

SACRED
MUSHROOM
OF VISIONS:
TEONAHÁCATL

A Sourcebook on the Psilocybin Mushroom

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Park Street Press
Rochester, Vermont

2005

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A HISTORY OF THE USE OF
PSILOCYBIN IN
PSYCHOTHERAPY

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INTRODUCTION

The Application of hallucinogens in modern psychotherapeutic methods can be traced back to the 1950s. At first, lysergic acid diethylamide (LSD) was the most commonly used of the *psycholytics*, as LSD and mescaline were then categorized (Abramson 1960, 1967; Passie 1997). In the early 1960s, psilocybin (4-phosphoryloxy-N, N-dimethyl-tryptamin) was discovered in Mexican mushrooms (Hofmann et al. 1958; 1959). Shortly thereafter it was synthesized and applied in psychotherapy under the name *Indocybin* by Sandoz.

Psilocybin was used almost exclusively in Europe as an agent to help activate unconscious material in depth psychology (*psycholysis*).

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This procedure utilizes the properties of hallucinogenic substances to stimulate the emotions and promote a fluid, dreamlike state that is experienced in clear consciousness and with good recollection of what is occurring. In this manner, subconscious conflicts and memories can be re-created and made accessible to psychotherapy. It is understood that it is not the pharmacological effect that causes the therapeutic result, but the long-term therapeutic processing of material that has been exposed.

In utilizing this pharmacologically-aided method, many previously therapy-resistant patients could be treated. Psilocybin, as well as its quick-acting derivative, CZ 74 (4-hydroxy-N-diethyltryptamine), distinguishes itself by its unique properties of short duration of effects, mild neurovegetative side effects, few instances of depersonalization or anxiety provocation, as well as a stable and positive influence on the emotional experience (Hofmann 1959; Leuner et al. 1965; Baer 1967). Since it offers a more gentle and direct control of the altered state than LSD, it appears to be a substance of choice for future applications in psychotherapy (Leuner 1968, 1981).

In regard to its use in psychotherapy, I will introduce four types of treatment that have been studied on approximately fifteen hundred patients. To start, the following discussion will elaborate on differences and similarities between traditional and modern applications.

EARLY HISTORY OF PSILOCYBIN USE

In the monumental work *Historia General de las Cosas de Nueva Espana* (1598) by the Franciscan monk Berhardino de Sahagún, we find descriptions of natives in the New World who ingested certain intoxicating mushrooms during religious ceremonies. The clergy of the Inquisition deemed these rituals the work of the devil, whereas the natives regarded the effect of the mushrooms as the direct work of god and consequently named the mushroom *teonanácatl*, which means "divine mushroom" (Wasson 1958). In the same source there are further references to the fact that these mushrooms are not only used during religious ceremonies, but also for healing purposes by a medicine man. Reportedly, ingesting these mushrooms gave the medicine man

certain visionary powers that enabled him to not only recognize the cause of an illness but also guided him in its treatment.

In the framework of such shamanistic treatment, psychological as well as social conflicts of the patient are addressed. The therapeutic sessions usually take place in the presence of relatives, who selectively will be involved in the ceremonial treatment. Frequently, only the healer actually will ingest the mushrooms for diagnostic purposes, or on other occasions the patient, the healer, and the attending relatives will ingest the mushrooms. This procedure is applied to diagnose not only the character and cause of the illness, but to simultaneously utilize the sensitization in the altered state of consciousness for healing catharsis and its manipulation (Wasson 1980; Passie 1985, 1987). By including direct family members and relatives, a positive healing outcome is made much more likely.

The first modern psychopharmacological research with psilocybin was presented between 1958 and 1960 (Dealay et al. 1995; Ruemmele 1959; Quetin 1960). Reports included dreamlike experiences that approximate the effect of other well-known hallucinogens such as LSD and mescaline, namely the intensification of the senses, illusions, pseudohallucinations, extreme tendency toward introversion, synaesthesia, changes in the experience of time, space, and the body, symptoms of depersonalization and the nonspecific increase in emotional qualities. Special attention was given to the frequent reliving of vivid memories with pronounced emotional undertones. This patient profile was observed particularly among neurotic subjects (Delay et al. 1959, 1961, 1963; Quetin 1960).

During the 1960s, other research that addressed different aspects was conducted by scientists of various nationalities, occasionally with a substantial number of subjects (Leary 1961; Salgueiro 1964). These studies confirmed the above-described psychopharmacological effects, the controllability of the state of inebriation and the physiological harmlessness of psilocybin (Malitz et al. 1960; Hollister 1961; Heimann 1961; Sercl et al. 1961; Rinkel et al. 1961; Nieto Gomez 1962; Leuner 1962; Aguilar 1963; Perez de Francisco 1964; Reda et al. 1964; Keeler 1965; Metzner et al. 1963; Da Fonseca et al. 1965; Steinegger et al. 1966; Flores 1966; Dubansky et al. 1967; Fisher et al. 1970).

APPLICATIONS IN PSYCHOLYTIC THERAPY

The longstanding traditions of healing rituals using hallucinogenic substances, particularly mescaline (Passie 1995), in central and South American societies was reported from extensive research conducted during the first half of the twentieth century (Beringer 1927; LaBarre 1938). Experiments with the extremely potent hallucinogen LSD (Stoll 1947) led Busch et al. (1950) to conduct the first trials including these substances in psychotherapy for neurotic patients. Later research was conducted in the context of psychoanalytical methods by Frederking (1953–1954). The English scientists working with Sandison et al. (1954) were particularly interested in the potential use of these substances as adjuncts to psychotherapeutic treatment. They reported improvements among their neurotic patients after a single treatment with LSD.

Initially, some scientists thought that the drug was responsible for the therapeutic effect. However, it quickly became evident that because of the unproductive structure and short-lived nature of experiences induced by the drugs, lasting benefits could only be realized with long-term therapy. The substances served as supporting agents in revealing unconscious material and gaining a more profound understanding of the self.

Psycholytic agents, such as LSD and psilocybin, possess the capability to aid in psychotherapy because they cause a fluid, dreamlike state experienced in clear consciousness with good recollection of what is occurring. Thus, unconscious conflicts and memories that have been suppressed can be activated and vividly recalled. Additionally, psychological defense mechanisms are relaxed and psychotherapeutically valuable types of regressive experience, such as age regression, can be evoked. Stimulating affectivity allows the recollection of long-past emotional experiences as well as recent ones. The transference relationship between the therapist and the patient is intensified and is sometimes accompanied by illusionary distortion of the therapist's features and identity. Hence, the patient clearly experiences the projective character, possibly that of infantile transference.

Under the influence of low dosages of psycholytic agents, a peculiar distancing enables the patient, or the reflective core of the self, to observe the altered state. This assures continuous understanding by the patient of the artificial cause of his altered state of experience.

Furthermore, the patient focuses on and associates separate emotional facts and reminiscences, personal relationships or wrongful evaluations of character, differently from an enlarged perspective. In this process, several areas of consciousness are addressed simultaneously and a broad integration of unconscious matter is achieved. The patient gains wide introspective access into delusional neurotic behavior. Due to the extraordinary emotional involvement, this process is particularly convincing, all the while intensifying and accelerating the therapy.

With the above-mentioned effects in mind, a considerable number of therapists thought it possible to expand the spectrum of psychotherapy by including patients who were formerly thought to be untreatable, due to their serious and chronic neuroses. These patients were characterized by their rigid defense and displacement mechanisms, lack of ability to form interpersonal relationships, and inability to process unconscious material through regular channels such as free association and dreams. Most psychotherapeutic treatments were ineffective for these patients. Psychotherapists recognized the potential of psycholytics to treat these difficult patients by stimulating a dreamlike alteration of experiences (Arendsen Hein 1963).

During the following ten years, the application of hallucinogens in psychotherapy treatment of extremely disturbed neurotic patients was tested internationally, improved, and established as clinical procedure (Sandison et al. 1954; Leuner 1962; Ling et al. 1963; Hausner et al. 1963; Grof 1967; also Abramson 1960, 1967; Passie 1995, 1997). Initially, LSD was the agent in these experiments, but very shortly after the discovery and synthesis of psilocybin, experiments were conducted with it as a psychotherapeutic drug (1958–1961). The basic psychopharmacological effect on individual neurotic patients was studied without psychotherapeutic preparation and postanalysis of the experience (Delay et al. 1959; Vernet 1960; Quetin 1960; David et al. 1961; Duche 1961; Sercl et al. 1961). Leuner described early treatments with psilocybin in a psycholytic setting (Barolin 1961; Leuner 1962). Until the 1980s, Leuner and his group of scientists treated more than 150 neurotic patients with psilocybin or its short-acting derivative, CZ 74, in a longitudinal study at the University Clinic of Goettingen, Germany (Leuner 1981, 1987, 1995; Fernandez-ceredeno et al. 1967).

The advantages of psilocybin in comparison to LSD were: short-term effectiveness, fewer neurovegetative side effects, less tendency to experience depersonalization, a stable, positive experience, and little distress while reliving conflicts and traumatic material. The entire experience under the influence of psilocybin was found to be altogether gentler and less confrontational than with LSD.

PROCEDURES IN PSYCHOTHERAPY WITH PSILOCYBIN

Psilocybin psychotherapy can be categorized in the following four types:

A. *Individual psychoanalytic therapy* including out-patient or residential psycholytic treatment and follow-up visits in psychoanalytic one-on-one sessions.

This method concerns the application of psycholytic substances in the course of psychotherapeutic individual treatment. It was developed and perfected for clinical application by various teams (Sandison et al. 1954; Leuner 1959; Hausner et al. 1963; Ling et al. 1963; Grof 1967). The first psycholytic session is almost always preceded by psychoanalytic treatment that has lasted for months. Psychoanalytic individual treatment with additional weekly or monthly psycholytic sessions sets the framework for the procedure that Sandison was the first to call "psycholysis" in 1960 (Barolin 1961). Experiences gained in psycholytic sessions are subsequently analyzed during intervening sessions without the use of drugs and with the help of documentation and memories.

The setting is arranged in such manner that the patient is able to surrender to his experiences uninhibitedly. All authors recommend a darkened room and quiet music to subtly stimulate the experience. The continuous presence of the therapist or a specifically trained assistant offers the patient protective support during the sessions. Occasional visits by the treating physician complement the care. These professionals do not intervene with interpretation during the course of the experience.

During the early sessions, the dosage is gradually increased from low dosages of LSD (50–150 mcg) or psilocybin (3–15 mg) up to the level at which the patient produces the most productive experiences. Psychodynamic encounters as well as the intensification of the transference relationship are deemed the most important indicators of adequate dosage.

Interpretation and integration take place during drug-free intermediate sessions. During the 1960s, much success was reported in treating more than a hundred neurotic patients with psilocybin (Fontana 1961; Heimann 1962; Leuner 1962; Alhadeff 1963, 1963; Hausner et al. 1963; Stevenin et al. 1962; Gnirss 1963, 1965; Kristensen 1963; Geert-Jørgensen et al. 1964, 1968; Massoni et al. 1964; Cwynar et al. 1966; Derbolowsky 1966; Johnson 1967; Fernandez-cerdeno et al. 1967; Clark 1967–1968; Berendes 1979–1980). Major indications for treatment were character neuroses, fear and compulsion, neurotic and reactive depressions, perversions and sexual neurosis. Counter indications would include hysterical neurosis, psychosis, and borderline cases, as well as patients that exhibit constitutionally infantile and weak-self properties.



Early classic psycholytic setting, with attending nurses and physician in the background.
(See: Bierer et al. 1961)

B. Individual psychoanalytic therapy with psycholytic one-on-one sessions and follow up meetings in group therapy.

First developed by Sandison et al. (1954) and tested with LSD on a great number of patients during the 1960s, this same methodology but using psilocybin was established by therapists using psychoanalysis (Fontana 1961; Derbolowsky 1966; Hausner et al. 1963; Geert Joergensen et al. 1964; Gnriss 1965; Johnsen 1967; Alnaes 1965; and particularly Leuner 1962).

This procedure followed the same premises as described in section A. The psycholytic one-on-one sessions were conducted at weekly or monthly intervals with the help of the therapist or an assistant. Patients were admitted to a clinic for several days to conduct each session. Before and after the psycholytic sessions in private rooms, the patients were brought together in a group to interpret and analyze the material through depth psychology. Their sensitized psychic condition could be utilized in the postsession analysis, while the effects of the drug were abating and the openness to discussion under the influence of the experience remained. In the next step, the patients had the opportunity to engage in artistic activities, such as painting or modeling with clay, to express their experiences. The following day, more single and group therapy sessions were conducted to further integrate the experience.

A reliable alternative to this procedure was stationary interval treatment used by Leuner (1964), Derbolowski (1966), Fontana (1961, 1963), Geert-Jørgensen et al. (1964), Alnaes (1965), and Johnsen (1967). Here five to six patients being treated in ambulatory psychoanalytic one-on-one sessions were admitted for two to three days and treated according to the procedure outlined above. This combined the advantages of a long-term ambulatory psychotherapy with the possibility of intensification and deepening through psycholytic sessions. Additionally, the safety of the procedure was increased through constant monitoring during and after the sessions.

C. Group therapy interspersed with psycholytic group sessions.

Fontana (1961, 1963) studied the use of psilocybin and LSD in depth psychological group sessions on more than 240 patients. A group of 7 to 8 patients that had consistently met once or twice a week over

a period of several months was offered the opportunity to participate in psycholytic group sessions. The participants met in suitable rooms within the clinic and received low dosages of psilocybin (8–12 mg) or LSD (50–150 mcg). Without asking for interaction within the group, participants were expected to surrender to their own experience uninhibitedly. According to their individual needs, participants were also encouraged to communicate with other group members. The group therapist in charge and the co-therapist acted as chaperones and would only interfere when problems occurred.

Recently, Swiss psycholytic therapists (Benz 1989; Styk 1994; Gasser 1995) have worked utilizing a similar method. Scientists see particular advantages of this method in the activation of the group dynamic and intensification of transference-phenomena, as well as in the individual patient's ability to understand and visualize his/her own defense mechanisms. Here, the group also supports the individual who thus experiences fewer fears and feelings of isolation.

Fontana (1963) describes the dynamic of a carefully planned group session as "comparable with that of a musical group, in that the melodies and rhythms of each one serve to form a collective rhythm and a complete melody not interfering with the individual melodies." In spite of particularly intensified transference reactions within the group, due to careful preparation no difficulties in supervising the meeting were observed (Fontana 1963; Styk 1994; Gasser 1995). Johnson (1964), however, reported difficulties with group application of psycholytic agents. He found increased confusion within the group dynamic and that individuals encountered interference with their personal experience. These problems can probably be traced back to the change from group therapy to interaction demands in psycholytic sessions. Follow-up analysis of the experiences is conducted in groups and, when necessary, in one-on-one sessions.

Fontana (1963) recognized the special indications for group treatment to be useful in cases of character neurosis (clarification of otherwise ego-syntonic defense mechanisms), hypochondriacs (a dissociation between psychic and somatic entities is experienced under the influence of psycholytic agents and often helps the patient to recognize their interactive effect), adolescents (intense confrontation with specific patterns of

conflict during this particular phase in life: relationship with the outside world and severance from the maternal influence). Otherwise, the indications described under A and B apply.

D. Preparation in group therapy and high dosage (psychedelic) in a supportive group setting.

This is the practice of administration of high dose psilocybin in group sessions for the purpose of inducing religious experiences that effect personality changes. The group associated with Leary (Leary 1961; Leary et al. 1963; Metzner et al. 1963, 1965; and also Pahnke 1962) researched the effect of high dosage psilocybin with over one hundred healthy volunteers in natural settings (nature, private homes, churches). Based on the observations of these normal subjects, therapists began to work with subjects with behavior problems (prison inmates). They utilized the deep changes in the experience of the self and the world while under the influence of psilocybin to improve therapeutically-effective self-realization in their subjects. This was based on the hypothesis that, with a given supportive setting and satisfactory agreement of the subjects: "(psilocybin) produces a state of dissociation or detachment from the roles and games of everyday interaction . . . This can provide insight and perspective about repetitive behavior or thought patterns and open up the way for the construction of alternatives." (Leary et al. 1965). The project at Concord Prison in Massachusetts, initiated by Leary et al., was laid out as a six-week program for behavioral changes. Each subject underwent regular group therapy sessions (under the premises of transaction analysis) as well as two psilocybin sessions in small groups characterized as improving self confrontation. The subjects were informed about the scope and purpose of the program as well as the effects of psilocybin. Following a few organized group sessions, the subjects received 20–30 mg of psilocybin in the first session and 50–70 mg in the second one. These latter sessions took place in specially prepared rooms within the infirmary of the prison. They were initially conducted with 5–10 subjects and later reduced to only four subjects and one psychologist. The sessions were marked by intense experiences and self-confrontation that were subsequently discussed in groups. Despite careful postanalysis, instances of

depressive aftereffects and difficulties in the emotional integration of the psychedelic experiences were sometimes observed (Leary et al. 1965). The authors also documented a reduced number of repeat offenders, particularly in respect to recurring criminal acts among participants of the study (Leary et al. 1968; see Doblin, chapter 6 this volume).

The Norwegian scientist Alnaes (1965) closely followed the group therapeutic approach developed by Leary et al. He worked with a group of twenty psychoneurotic patients to help them gain deep insight into their own experience and behavior. He utilized a depth psychology group process that was interspersed with high dosage psilocybin (20–50 mg) sessions to achieve experiences of self-transcendence. After preparation in psychotherapeutic one-on-one sessions, the patient would receive psilocybin or the derivative CZ 74 in group session in supportive surroundings (cozy treatment rooms with pictures, candle light, and music). In the afternoon, immediately following the session, the experiences were discussed and interpreted in a group setting. Alnaes reported improvement of his patients but did not provide detailed evaluation.

The Mexican psychiatrist Roquet used psilocybin and other psycholytic substances in a different way. After initially following Leuner's (1962) guidelines for treatment, in 1967 Roquet developed his own methodology by incrementally integrating certain practices of Native American healers and combining them with modern audiovisual instruments (Roquet et al. 1975, 1981). In the beginning, the patient is carefully prepared through depth psychology in group or individual therapy. The patients are then subjected to a sequence of experiences involving hallucinogenic plants or substances in a group setting of six to thirty-five patients (Villoldo 1977).

The day of the session the participants gathered in the morning for relaxation exercise. Later they met in special rooms that featured modern lighting and pictures of existential meaning. Once the effect of the drug took hold, the participants, who were in a sensitized psychic state, were subjected to strong sensory stimuli (sounds, music, movies, slides), which produced distinct emotional reactions. The sensory bombardment was produced deliberately to cause a severe psychic irritation with a concurrent breakdown of inner emotional defense mechanisms and mental

concepts. The confrontational nature of this procedure aimed to evoke and stimulate personal and transpersonal emotional conflicts that were subsequently integrated into consciousness with the help of follow-up psychotherapy.

Roquet et al. (1981) used this procedure to treat patients with character neuroses, sexual neuroses, and drug addiction. Nine hundred fifty patients were treated in this manner and, according to a scientific follow-up study, approximately 80% of those treated showed distinct improvements (Roquet et al. 1981). Table I summarizes the information on these studies.

In addition to psilocybin, two related tryptamines have been used in psycholytic therapy. CZ 74, which has been clinically tested and applied in psychotherapy by Leuner (1967), Johnson (1967), and Alnaes (1965), should be of great interest for future research in psycholytic therapy. This derivative of psilocybin remains effective for only three hours and is entirely free of somatic side effects. Another related tryptamine derivative with an effective duration of 2–4 hours named DPT (dipropyltryptamine) was studied as an alternative to LSD in context of a research project of the Baltimore group led by Grof (1972–1973), Grof et al. (1973) and Soskin (1975; Soskin et al. 1973). The authors thought the short-term effectiveness of these substances also to be suitable for ambulatory psycholytic treatment (Leuner et al. 1965).

COMPARISON OF PSYCHOLYTIC THERAPY WITH TRADITIONAL SHAMANIC PRACTICES

The methods of psychoanalytic therapy described above are strongly influenced by the premises and procedures of Freudian and Jungian psychoanalysis. Psychoanalysis employs methods that are suitable for the exposure of traumatic experiences and hidden conflicts in personality development. Methods include hypnosis, dream evaluations, active imagination, free association, and guided visualizations, what Leuner calls "katathymic imagery." The use of psycholytic agents, which enhance introspective experience and activate subconscious material, thus produces fruitful results in the hands of psychoanalytically-oriented

AUTHOR(S)	TYPE OF STUDY	PRESENCE OF RITUAL ELEMENTS	INTENDED EXPERIENCES	# OF SESSIONS	PSILOCYBIN DOSAGE	# OF PATIENTS	OTHER SUBSTANCES
Leuner (1962 et seq.)	A/B	+	Activation of unconscious memories and conflicts	10–30	5–15 mg	150	LSD/CZ 74
Gnirss (1963 et seq.)	A	+	"	10–30	5–12 mg	25	---
Alhadeff (1963)	A	+	"	1–5	5–15 mg	15	LSD
Hausner et al. (1963 et seq.)	B	+	"	1–35	3–10 mg	100s	LSD
Massoni et al. (1964)	A	+	"	Some	9–23 mg	92	LSD
Derbolowski (1966)	B	+	"	1–15	5–15 mg	65	LSD
Fernandez-cerdano (1967)	A	+	"	7–30	5–15 mg	?	LSD
Berendes (1979/80)	A	+	"	?	?	?	LSD/DPT
Johnsen (1967)	B	+	"	1–3	20–30 mg	12	LSD/CZ 74
Kristensen (1963)	B	+	"	5–10	4–5 mg	20	---
Geert-Jørgensen (1968)	A/B	+	"	5–15	5–15 mg	150	LSD
Cwynar (1966)	?	+	"	9–12	9 mg	11	---
Clark (1967/68)	A	+	"	2–5	4–20 mg	20	LSD
Rydzynski et al. (1978)	A/B	+	"	12–15	6–30 mg	31	LSD
Hollister et al. (1962)	A (?)	+	"	?	5–10 mg	18	LSD/Mescaline
Fontana	C	++	"	1–10	?	250	LSD/Mescaline
Alnaes (1965)	D	+++	Psychedelic ego transcendence	2–5	20–30 mg	20	LSD/CZ 74
Leary et al. (1965 et seq.)	D	++	"	2–3	20–70 mg	40	---
Roquet et al. (1981)	D	+++	" and self-confrontation	5–10	10–30 mg	950	LSD/Mescaline/ Ketamine

therapists and was quickly established as an experimental procedure among researchers. The activation of unconscious conflicts and the recollection of dreams achieved greater depth in psycholytic sessions than with conventional treatments. It was observed that recollection with psycholytic agents could reach childhood memories as early as the first year of the patient's life, producing a vivid and realistic recollection of events and making them available for therapeutic analysis.

In shamanistic healing, unconscious conflicts and illness-related memories are equally stimulated, recognized as root causes of the illness, and subsequently interpreted by the shaman. Classical psychotherapists encourage the patient to surrender to emerging material and to try not to interfere with the state of inebriation, while some indigenous healers exploit the sensitized state of their patients to make specific suggested cathartic interventions. The European psycholytic method puts more emphasis on the activation and analysis of unconscious conflicts and memories.

In traditional applications of very low dosages, suitable material appears mostly in the form of dream fragments. These fragments have been shown to possess personality-related characteristics; therefore it makes sense to integrate them into the therapy process of depth psychology. Missing from depth psychology is the psycho-dramatic momentum, as the stimulation/manipulation of the experience is limited to the playing of quiet music in a darkened room. The awareness of the self remains intact and allows the patient to observe from the perspective of a spectator.

A further difference from traditional applications is the repeated administration of psycholytic drugs, where the patients are subjected to a series of ten to seventy weekly or monthly sessions. In traditional settings, singular sessions centered around conflict and including psychodramatic elements are customary. Indigenous healers frequently make use of follow-up sessions, but they focus on acutely-occurring illnesses. To achieve a strong impact with these short-term interventions, suggestive, psycho-dramatic, and religious aspects of the induced altered experiences are utilized. Shamans will interfere in the process of the session much more decisively than modern therapists will in psycholysis. The latter offer help with interpretation and therapeutic analysis solely during drug-free intervening sessions.

The fact that the shamans include family members and relatives probably intensifies the impact of occasional interventions. Due to less frequent but higher dosages in shamanistic treatment, the awareness of the self is subject to greater fluctuation. In contrast, psycholytic therapists concentrate on the treatment of chronic neurotic diseases in the course of serial sessions. These chronic problems are usually based on structural distortions of the personality, so long-term treatment in psychotherapy promises success.

The time of day that sessions take place is another difference. The indigenous healers exclusively hold sessions at night, whereas classical psycholytic therapists administer substances in the morning to utilize the afternoons for follow-up sessions. The procedures described above in section D (psychedelic), however, more directly follow various aspects of the religious cultural applications of hallucinogenic substances. Therapists were aiming at religiously ecstatic experiences for participants who were specifically prepared and received higher dosages of these agents. Such experiences often entail conversion experiences with personality-changing effect.

This effect was scientifically proven by Pahnke (1962) and suggested the concept of "psychedelic therapy," as developed by American LSD therapists (Chewelos et al. 1959; Savage 1962; Sherwood et al. 1962). Here the setting resembles that of the practices and rituals among traditional indigenous cults: dimly lighted, specially prepared rooms, semi-religious preparation, music, and other circumstances favorable to absorption of the experiences. These create a feeling of security and set the mood for the participants. Also, in contrast to the psycholytic method, no psychodynamic interpretation and analysis of the experiences takes place.

Further differences include the fact that psychedelic therapy sessions only take place with individuals or in very small groups. On the other hand, traditional healings that are inspired by religious traditions are always performed in group settings with a ritual structure (LaBarre 1938; Myerhoff 1980). While in single settings the course of the experience is largely determined by the relationship between the therapist and the patient, in traditional group rituals the patient's experience is dependent on the structure of the entire group and the follow-up work

consists of a joint discussion of the pertaining experiences. In psychedelic therapy, just as in traditional applications, a small number of sessions over a period of time utilize higher dosages of the drug.

Both groups offer professional observation of the participants, necessary because of possible fluctuations after the treatment. The traditional healers hold nightly sessions and meetings on the following day and the psycholytic therapists utilize an in-patient setting.

Combining the several advantages found in psycholytic and psychedelic approaches was suggested by Grof (1967) and applied by Alnaes (1963) and Roquet et al. (1981), as well as by the Swiss psycholytic therapists Styk (1994) and Gasser (1995). These authors favored psychedelic/mystical forms of experience, adhering to the traditional setting (group sessions with higher dosage, ingestion at night, ritualistic structure, natural surroundings, etc.), as well as long-term therapeutic analysis of the psycho-dynamic biographical experience.

SUMMARY

In summarizing the historic development in the use of psycholytic substances in modern psychotherapy, I observed two lines of development. One direction is outlined in the psycholytic method in Europe, which integrates evocation of unconscious materials through psycholytic agents with the methods of classic depth psychology. The other direction is depicted in the development of the psychedelic method, which provides the base for therapeutic treatment by closely adhering to the traditional settings and procedures with semireligious experiences of mystical self-transcendence.

In regard to results of treatments with psilocybin in modern psychotherapy, I will only point toward the research by Mascher (1966), Schulz-Wittner (1989), Leuner (1994), and the studies of the Baltimore-group (Yensen et al. 1995). These authors could (in agreement with many others) document a significant improvement in approximately 65% of the patients with serious and chronic neuroses. However, part of the evaluation seems problematic because it was conducted during the 1960s, when psycholytic substances were still being researched, and could only satisfy the standards of psychotherapy evaluation at that time.

According to current standards, these evaluations seem to be lacking important data (Pletscher et al. 1994). Further research and examination of the promising treatment successes of those days are desirable under the following guidelines: 1. Specification of the diagnoses according to DSM IV/ICD-10; 2. The use of standardized instruments in understanding the psychopathology of the patient; 3. Specification of variables concerning the therapists and the environment; 4. Operational standardization of outcome variables; 5. The use of control groups. Some studies following these guidelines are in process now, in the United States and elsewhere, as described in a following chapter "A Note on Current Psilocybin Research" by Rick Doblin.

Translation of this essay from the German by Cordelia Ballent and Ralph Metzner.

References

- Abramson, H. A., ed. 1960. *The Use of LSD in Psychotherapy*. New York: Josiah Macy Foundation.
- Abramson, H. A., ed. 1967. *The Use of LSD in Psychotherapy and Alcoholism*. New York, Kansas City: Bobbs Merrill.
- Aguilar, T. M. 1963. La Psilocybine: perspectives d'utilisation en psychiatrie clinique. *Acta Neurologica et Psychiatrica Belgica* 63:114-31.
- Aldhadeff, B. W. 1963. Aspects cliniques de l'emploi du delyside et de l'indocybine en psychiatrie. *Schweizer Apotheker-Zeitung* 101:245-50.
- . 1963. Les effets psychotomimetiques du LSD et de la psilocybine dans l'exploration clinique de la personnalité. *Schweizer Archiv für Neurologie, Neurochirurgie und Psychiatrie* 92:238-42.
- Alnaes, R. 1965. Therapeutic application of the change in consciousness produced by psycholytica (LSD, Psilocybin, etc.). *Acta Psychiatrica Scandinavica* 40:397-409. Suppl. 180.
- Arendsen Hein, G. W. 1963. Psychotherapeutische Möglichkeiten zur Überwindung einer Behandlungsresistenz unter besonderer Berücksichtigung der psycholytischen methode. *Zeitschrift für Psychotherapie und medizinische Psychologie* 13:81-87.
- Baer, G. 1967. Statistical results on reactions of normal subjects to the Psilocybin derivatives ceY 19 and CZ 74. In *Neuro-Psycho-Pharmacology*, ed. H. Brill, 400-404. Amsterdam, New York, London: Excerpta Medica.

- . 1967. *Über die psychopathologische Wirkung zweier neuer Halluzinogene der Psilocybingruppe*. Göttingen: Medical dissertation.
- Barolin, G. S. 1961. Erstes Europäisches Symposium für Psychotherapie unter LSD-25, Göttingen, November 1960. *Wiener Medizinische Wochenschrift* 111:466–68.
- Benz, E. 1989. *Halluzinogen-unterstützte Psychotherapie*. Zürich: Medical dissertation.
- Berendes, M. 1979–1980. Formation of typical dynamic stages in psychotherapy before and after psychedelic drug intervention. *Journal of Altered States of Consciousness* 5:325–38.
- Beringer, K. 1927. *Der Meskalinrausch*. Berlin: Springer.
- Busch, A. and W. Johnson. 1950. LSD 25 as an aid in psychotherapy. *Diseases of the Nervous System* 11:241–43.
- Chwelos, N., D. B. Blewett, C. M. Smith, and A. Hoffer. 1959. Use of d-Lysergic Acid Diethylamide in the treatment of alcoholism. *Quarterly Journal of Studies on Alcohol* 20:577–90.
- Clark, B. 1967–1968. Some early observations on the use of Psilocybin in psychiatric patients. *British Journal of Social Psychiatry* 2:21–26.
- Clark, J. 1970. The use of Psilocybin in a prison setting. In *Psychedelics*, eds. B. Aaronson and H. Osmond, 40–44. London: Hogarth Press.
- Clark, W. H. 1977. Art and psychotherapy in Mexico. *Art of Psychotherapy* 4:41–44.
- Cwynar, S. and Z. Rydzynski. 1966. Psilocybin in der Behandlung von persönlichkeitsstörungen. *Activitas Nervosa Superior* 8:424.
- Da Fonseca, J. S., C. Cardoso, P. Salguiero and M. L. Fialho. 1965. Neurophysiological and psychological study of Psilocybin-induced modifications of visual information processing in man. In *Neuro-Psychopharmacology Vol. 4*, eds. D. Bente & P. B. Bradley, 315–19. Amsterdam, London, New York: Elsevier.
- David, A. E. and J. David. 1961. La psilocibina, un nuevo alucinogeno, y sus posibilidades terapeuticas en psicoterapia. *Acta Neuropsiquiatrica Argentina* 7:143–44.
- Delay, J., P. Pichot and P. Nicolas-Charles. 1959. Premiers essais de la psilocybine en psychiatrie. In *Neuro-Psychopharmacology*, eds. P. Bradley, P. Deniker and C. Radouco-Thomas, 528–31. Amsterdam, London, New York, Princeton: Elsevier.

- Delay, J., P. Pichot, T. Lemperiere and A. M. Quetin. 1959. Effet therapeutique de la psilocybine sur une nevrose convulsive. *Annales medico-psychologiques* 117:509–15.
- Delay, J., P. Pichot, T. Lemperiere, P. Nicolas-Charles and A. M. Quetin. 1959. Les effets psychiques de la psilocybine et les perspectives therapeutiques. *Annales medico-psychologiques* 117:899–907.
- Delay, J., P. Pichot, and T. Lemperiere. 1961. La Psilocybine—Ses implications therapeutiques. *Le Sud Medical et Chirurgical* 97:9217–24.
- . 1963. The therapeutic implications of Psilocybine. In *Hallucinogenic drugs and their Psychotherapeutic Use*, eds. R. Crockett, R. A. Sandison, A. Walk, 37–41. London: Lewis.
- Derbolowsky, G. 1967–1968. Dealing and working with materials in group-analysis and with "LSD-25." *British Journal of Social Psychiatry* 2:67–72.
- Derbolowsky, U. 1966. Psycholytische intervalltherapie mit LSD 25 oder ambulante analytische psychotherapie? *Zeitschrift für Psychotherapie und medizinische Psychologie* 16:33–38.
- Doblin, R. 1998. Dr. Leary's Concord Prison Experiment: A 34-year follow-up study. *Journal of Psychoactive Drugs* 30:419–26.
- Dubansky, B., M. Vyhnankova and L. Setlik. 1967a. Veränderungen der ausseroptischen Sinneswahrnehmung nach Psilocybin. *Activitas Nervosa Superior* 9:378–79.
- . 1967b. Gleichzeitiges Vorkommen von propriozeptiven S-innestäuschungen und neurologischer symptomatologie nach Psilocybin. *Activitas Nervosa Superior* 9:376–77.
- Duche, D. 1961. Les effets de la psilocybine dans une cas d'hysterie. *Semaine des hospitaux de Paris* 37:3061–62.
- Fernandez-cerdeno, A., A. Brugmann and A. Suarez. 1967. Besonderheiten der psycholytischen Technik im Vergleich mit der psychoanalytischen. *Jahrbuch für Psychologie, Psychotherapie und medizinische Anthropologie* 15:274–79.
- Fernandez-cerdeno, A. and H. Leuner. 1967. Das Erleben der oralen regression unter Einfluss von halluzinogenen (LSD-25 und Psilocybin). *Zeitschrift für psychosomatische Medizin* 11:45–54.
- Fischer, R., R. M. Hill, K. Thatcher, and J. Scheib. 1970. Psilocybin-induced contraction of nearby visual space. *Agents and Actions* 1:190–97.

- Fisher, G. 1963. Some comments concerning dosage levels of psychedelic compounds for psychotherapeutic experiences. *Psychedelic Review* 1:208-18.
- Flores, J. R. 1966. Psicosis experimental con psilocybina. *Revista de Neuropsiquiatria* 29:45-70.
- Fontana, A. E. 1961. El uso clinico de las drogas alucinogenas. *Acta Neuropsiquiatrica Argentina* 7:94-98.
- . Clinical use of hallucinogenic drugs. In *Proceedings of the Third World Congress of Psychiatry Vol. 2.*, 942-44. Toronto: University of Toronto Press.
- Fortes, J. R. A. 1964. Psilocibina e alcoolismo cronico: contribuciao para los estudo des efeitos somaticos e psiquicos em 30 casos. Sao Paulo: Medical dissertation.
- Fortes, J. R. A., F. O. Bastos, and R. V. Arruda. 1968. Estudio comparativa de la accion psicofarmacologico del LSD-25 y de la psilocybina en los alocoholicos cronicos. In *Proceedings Fourth World Congress of Psychiatry 1966 Vol. 3*, ed. J. Lopez Ibor, 2010-13. Amsterdam: Excerpta Medica.
- Frederking, W. 1953-1954. Über die Verwendung von Rauschdrogen (Meskalin und Lysergsäurediäthylamid) in der Psychotherapie. *Psyche* 7:342-64.
- . 1954. Meskalin in der psychotherapie. *Medizinischer Monatsspiegel* 3:5-7.
- Gasser, P. 1995. Katamnestic Untersuchungen zur psycholytischen therapie. *Yearbook of Cross-Cultural Medicine and Psychotherapy* 1995:143-62.
- Geert-Jørgensen, E., M. Hertz, K. Knudsen, and K. Kristensen. 1964. LSD-treatment: Experience gained within a three-year-period. *Acta Psychiatrica Scandinavica*, 373-82. Suppl. 180.
- Gnirss, F. 1959. Untersuchungen mit Psilocybin, einem phantastikum aus dem amerikanischen Rauschpilz Psilocybe mexicana. *Schweizer Archiv für Neurologie und Psychiatrie* 84:346-48.
- . 1963. Therapie der neurosen mit phantastica. *Schweizer Archiv für Neurologie, Neurochirurgie und Psychiatrie* 92:234-36.
- . 1965. Neurosentherapie mit psycholytischen Stoffen. In *Psychiatrische Pharmakotherapie in Klinik und Praxis*, ed. F. Kielholz, 135-51. Bern, Stuttgart: Huber.

- . 1995. Personal communication.
- Grof, S. 1967. The use of LSD 25 in personality diagnostics and psychotherapy of psychogenic disorders. In *The Use of LSD in Psychotherapy and Alcoholism*, ed. H. A. Abramson, 154-90. New York, Kansas City: Bobbs Merrill.
- . 1972-1973. LSD and the human encounter with death. *Voices: The Art and Science of Psychotherapy* 8:64-76.
- . 1975. *Realms of the Human Unconscious*. New York, N.Y.: Viking.
- . 1983 *LSD-Psychotherapy*. Pomona, Calif.: Hunter House.
- Grof, S., R. A. Soskin, W. A. Richards, and A. A. Kurland. 1973. DPT as an adjunct in psychotherapy of alcoholics. *International Pharmacopsychiatry* 8:104-15.
- Hausner, M. 1968. Psycholytiska psychotherapie. *Activitas Nervosa Superior* 10:50.
- Hausner, M., and V. Dolezal. 1963. Prakticke zkusenosti s halucinogeny v psychoterapii. *Ceskoslovenska Psychiatrie* 54:328-35.
- Hausner, M., and V. Dolezal. 1963. Group and individual therapy under LSD. *Acta Psychotherapeutica et Psychosomatica* 11:39-59.
- Heimann, H. 1962. Zur Behandlung therapieresistenter neurosen mit modelpsychosen (Psilocybin). *Schweizer Archiv für Neurologie, Neurochirurgie und Psychiatrie* 89:214-20.
- Hofmann, A. 1959. Abwandlungsprodukte des Psilocybin und Psilocin. *Helvetica Chimica Acta* 42:2073ff.
- Hofmann, A., R. Heim, A. Brack, and H. Kobel. 1958. Psilocybin, ein psychotroper Wirkstoff aus dem mexikanischen Rauschpilz Psilocybe mexicana Heim. *Experientia* 14:107-9.
- Hofmann, A., R. Heim, A. Brack, H. Kobel, A. Frey, H. Ott, T. Petrzilka, and F. Troxler. 1959. Psilocybin und Psilocin, zwei psychotrope Wirkstoffe aus mexikanischen Rauschpilzen. *Helvetica Chimica Acta* 42:1557-72.
- Hollister, L. E. 1961. Clinical, biochemical and psychologic effects of Psilocybin. *Archives Internationales de Pharmacodynamie e de Therapie* 130:42-52.
- Hollister, L. E., R. O. Degan, and S. D. Schultz. 1962. An experimental approach to facilitation of psychotherapy by psychotomimetic drugs. *Journal of Mental Science* 108:99-100.

- Johnsen, G. 1964. Three years experience with the use of LSD as an aid in psychotherapy. *Acta Psychiatrica Scandinavica* 40:383-88. Suppl. 180.
- . 1967. Indications for psycholytic treatment with different types of patients. In *The Use of LSD in Psychotherapy and Alcoholism*, ed. H. A. Abramson, 333-41. New York, Kansas City: Bobbs Merrill.
- Keeler, M. H. 1965. Similarity of schizophrenia and the Psilocybin syndrome as determined by objective methods. *International Journal of Neuropsychiatry* 1:630-34.
- Kristensen, K. K. 1963. Kliniske erfaringer med psilocybin. *Nordisk Psykiatrisk Tidsskrift* 17:177-82.
- LaBarre, W. 1938. *The Peyote Cult*. New Haven.
- Ladewig, D. 1994. Conclusions, with special regard to clinical aspects. In *50 Years of LSD. Current Status and Perspectives of Hallucinogens*, eds. A. Pletscher and D. Ladewig, 223-28. New York, London: Parthenon.
- Leary, T. 1962. How to Change Behavior. In *Clinical Psychology*, ed. G. S. Nielsen, 50-68. Copenhagen.
- . 1964. The religious experience: Its production and interpretation. *Psychodelic Review* 1:324-46.
- . 1969. The effects of consciousness-expanding drugs on prisoner rehabilitation. *Psychodelic Review* 10:29-44.
- Leary, T., R. Alpert, and R. Metzner. 1964. *The Psychodelic Experience*. New York: University Books.
- Leary, T., G. H. Litwin, and R. Metzner. 1963. Reactions to Psilocybin administered in a supportive environment. *Journal of Nervous and Mental Disease* 137:561-73.
- Leary, T., and R. Metzner. 1967-1968. Use of psychodelic drugs in prisoner rehabilitation. *British Journal of Social Psychiatry* 2:27-51.
- Leary, T., R. Metzner, M. Presnell, G. Weil, R. Schwitzgebel, and S. Kinne. 1965. A new behavior change program using Psilocybin. *Psychotherapy: Theory, Research and Practice* 2:61-72.
- Leuner, H. 1959. Psychotherapie in modellpsychosen. In *Kritische Psychotherapie*, ed. E. Speer, 94-102. München: J. F. Lehmanns.
- . 1960. Über psychopathologische schlüsselfunktionen in der modellpsychose. *Medicina Experimentalis* 2:227-32.
- . 1961. Psychophysische korrelationen unter der einwirkung von psycholytika (LSD Psilocybin und ähnl.). *Medicina Experimentalis* 5:209-14.

- . 1962a. *Die experimentelle Psychose*. Berlin, Göttingen, Heidelberg: Springer.
- . 1962b. Ergebnisse und probleme der psychotherapie mit Hilfe von LSD-25 und verwandten substanzen. *Psychiat. Neurol.* 143:379-91.
- . 1963. Die psycholytische therapie: Klinische psychotherapie mit Hilfe von LSD-25 und verwandten substanzen. *Zeitschrift für Psychotherapie und medizinische Psychologie* 13:57-64.
- . 1966. Psychotherapie mit Hilfe von halluzinogenen. *Arzneimittelforschung* 16:253-55.
- . 1967. Present status of psycholytic therapy and its possibilities. In *The Use of LSD in Psychotherapy and Alcoholism*, ed. H. A. Abramson, 101-16. New York, Kansas City: Bobbs Merrill.
- . 1968. Ist die Verwendung von LSD-25 für die experimentelle psychiatrie und in der psychotherapie heute noch vertretbar? *Nervenarzt* 39:356-60.
- . 1971. Halluzinogene in der psychotherapie. *Pharmakopsychiatrie—Neuro-Psychopharmakologie* 4:333-51.
- . 1981. *Halluzinogene*. Bern, Stuttgart, Wien: Huber.
- . 1987. Die psycholytische therapie: Durch halluzinogene unterstützte tiefenpsychologische psychotherapie. In *Ethnopsychotherapie*, eds. A. Dittrich, and C. Scharfetter, 151-60. Stuttgart: Enke.
- . 1994. Hallucinogens as an aid in psychotherapy: Basic principles and results. In *50 Years of LSD. Current Status and Perspectives of Hallucinogens*, eds. A. Pletscher, and D. Ladewig, 175-90. New York, London: Parthenon.
- . 1995. Personal communication.
- Leuner, H., and G. Baer. 1965. Two new short-acting hallucinogens of the Psilocybin group. In *Neuro-Psychopharmacology Vol. 4*, eds. D. Bente, and P. B. Bradley, 471-73. Amsterdam, London, New York: Elsevier.
- Leuner, H., and H. Holfeld. 1964. Psycholysis—Psychotherapy under the influence of hallucinogens. *Physicians Panorama* 2:13-16.
- Ling, T. M., and J. Buckman. 1963. *Lysergic Acid (LSD-25) & Ritalin in the Treatment of Neuroses*. Sidcup, Kent: Lombarde Press.
- Lipp, F. 1990. Mixed concepts and uses of entheogenic mushrooms. In *The Sacred Mushroom Seeker*, ed. T. Riedlinger, 151-60. Portland, Ore.: Discorides Press.

- Malitz, S., H. Esecover, B. Wilkens, and P. H. Hoch. 1960. Some observations on Psilocybin, a new hallucinogen in volunteer subjects. *Comprehensive Psychiatry* 1:8–17.
- Mascher, E. 1966. *Katamnestiche Untersuchung von Ergebnissen der psycholytischen Therapie*. Göttingen: Medical dissertation.
- Massoni, R. S., and F. Lebensohn. 1964. Las drogas alucinogenas: su importancia en psicoterapia asistencial. *Acta psiquiatrica y psicologica America latina* 10:128–32.
- Metzner, R., and Editors of Psychedelic Review. 1963. The subjective aftereffects of psychedelic experiences: A summary of four recent questionnaire studies. *Psychedelic Review* 1:18–26.
- Metzner, R., G. Litwin, and G. M. Weil. 1965. The relation of expectation and mood to Psilocybin reactions: A questionnaire study. *Psychedelic Review* 5:339.
- Metzner, R. 1998. Reflections on the Concord Prison Project and the follow-up study. *Journal of Psychoactive Drugs* 30:427–28.
- Nieto Gomez, D. 1962. Psicosis experimentales con Psilocibina. *Neurologia, Neurocirurgia, Psiquiatria* 4.
- Pahnke, W. N. 1962. *Drugs and Mysticism: An Analysis of the Relationship between Psychedelic Drugs and the Mystical Consciousness*. Cambridge, Mass.: Philosophical dissertation.
- Passie, T. 1985. Field observations in Mexiko.
- . 1987. Field observations in Mexiko.
- . 1995a. Ausrichtungen, methoden und ergebnisse früher meskalin-forschungen im deutschsprachigen Raum. *Yearbook of the European College for the Study of Consciousness* 1993–1994:103–11.
- . 1995b. Die psycholyse in den skandinavischen Ländern. Ein historischer Überblick. *Yearbook of Cross-Cultural Medicine and Psychotherapy* 1995:183–220.
- . 1995c. Psilocybin in der modernen psychotherapie. *Curare* 18:131–52.
- Passie, T., J. Seifert, U. Schneider, and H. M. Emrich. 2002. The pharmacology of Psilocybin. *Addiction Biology* 7:357–64.
- Perez de Francisco, C. 1964. *Psicosis experimentales con psilocybina y LSD*. Mexico City: Medical dissertation.
- Pletscher, A., and D. Ladewig, eds. 1994. *50 Years of LSD. Current Status and Perspectives of Hallucinogens*. New York, London: Parthenon.

- Quetin, A. M. 1960. *La psilocybina en psychiatrie clinique et experimentale*. Paris: Medical dissertation.
- Reda, G., G. Vella, I. Cancrini, and E. D'Agostino. 1964. Studio clinico e psicopatologico della psilocibina. *Rivista sperimentale di freniatria e medicina legale delle alientazioni mentali* 88:7–76.
- Rinkel, M., A. DiMascio, A. Robey, and C. Atwell. 1961. Personality patterns and reaction to Psilocybin. In *Neuro-Psychopharmacology Vol. 2*, ed. P. B. Bradley, 273–79. Amsterdam: Elsevier.
- Roquet, S., and P. Favreau. 1981. *Los alucinogenos de la concepcion indigena a una nueva psicoterapia*. México D.F.: Ediciones Prisma.
- Roquet, S., P. Favreau, R. Ocana, and M. R. Velasco. 1975. *La existencial a través de psicodyslepticos: una nueva Psicoterapia*. Mexico City: Instituto de psicosisintesis.
- Rosenbohm, A. 1991. *Halluzinogene Drogen im Schamanismus*. Berlin: Reimer.
- Rydzynski, Z., and W. Gruszczynski. 1978. Treatment of alcoholism with psychotomimetic drugs: A follow-up study. *Activitas Nervosa Superior* 20:81–82.
- Salguiero, E. G. 1964. *A psicose experimental pela psilocibina: estudio clinico-labortorial em voluntarios humanos*. Lissabon: Inquerito.
- Sandison, R. A. 1954. Psychological aspects of the LSD treatment of the neurosis. *Journal of Mental Science* 100:508–18.
- . 1959. The role of psychotropic drugs in individual therapy. *Bulletin of the World Health Organization* 21:495–503.
- Sandison, R. A., and A. Spencer. 1954. The therapeutic value of Lysergic Acid Diethylamide in mental illness. *Journal of Mental Science* 100:491–507.
- Sandison, R. A., A. Spencer, and J. Whitelaw. 1957. Further studies in the therapeutic value of Lysergic Acid Diethylamide in mental illness. *Journal of Mental Science* 103:332–42.
- Savage, C. 1962. LSD, alcoholism and transcendence. *Journal of Nervous and Mental Disease* 135:429–35.
- Savage, C., and S. Wolf. 1967. An outline of psychedelic therapy. In *Neuro-Psycho-Pharmacology*, ed. H. Brill, 405–10. Amsterdam: Excerpta Medica.
- Schulz-Wittner, G. 1989. Mit psychoaktiven substanzen unterstützte psychotherapie bei negativ prognostizierten patienten: Neue katamnestiche Ergebnisse. Göttingen: Medical dissertation.

- Sercl, M., J. Kovarik, and O. Jaros. 1961. Klinische erfahrungen mit Psilocybin (CY-39 Sandoz). *Psychiat. Neurol.* 142:137-46.
- Sherwood, J. N., M. Stolaroff, and W. W. Harman. 1962. The psychedelic experience—A new concept in psychotherapy. *Journal of Neuropsychiatry* 4:69-80.
- Soskin, R. A. 1975. Dipropyltryptamine in psychotherapy. *Current Psychiatric Therapies* 15:147-56.
- Soskin, R. A., S. Grof, and W. A. Richards. 1973. Low doses of Dipropyltryptamine in psychotherapy. *Archives of General Psychiatry* 28:817-21.
- Steinegger, E., and H. Heimann. 1966. Pharmakochemie und psychische Wirkung von drei mexikanischen zauberdrogen. *Mitteilungen der Naturforschenden Gesellschaft in Bern* 23:83-99.
- Stevenin, L., and J. C. Benoit. 1962. L'utilisation des medicaments psychotropes en psychotherapie. *Encephale* 51:420-59.
- Stoll, W. A. 1947. Lysergsäure-diäthylamid, ein phantastikum aus der mutterkornggruppe. *Schweizer Archiv für Neurologie und Psychiatrie* 60:279-323.
- Styk, J. 1994. Personal communication.
- Swain, F. 1963. Four Psilocybin experiences. *Psychedelic Review* 2:219-43.
- Vernet, I. 1960. Actions psychologique et therapeutique de la psilocybine. *Medecine et Hygiene* 18:420.
- Villoldo, A. 1977. An introduction to the psychedelic psychotherapy of Salvador Roquet. *Journal of Humanistic Psychology* 17:45-58.
- Wasson, R. G. 1958. Les premieres sources. In *Les champignons hallucinogenes du mexique*, R. Heim, and R. G. Wasson, 15-44. Paris: Museum d'histoire naturelle.
- . 1980. *The Wondrous Mushroom*. New York: McGraw Hill.
- Yensen, R., and D. Dryer. 1995. Thirty years of psychedelic research. The Spring Grove Experiment and its sequels. *Yearbook of the European College for the Study of Consciousness* 1993-1994:73-102.