21 Apr. 1959, p. 22; Richard Gehman, “The Ageless Cary Grant,” *Good Housekeeping*, Sept. 1960, pp. 66–67, 144–160; and Hyams, “How a New Shock Drug Unlocks Troubled Minds,” *This Week* (Sunday supplement), *Los Angeles Times*, 8 Nov. 1959, pp. 6–7, 9–10. See also Geoffrey Wansell, *Haunted Idol: The Story of the Real Cary Grant* (New York: Morrow, 1984), pp. 232–234.

<sup>55</sup> Joe Hyams, quoted in Bob Gaines, “LSD: Hollywood’s Status Symbol Drug,” *Cosmopolitan*, Nov. 1963, p. 79. William Brazen asserted that press coverage of LSD began in 1963; see William Brazen, “LSD and the Press,” in *Psychedelics: The Uses and Implications of Hallucinogenic Drugs*, ed. Bernard S. Aaronson and Humphry Osmond (Garden City, N.Y.: Anchor, 1970), pp. 400–418. See also Charles C. Dahlberg *et al.*, “LSD Research: The Impact of Lay Publicity,” *Amer. J. Psychiat.*, 1968, 125:137–141. In the early 1950s Nicholas Bercel complained that negative publicity about LSD was making it difficult for him to find volunteers; see Bercel *et al.*, “Model Psychoses Induced by LSD-25” (cit. n. 13), p. 589.

<sup>56</sup> Nathan S. Kline, “Relation of Psychiatry to the Pharmaceutical Industry,” *Amer. Med. Ass. Arch. Neurol. Psychiat.*, 1957, 77:611–615; “Too Many Drugs?” *Time*, 25 Apr. 1960, p. 78; Edgar F. Mauer, “A Physicians’ Revolt: Objective: To Free the AMA of Drugmakers,” *Saturday Rev.*, 6 Aug. 1960, pp. 45–46; Walter Modell, “The Drug Explosion,” *Clin. Pharmacol. Therap.*, 1961, 2:1–7; Charles D. May, “Selling Drugs by ‘Educating’ Physicians,” *Journal of Medical Education*, 1961, 36:1–23; and “Too Many Drugs,” *Time*, 26 May 1961, p. 73.

although physicians enjoyed legal immunity and insurance coverage for mishaps that occurred in the course of treating patients, "in giving drugs to volunteers the physician has no such legal protection. The death of a volunteer caused by taking an experimental drug would legally be homicide." Fearing lawsuits, at the 1959 Princeton conference Paul Hoch advised LSD researchers "to be very much aware of the legal implications of many of these things we are doing." In fact, psychiatric experiments entailed unknown risks. That same year psychiatrists conducting experiments on sleep deprivation and sensory isolation, which produced LSD-like hallucinations, discovered that these experiences could cause mental breakdowns.<sup>57</sup>

Unfortunately, just as the safety of LSD was becoming an issue, the drug was spreading into the undergraduate population. On 20 March 1959 Los Angeles newspapers carried a front-page story about the drug death of a freshman at the University of Redlands, eighty miles east of Los Angeles. The police investigation showed that he and five classmates had been experimenting with drugs, among them mescaline and LSD, in his dorm room. Closer to home, that same spring the UCLA biochemist Clara Szego kept two of her students from taking part in a campus LSD experiment. She had tested LSD on rats and recalls, "It was perfectly clear to me that this was no innocuous little substance that you could recover from."<sup>58</sup> She forced the investigators to stop their experiments.

#### INVESTIGATING THE SAFETY OF LSD

Almost a decade after LSD research began in the United States, Cohen took the unusual step of launching an investigation into the drug's safety. He explained his motivation in a cover letter: "A survey of this sort seems desirable at this time because reports of undesirable and unexpected reactions to lysergic acid diethylamide are not finding their way into the literature. Since it is coming into more widespread use, it may be possible, through an analysis of the collected data, to avoid some of the untoward events that might otherwise occur." In February 1959 he sent a questionnaire to sixty-two LSD researchers, forty-four of whom replied. He asked whether any of their subjects had died, committed suicide, or suffered mental breakdowns or other serious side effects. Their responses provided demographic data about authorized LSD and mescaline use to that date. Researchers reported having administered the drugs over twenty-five thousand times to almost five thousand individuals. Though there had been occasional panic attacks, ten prolonged psychotic reactions, and a few flashbacks, no one had died by being poisoned by the drug.<sup>59</sup>

<sup>57</sup> For the 1956 conference conclusions see Jonathan O. Cole and Ralph W. Gerard, eds., *Psychopharmacology: Problems in Evaluation* (Washington, D.C.: National Academy of Sciences, 1959), p. 330; Hoch is quoted in Abramson, ed., *Use of LSD in Psychotherapy* (cit. n. 7), pp. 60–61. See also Irving Ladimer, "Human Experimentation: Medicolegal Aspects," *New England Journal of Medicine*, 7 July 1957, 257:19–20; and William Furst and William Furst, "The Medico-Legal Aspects of Psychiatric Research," *Dis. Nervous System*, Feb. 1960, pp. 132–134. For experiments on sleep deprivation and sensory isolation see John T. Brauchi and Louis J. West, "Sleep Deprivation," *Journal of the American Medical Association*, 5 Sept. 1959, 171:97–100; Eugene L. Bliss et al., "Studies of Sleep Deprivation—Relationship to Schizophrenia," *Amer. Med. Ass. Arch. Neurol. Psychiat.*, 1959, 81:348–359; and Bernard Bressler et al., "Research in Human Subjects and the Artificial Traumatic Neurosis: Where Does Our Responsibility Lie?" *Amer. J. Psychiat.*, 1959, 116:522–526.

<sup>58</sup> *Los Angeles Times*, 20 Mar. 1959, Sec. 1, pp. 1, 16; *Los Angeles Evening Mirror News*, 20 Mar. 1959, Sec. 1, p. 4; *Los Angeles Examiner*, 22 Mar. 1959, Sec. 1, p. 28; Michael S. Balter interview of Clara M. Szego, *Insight and Progress: Development of a Cell Biologist* (UCLA Oral History Program, 1989), Department of Special Collections, University Research Library, UCLA, pp. 637–638; and Robert Sherins interview, 27 Apr. 1993.

<sup>59</sup> Cohen to Oscar Janiger, 6 Feb. 1959, Hofmann Foundation. For Cohen's report of his findings see Sidney Cohen, "Lysergic Acid Diethylamide: Side Effects and Complications," *J. Nervous Mental Dis.*, 1960, 130:30–39.

A key statistic was suicides. Frank Fremont-Smith said in 1959, "We are all worried that someone might commit suicide after taking the drug." Cohen had learned of five possible LSD suicides but concluded that only two of these had been "directly due to LSD."<sup>60</sup> In his published report, he calculated that the suicide rate of LSD subjects was 0.4/1,000—two suicides among five thousand cases. On the basis of this figure, he concluded that complications were "surprisingly infrequent" and that, in the hands of experimental clinicians, LSD and mescaline were "safe." Nevertheless, Cohen's article offered much advice on how to screen people who should not take the drug and on how doctors could terminate an LSD session gone awry.

LSD activists read Cohen's study as if it were a ringing endorsement. His statistic of 0.4 suicides per one thousand subjects was widely cited in subsequent years. A 1964 study quoted Cohen's figure as proof that LSD was "exceptionally safe." A model legal release form for LSD experiments offered Cohen's 1960 calculations as the only data about risks—vital information for informed consent. In 1966 Leary cited the study in his congressional testimony.<sup>61</sup>

The trouble was that Cohen's study was tentative. The data were vague because he only asked investigators for approximate numbers and then rounded them off. The data were guesswork because not a single lab had carried out a follow-up of its subjects. Cohen acknowledged that his study was "doubtless incomplete" and that he suspected "serious complications" might have gone unreported because of investigators' "guilt feelings."<sup>62</sup> Eighteen researchers failed to reply to the questionnaire, and some key labs had withheld vital information. Cohen was not informed that in 1952 a patient at the Massachusetts Mental Health Center had committed suicide within hours of being injected with LSD.<sup>63</sup> He did not know of the Hoch patient who died in 1953 after being injected with a mescaline derivative. The CIA had successfully covered up the 1953 suicide of one of its subjects. An expert later speculated that if Cohen had been aware of the CIA suicide he might have reached different conclusions.<sup>64</sup>

But Cohen did not close his investigation in 1960. No sooner was the ink dry on his article than he began to obtain new data, especially on abuses by unqualified therapists that had caused adverse patient reactions. Therapists were drawn to LSD partly because it broke down patient defenses but also because it was lucrative. Although Sandoz Pharmaceuticals gave the drug away, therapists charged up to \$500 for a session. As an investigational drug, LSD was supposed to be used exclusively for research, but to get around this rule therapists simply tabulated and wrote up their results—or said they planned to. Cary Grant's Beverly Hills psychiatrists, Arthur L. Chandler and Mortimer A. Hartman,

<sup>60</sup> Abramson, ed., *Use of LSD in Psychotherapy* (cit. n. 7), pp. 63 (Fremont-Smith), 227 (Cohen).

<sup>61</sup> Jerome Levine and Arnold M. Ludwig, "The LSD Controversy," *Comprehensive Psychiatry*, 1964, 5:314–321, on p. 318; "Authorization and Release of Responsibility for the Investigational Use of LSD-25 and Psilocybin (1964)," quoted in Jay Katz, comp., *Experimentation with Human Beings* (New York: Russell Sage, 1972), pp. 389–390; and *Federal LSD Research*, p. 139.

<sup>62</sup> Cohen, "Lysergic Acid Diethylamide: Side Effects and Complications" (cit. n. 59), pp. 38–39. The only extant copy of the questionnaire I have found is that of Humphry Osmond in the Hoffer Papers.

<sup>63</sup> Alison Bass, "Mentally Ill Patient in LSD Study Is Said to Have Killed Self," *Boston Globe*, 5 Jan. 1994, p. 14. Two Boston psychiatrists who were present divulged this death to the press over forty years after it occurred. See also Robert Reid interviews, 1 Feb., 14 Apr. 1994; and Paul Watson interview, 18 Apr. 1994.

<sup>64</sup> Marks, *Search for the "Manchurian Candidate"* (cit. n. 3), pp. 67n, 73–86, 87–88, 93, 97, 100n, 205; and testimony of General R. R. Taylor, quoted in U.S. Senate, *Biomedical and Behavioral Research: Joint Hearings before the Subcommittee on Health of the Committee on Labor and Public Welfare and the Subcommittee on Administrative Practice and Procedure of the Committee on the Judiciary*, 94th Cong., 1st sess., 10, 12 Sept. and 7 Nov. 1975 (Washington, D.C.: Government Printing Office, 1976), pp. 182–183.

published a paper in which they reported giving LSD 690 times to 110 patients, who showed a 69 percent improvement rate. A second group offering LSD therapy and research was the Menlo Park Foundation for Advanced Study, which operated both in the Bay Area and in Southern California.<sup>65</sup> It charged \$600 per treatment, and its founders dreamed of opening a string of LSD clinics across the nation. By the early 1960s at least a dozen Los Angeles psychologists were using LSD in therapy, including Huxley's wife Laura. Several incidents occurred, though a veil of silence hides many of the worst excesses. An LSD therapy handbook written by Canadian psychologists recommended that therapists take LSD along with patients to improve rapport, and some Southern California psychologists who took the advice became involved in sexual activity with their patients and were charged with sexual abuse. In 1962 a middle-aged Long Beach man filed a \$500,000 damage suit against his clergyman, the president of the Menlo Park Foundation, and several others on the grounds that they had enticed him to take LSD, a "dangerous" drug, which they were "unqualified" to administer. After taking LSD he had suffered depression, attempted suicide, and ended up in a mental institution.<sup>66</sup> By 1963 a number of local LSD investigators who were heavy users themselves had fallen afoul of legal and medical authorities; some had even been hospitalized. Cohen was bitter about the excesses of LSD psychotherapists. He charged that LSD therapists "have included an excessively large proportion of psychopathic individuals."<sup>67</sup>

Cohen's only connection to these for-profit LSD therapists was in treating their failures. One case in particular crystallized his concern. A forty-year-old woman who had undergone eight LSD treatments in Honolulu administered by Dr. William E. Stevens attempted to commit suicide in 1961 and ended up at the UCLA Hospital. In taking her history, Cohen discovered a painfully unstable life, including child abuse, murdered parents, prostitution, illegitimate children, divorces, suicide attempts, and electroshock treatments. He thought LSD was contraindicated in her case and upbraided Stevens: "I wondered why uncovering therapy was given this recently psychotic unstable woman. . . . Oddly enough, she wants LSD. I told her that she wanted magic and that this would be very risky. . . . I think she should be considered an LSD failure."<sup>68</sup>

In his defense, Stevens explained that this woman had suffered one of only two known disastrous experiences in the four hundred LSD sessions he had administered so far, though he told Cohen of other abuses in Hawaii. In reply, Cohen acknowledged Los Angeles's own problems: "We, too, have our share of hair-raising LSD operations. Only today Keith [Ditman] and I saw a woman who had a panicky dissociated state following extensive

<sup>65</sup> Arthur L. Chandler and Mortimer A. Hartman, "Lysergic Acid Diethylamide (LSD-25) as a Facilitating Agent in Psychotherapy," *Amer. Med. Ass. Arch. Gen. Psychiat.*, 1960, 2:286-299. On the Menlo Park Foundation see Myron J. Stolaroff interview, 17 Aug. 1993; and J. N. Sherwood, M. J. Stolaroff, and W. W. Harman, "The Psychedelic Experience—A New Concept in Psychotherapy," *Journal of Neuropsychiatry*, Nov.-Dec. 1962, 4:69-80. See also Stolaroff, *Thanatos to Eros: Thirty-five Years of Psychedelic Exploration* (Berlin: Verlag für Wissenschaft und Bildung, 1994).

<sup>66</sup> D. B. Blewett and N. Chewlos, "Handbook for the Therapeutic Use of LSD-25: Individual and Group Procedures" (mimeographed, 1959); and Murray Korngold interview, 21 May 1993. The lawsuit is reported in *Long Beach Express-Telegram*, 14 June 1962, Sec. A, pp. 1, 4, 21 June 1962, Sec. B, p. 1.

<sup>67</sup> Cohen to William Harlan Hale, 18 Jan. 1963, Cohen Papers. On the problems of the LSD therapists see Board of Medical Examiners of the State of California, D-350, 6 Aug. 1956, D-606, 31 Aug. 1961, California State Archives, Sacramento, California; "Marijuana Charge Jails Psychiatrist," *Los Angeles Times*, 21 Aug. 1963, Sec. 1, p. 24; James Goddard, in *Federal LSD Research*, p. 64; and Janiger interview, 26 Aug. 1991. Cohen mentioned therapist breakdowns in *Beyond Within* (cit. n. 16), p. 217.

<sup>68</sup> Cohen to William H. Stevens, 22 June 1961, Cohen Papers. Details of this woman's condition are in Sidney Cohen and Keith S. Ditman, "Prolonged Adverse Reactions to Lysergic Acid Diethylamide," *Amer. Med. Ass. Arch. Gen. Psychiat.*, 1963, 8:475-480, on p. 477.

LSD therapy. A second possibility is that her hallucinatory episode represented a folie à deux with her therapist. In general, this sort of eccentric LSD practice is diminished here due to Harry [Althouse]'s tighter control of the drug."<sup>69</sup>

Unfortunately, Cohen's faith that Althouse, the Sandoz detail man, could keep the lid on abuses was shattered in early 1962 when he and Ditman met a man at a Hollywood party who told them that he was making bootleg LSD. His sugar cubes contained 1,000 micrograms of LSD, ten times the normal dosage. Although the identity of the street acid maker is unknown, it may have been either Bernard Roseman or Bernard Copley. Roseman and Copley were the first men arrested, in 1963, for selling homemade LSD. They had been introduced to LSD in Southern California experiments. Charged with smuggling the drug into the United States from Israel, they claimed that they had manufactured the LSD in Los Angeles in 1960.<sup>70</sup>

Alarmed that physicians were losing control over LSD, Cohen and Ditman quickly wrote a second article on the drug's side effects, warning the medical profession about the dangerous new complications they were seeing. They presented nine case studies. A child had accidentally swallowed an LSD sugar cube and suffered dissociation for months. A therapist had given a female patient LSD over three hundred times and left her an emotional wreck, surviving on sedatives. Avant-garde groups were mixing LSD with peyote, marijuana, barbiturates, amphetamines, and the like. Owing to the spread of LSD and the existence of a black market supply, Cohen and Ditman concluded that "the dangers of suicide, prolonged psychotic reactions, and antisocial acting out behavior exist."<sup>71</sup>

#### FEDERAL REGULATION OF LSD RESEARCH

The impact of Cohen and Ditman's warning was magnified by the fact that it appeared just before the thalidomide tragedy hit the press. Women who had taken thalidomide, a sedative, gave birth to over ten thousand babies, two-thirds of whom lived, who suffered severe birth defects; most of these children were born in Germany and England, but there were six in the United States.<sup>72</sup> Like LSD, thalidomide was an investigational drug in the

<sup>69</sup> Stevens to Cohen, 14 Dec. 1961; and Cohen to Stevens, 21 Dec. 1961, Cohen Papers.

<sup>70</sup> Janiger interview of Ditman, 29 Mar. 1978, Hofmann Foundation; and Ditman interview, 8 Apr. 1991. On the arrest of the pair see *San Francisco Chronicle*, 4 Apr. 1963, p. 4, 5 Apr. 1963, p. 3. Photographs of the arrest are in the *Food and Drug Review*, May 1963, p. 3. FDA Commissioner James Goddard asserted that this was the first LSD arrest: *Federal LSD Research*, p. 65. On the trial see *San Francisco Chronicle*, 3 June 1964, p. 15; facts of the case are also found in the appeal: *Bernard Roseman and Bernard Copley v. United States of America*, 20 July 1966, in 364 F.2d 18 (1966). Roseman and Copley were sentenced to seventeen years in prison: U.S. Food and Drug Administration, *Annual Reports, 1950-1974* (Washington, D.C.: Government Printing Office, 1976), p. 294. Roseman wrote a fascinating account of his involvement with LSD and its effects on his life; see Bernard Roseman, *LSD and the Age of Mind* (Hollywood, Calif.: Wilshire, 1963), 2nd ed. (1966), pp. 22-40.

<sup>71</sup> Sidney Cohen and Keith S. Ditman, "Complications Associated with Lysergic Acid Diethylamide (LSD-25)," *J. Amer. Med. Ass.*, 14 July 1962, 181:161-162. See also Harry Nelson, "Doctors Reveal Traffic in Hallucinations Drug," *Los Angeles Times*, 14 July 1962, Sec. 3, p. 1. Cohen and Ditman published a more detailed summary of the complications in "Prolonged Adverse Reactions to Lysergic Acid Diethylamide" (cit. n. 68). In the same issue of the *American Medical Association Archives of General Psychiatry* editor Roy R. Grinker, Sr., denounced LSD investigators who "administered the drug to themselves, . . . became enamored of the mystical hallucinatory state," and ended up "disqualified as competent investigators." He charged that LSD had lost its usefulness as a research tool "due to unjustified claims, indiscriminate and premature publicity, and lack of proper professional controls": Roy R. Grinker, Sr., "Lysergic Acid Diethylamide," *Amer. Med. Ass. Arch. Gen. Psychiat.*, 1963, 8:425. Apparently a number of physicians sent Cohen word of many adverse reactions to LSD after his article appeared. See Hoffer to Osmond, 11 July 1963, Hoffer Papers.

<sup>72</sup> "Thalidomide Disaster," *Time*, 10 Aug. 1962, p. 80; and "Tragedy from a Pill Bottle," *Newsweek*, 13 Aug. 1962, pp. 52-54. See also Phillip Knightly, Harold Evans, Elaine Potter, and Marjorie Walker, *Suffer the Children: The Story of Thalidomide* (New York: Viking, 1979).

United States. Even before the thalidomide crisis broke, LSD researchers had been warned that they should stop giving the drug to pregnant women. In the medical community, LSD and thalidomide were linked. In Canada a new regulatory category of drugs was created, Schedule H, which could be neither sold nor distributed, and thalidomide and LSD were the first drugs placed on the list.<sup>73</sup>

The thalidomide crisis forced Congress to pass tougher regulatory controls over investigational drugs. Since December 1959, Senator Estes Kefauver had been conducting hearings on drug company price fixing. Suddenly, after the thalidomide scare, his committee was in the spotlight. In hearings held in August 1962, Senator Jacob Javits was amazed to learn that physicians could try out unproven drugs on patients without warning them that they were being tested. The head of the Food and Drug Administration, George P. Larrick, had to admit that, as the law then stood, "that is up to the physician." On 10 October 1962, Congress passed the Kefauver-Harris Drug Amendments, which went into effect in January 1963. Henceforth the FDA had to give prior approval for all testing of new investigational drugs, and such drugs would be authorized for sale only if they had been proven both safe and efficacious in curing some human ailment.<sup>74</sup>

The FDA and the Federal Bureau of Narcotics had been caught napping by this new outbreak of drug use. The FDA's first investigations of LSD abuse began in 1961, in Southern California, where early "reports of misuse" focused on "physicians and psychologists who were not authorized to use the drug."<sup>75</sup> No one knows who tipped off the FDA, but in 1962 agents raided several Los Angeles therapists and seized their LSD supplies. Sandoz Pharmaceuticals took the opportunity provided by the new FDA regulations to cut off the supply of LSD to marginal investigators.<sup>76</sup> In 1963 Sandoz restricted LSD to researchers connected to the National Institute of Mental Health, state commissioners of mental health, or the VA, which cut the number from a couple of hundred to only seventy. But it was too late to stop the spread of LSD. In early 1963 Leary was fired from Harvard and launched his crusade to have the nation's youth "turn on, tune in, and drop out." Leary gained so much notoriety that we forget that the crackdown on LSD began before his escapades.<sup>77</sup>

<sup>73</sup> On the warning against giving LSD in pregnancy see Frank Fremont-Smith's statement in Abramson, ed., *Use of LSD in Psychotherapy* (cit. n. 7), pp. 88–90. At a 1961 London conference Linford Rees warned, "Here we have a drug which is of extreme potency . . . and which one might expect to have severe effects on the growing foetus": Linford Rees, quoted in Richard Crocket *et al.*, *Hallucinogenic Drugs and Their Psychotherapeutic Use* (London: Lewis, 1963), p. 49. On Schedule H see Hoffer to Osmond, 22 Oct. 1962, Hoffer Papers.

<sup>74</sup> George P. Larrick, quoted in *U.S. News and World Report*, 13 Aug. 1962, p. 57. On the consequences of the new legislation see Louis Lasagna, "Congress, the FDA, and New Drug Development: Before and After 1962," *Perspect. Biol. Med.*, 1989, 32:322–343.

<sup>75</sup> James Goddard, quoted in *Narcotic Rehabilitation Act of 1966*, p. 321; and *Federal LSD Research*, p. 64. Richard H. Blum and Associates, *Utopians: The Use and Users of LSD* 25 (New York: Atherton, 1964), first established that the early spread of LSD was due to professionals who shared the drug with their friends and families. On the 1961 FDA investigations see the testimony of FDA Commissioner James Goddard in *Federal LSD Research*, p. 64; for a survey of LSD legislation see Grinspoon and Bakalar, *Psychedelic Drugs Reconsidered* (cit. n. 2), pp. 309–312. See also David F. Musto, *The American Disease: Origins of Narcotic Control*, expanded ed. (New York: Oxford Univ. Press, 1987), pp. 252–253.

<sup>76</sup> The belief that Sandoz feared litigation over LSD abuses appears in Hoffer to Osmond, 26 Sept. 1962, Hoffer Papers. On the raids in Los Angeles in 1962 see Goddard, in *Federal LSD Research*, p. 64; and Janiger interview, 26 Aug. 1991. Other therapists tried to distance themselves from their Southern California brethren. Charles Savage wrote the chairman of the California State Assembly Committee on Criminal Procedure, 5 Nov. 1963, "LSD therapy should not be seen from the narrow vantage point of Southern California where it has been vastly misused": California State Assembly Committee on Criminal Procedure, 13, 14, 15 Nov. 1963, *Narcotics and Dangerous Drugs* (Sacramento, 1964), App. IV-c.

<sup>77</sup> On the reduction of LSD researchers see *Federal LSD Research*, pp. 61–62.

As the popularization and use of psychedelic drugs increased, Congress further tightened regulations. In 1965 Congress passed the Drug Control Amendments, which prohibited the manufacture or sale of psychedelic drugs. In 1966 California and New York passed the first state laws on LSD. California Governor Edmund G. Brown, Sr., invited Cohen and Ditman to the ceremonial signing. That same year, Sandoz withdrew its sponsorship and Congress cut off nearly all LSD research. To halt the spread of LSD, Cohen served as the first director of the NIMH Division of Narcotics Addiction and Drug Abuse from 1968 to 1970. His LSD subject Clare Boothe Luce teased him, "There is a certain irony in Dr. Sid's predicament. (LSD *has* been your Frankenstein monster!)"<sup>78</sup> Cohen thought it was time to tame the monster.

### CONCLUSION

The introduction to this article showed that the historiography of the psychedelic drug movement starts with the assumption that Cohen proved the safety of LSD in 1960 and then tries to explain why, nevertheless, the medical profession and the government turned against the drug. This article argues, on the contrary, that Cohen's study arose out of his concerns about its safety, that the study was admittedly incomplete and inconclusive, and that Cohen reversed himself only two years later. This interpretation sees medical opposition to LSD in the 1960s as due not to secret CIA conspiracies or to fear of the counterculture but to valid health concerns. The medical profession's rejection of LSD was not the result of its subservience to the government; rather, government restrictions on LSD followed pressure from physicians. The intrusion of "strangers at the bedside," as David Rothman has called increased governmental regulation of American medicine, was justified in the case of LSD research.<sup>79</sup>

This review of Cohen's LSD research also allows us to mark the time and place where the psychedelic drug movement began. The transformation of LSD research from a medical affair to a cultural crusade occurred not at Harvard in the early 1960s or in San Francisco in the 1967 summer of love but in Los Angeles in the late 1950s. It was here that Huxley and Heard redefined LSD's effects as a mystical experience. Southern California investigators extended the purview of LSD research from mental illness to neurosis, alcoholism, and creativity, causing word of LSD to spread among alcoholics, artists, writers, and actors. Premature media announcements stirred public expectations and excitement. Despite the drug's investigational status, therapists abandoned caution and adopted it in their clinical practice. Yet none of the hasty claims made for LSD withstood the test of time.

Cohen's collaboration with Heard and Huxley attempted to bridge the gap between what C. P. Snow called "the two cultures," the scientific and the literary. Cohen sought to find a middle way between scientism and mysticism, but he underestimated the extent to which his collaborators brought along their own agendas and values. LSD researchers in the 1950s understood the subjective nature of drug responses and how often the results merely mirrored subjects' personalities. To be valid, LSD experiments required a random sample of subjects with no preconceptions about the drug. Once Huxley and Heard had popularized their psychedelic interpretation, self-selected volunteers arrived primed to have a *Doors*

<sup>78</sup> Clare Boothe Luce to Cohen, 2 Dec. 1965, Cohen Papers.

<sup>79</sup> John R. Neill, "'More than Medical Significance': LSD and American Psychiatry, 1953 to 1966," *J. Psychoactive Drugs*, 1987, 19:39–45, esp. p. 44; and David J. Rothman, *Strangers at the Bedside: A History of How Law and Bioethics Transformed Medical Decision Making* (New York: Basic, 1991).

of *Perception* experience. Bill Wilson read *Heaven and Hell* before his first LSD session. Ditman noted that several subjects came to his experiments “after reading Huxley’s *Heaven and Hell* or *Doors of Perception*.” Janiger’s study participants often read Huxley before taking LSD. A subject in New York explained that he had volunteered in order to be “in good company—people like Aldous Huxley.”<sup>80</sup> Experimental data from subjects like these were worthless because the subjects had been preconditioned.

By the mid 1960s Cohen had grown skeptical of Huxley’s inflated claims for LSD. Cohen and the RAND Corporation psychologist William H. McGlothlin tried but failed to find statistically significant proof of the lasting effects of LSD. Though the effects produced by a dose of LSD felt tremendously significant, Cohen suspected that this was mainly self-deception. LSD revealed not a higher reality but antirationality.<sup>81</sup> By the mid 1960s Cohen was describing the LSD state as a “completely uncritical one” with “the great possibility that the insights are not valid at all and overwhelm certain credulous personalities.” His alternative to LSD came in advice he gave an audience near the end of his life: “I would like to commend the sober mind to you.”<sup>82</sup>

<sup>80</sup> Wilson to Heard, 1 May 1956, Heard Papers, Box 29-2; Ditman *et al.*, “Nature and Frequency of Claims” (cit. n. 36), pp. 348–349, 352; and Harold Esecover *et al.*, “Clinical Profiles of Paid Normal Subjects Volunteering for Hallucinogen Drug Studies,” *Amer. J. Psychiat.*, 1961, 117:910–915, on p. 912. On volunteer bias in psychedelic drug tests see Lasagna and von Felsinger, “Volunteer Subject in Research” (cit. n. 23), pp. 359–361; and Margaret R. Riggs and Walter Kaess, “Personality Differences between Volunteers and Non-volunteers,” *J. Psychol.*, 1955, 40:229–245.

<sup>81</sup> On the failure to find proof of the lasting effects of LSD see William H. McGlothlin, Sidney Cohen, and Marcella S. McGlothlin, “Short-Term Effects of LSD on Anxiety, Attitudes, and Performance,” *J. Nervous Mental Dis.*, 1964, 139:266–273; and McGlothlin, Cohen, and McGlothlin, “Long Lasting Effects of LSD on Normals,” *Amer. Med. Ass. Arch. Gen. Psychiat.*, 1967, 17:521–532. For Cohen’s conclusion that LSD revealed only irrationality see Cohen, “The Return to the Primary Process,” *Psychosomatics*, 1973, 14:9–11.

<sup>82</sup> Cohen, in *Federal LSD Research*, p. 157; and Sidney Cohen, “The Antipodes of the Mind,” *Journal of Substance Abuse Treatment*, 1984, 1:151–155, on p. 155. Cohen explained that “the discriminating, critical capacity is lost. The ability to observe oneself, to evaluate the validity of one’s ideas and swift flowering fantasies, is lost”: Richard Alpert and Cohen, *LSD* (New York: New American Library, 1966), p. 17.





## LSD before Leary: Sidney Cohen's Critique of 1950s Psychedelic Drug Research

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