Chapter 72

Use of LSD by Mental Health Professionals

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INTRODUCTION

The history of Czech hallucinogen research is longstanding and rich, yet not well known internationally. Its roots date back to J. E. Purkyně, who became world renown for his work on Purkinje cells, Purkinje fibers, Purkinje images, and the Purkinje shift (Winkler & Csémy, 2014). Purkyně self-experimented with belladonna, nutmeg, opium, and other substances, and characterized their mind-altering properties (Winkler & Csémy, 2014).

In the 1940s, the physician S. Vomela researched the hallucinogenic effects of anticholinergics and experimented with atropine (Vojtěchovský, 2009). The tradition continued with mescaline research conducted mainly by S. Nevole, whose pioneering work laid the foundations for later LSD researchers, including S. Grof. LSD research was extensive during its period of legality in the former Czechoslovakia, and self-experimentation played a central role. Although psilocybin had its place as well, it never achieved the scale of LSD research in the country. This may be partly explained by its ease of access, as Czechoslovakia produced LSD industrially. The SPOFA pharmaceutical company manufactured LSD at its Opava branch and distributed it under the name Lysergamide SPOFA (see Figures 1, 2 and 3). Research into hallucinogens was effectively banned in 1974, which was late in comparison to the USA or Western Europe. This delay may be partly explained by the rare incidence of hallucinogen misuse in the former Czechoslovakia. The tradition of Czech hallucinogen research has been recently renewed at the National Institute of Mental Health of the Czech Republic (formerly Prague Psychiatric Center, and Psychiatric Research Institute). The Czech NIMH is one of a handful of research centers that are leading this hallucinogen research globally.

This chapter is particularly focused on self-experimentation with LSD among mental health professionals in the former Czechoslovakia, which may be one of the most fascinating aspects of the Czech hallucinogen research history. Four leading centers of Czechoslovak LSD research and their activities are described in this context. The main body of this chapter is based on the systematic review of published literature and interviews with mental health professionals who were personally involved in self-experimentation with LSD in the era of legal scientific research. This chapter builds on a paper that was previously published in the *Journal of Psychoactive Drugs* (Winkler & Csémy, 2014).

SELF-EXPERIMENTS WITH MESCALINE IN THE FORMER CZECHOSLOVAKIA

The history of mescaline research in the USA and Western Europe has been described comprehensively in books such as *The Hallucinogens* (Hoffer & Osmond, 1967), *Flesh of the Gods* (Furst, 1972), and *Psychedelic Drugs Reconsidered* (Grinspoon & Bakalar, 1979). However, the history of mescaline research that took place east of the Iron Curtain is not well documented.

The most prominent mescaline researcher in the former Czechoslovakia was S. Nevole, whose work laid the foundation for subsequent LSD research. His book *On Four-Dimensional Vision* and *on Sensory Illusions* became widely known among the mental health professionals in the country. His ideas were similar to those of Aldous Huxley, and influenced yet another Czech psychedelic researcher Grof (Winkler & Csémy, 2014).

LSD RESEARCH IN THE FORMER CZECHOSLOVAKIA

LSD arrived to the former Czechoslovakia in 1952 as a gift from Sandoz to the psychiatrist and researcher J. Roubíček. Sandoz distributed the substance under the name *Delysid*; accompanied by it was a notice that it could be used to enhance psychotherapy, for psychiatrists themselves to experience extraordinary psychological states, and the recommendation that psychiatrists who considered using the substance in therapy should have his or her own experience (Grob, 2002).

LSD instantly became a subject of extensive scientific exploration in the former Czechoslovakia. Its treatment properties were tested for a number of psychological conditions, including alcohol-related disorders (Tauš & Stehlík, 1967; Vojtěchovský, Krus, & Skála, 1966; Vojtěchovský, Skála, & Hort, 1969), neurotic disorders (Hausner & Doležal, 1962; Hausner & Segal, 2009), psychotic disorders (Broučková, 1962; Hausner & Segal, 2009), autism (Boš, 1971), and even sexual deviations (Šípová, 1974). Such an expansive exploration seems controversial from today's perspective; however, it is important to consider that (1) LSD was then a brand new substance and its properties were largely unknown; (2) it was an era when psychiatric care relied on large psychiatric wards somewhat reminiscent of the one depicted in *One Flew Over the Cuckoo's Nest*; and (3) psychopharmacology was in its infancy.

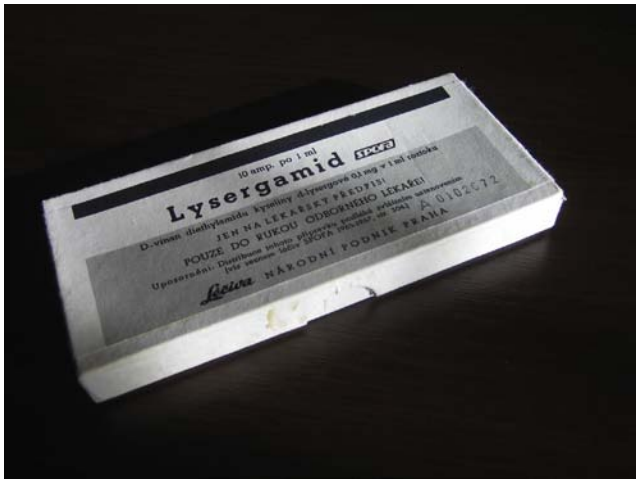


FIGURE 1 Lysergamid: LSD produced by the pharmaceutical company SPOFA in the former Czechoslovakia. The picture shows the original box of LSD produced in Czechoslovakia; published with the permission from the photographer, Respondent 13.

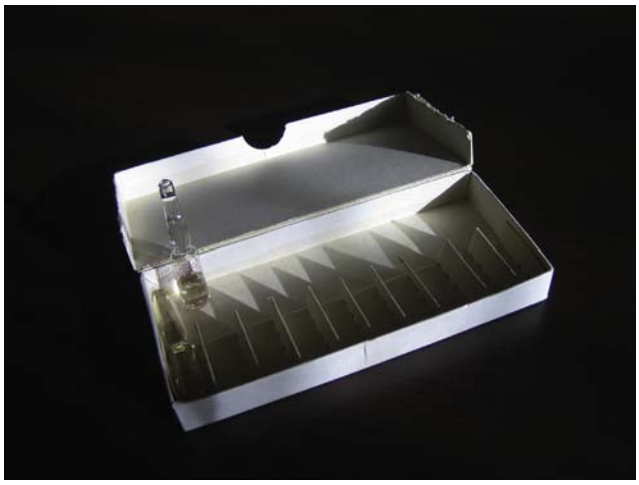


FIGURE 2 Lysergamid SPOFA. The picture shows the original ampule of LSD produced in Czechoslovakia; published with the permission from the photographer, Respondent 13.

The biochemical properties of LSD were studied too. This included research on the influence of LSD on human genetics, production of sperm (Mellan & Hausner, 1968), and other research. Considerable scientific attention was dedicated to the similarities between psychosis and the LSD experience (Roubíček, 1958), sensory processing disorders (Grof, 1964), and cognitive disorders; this research built partly on the mescaline research tradition described above. LSD experiences were also compared with the states induced by other hallucinogens (Grof & Vojtěchovský, 1960).

Self-experimentation with LSD was consistent with the country's hallucinogen research tradition as well as with the recommendations made by Sandoz. As such, self-experimentation among psychiatrists and psychologists was well integrated and respected (Grof, 1964; Vojtěchovský, 1966). This was appreciated by the psychoanalytic tradition, with LSD being considered as an adjuvant to psychoanalysis. Sigmund Freud was born in the territory of the current Czech Republic and spent his life in Vienna, which is approximately 300 km from Prague. Although persecuted by the communist regime, psychoanalysts had a strong foundation in the former Czechoslovakia, with LSD fitting well into it. LSD also fit into a larger societal context for two reasons: first, Czechoslovakia had a strong tradition in ergot research, and second, the potential to mimic psychosis with pharmacological substances fit into the materialist explanation of psychiatric disorders, which was in agreement with official scientific discourse within the communist regime.

The motivation of mental health professionals to undergo LSD administration was driven by several factors, these included personal autognostic curiosity; the desire to enhance their own training in psychoanalysis; professional curiosity stemming from the desire to understand psychiatric patients as well as the human psyche; and interest in working with the substance therapeutically (Winkler & Csémy, 2014). There were many institutions where such studies took place. We outline four research teams that we consider to be most central in regard to mental health professionals' self-experimentation with LSD in the former Czechoslovakia. Furthermore, we describe the work of these teams in a larger societal and scientific context.

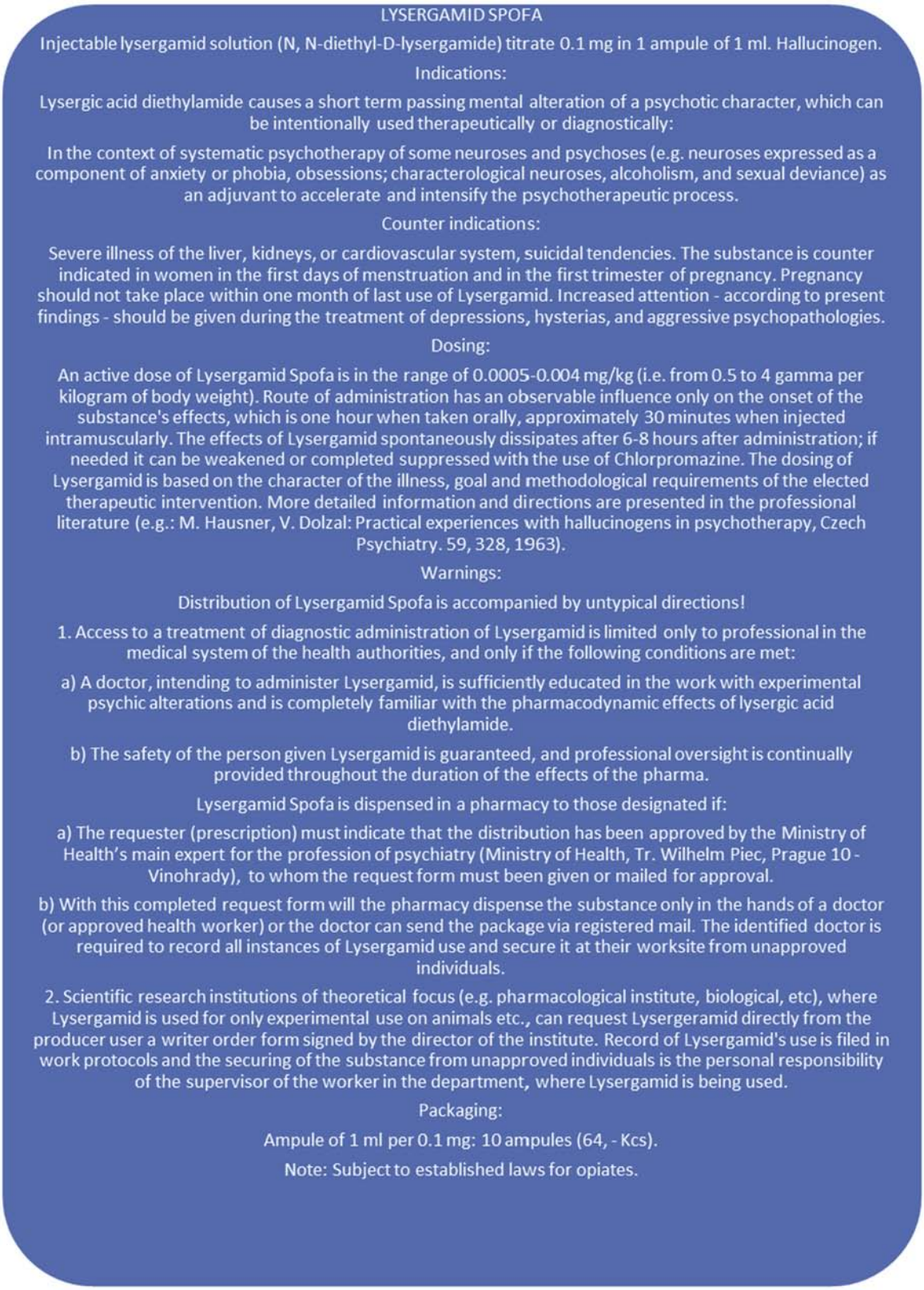
THE PSYCHIATRIC DEPARTMENT OF THE GENERAL UNIVERSITY HOSPITAL IN PRAGUE

Context

LSD first arrived as a gift from Sandoz to the Czech EEG expert and psychiatrist J. Roubíček (Respondent 7) who worked in the Psychiatric Department of the General University Hospital in Prague. In 1952, Roubíček and his team started experimenting with the substance. Roubíček's team also researched other substances such as mescaline, psilocybin, dimethyltryptamine, cocaine, and some other hallucinogenic and psychoactive drugs (Roubíček, 1960). At the time, Roubíček was working closely with J. Srnec, who was present as a sitter in almost all of the sessions conducted at this site. Srnec was also likely the first individual in the former Czechoslovakia who was administered LSD to undergo self-experimentation (Respondent 7). Roubíček's team was administering LSD to mental health professionals, patients, and artists. S. Grof and other important individuals in the field had their first LSD experience under the supervision of Roubíček's team. Grof (2009) later spoke of this experience as having deepened his interest in psychedelics.

Theoretical Orientation

Roubíček's team was mostly psychotomimetically oriented. They were studying similarities between LSD intoxication and psychosis on all levels of functioning—biological, psychological, and social (Roubíček, 1961). They also emphasized the value of autoexperimentation for mental health professionals. More than the autognostic value of the experience, Roubíček valued LSD's potential to relate to a mental health professional



LYSERGAMID SPOFA

Injectable lysergamid solution (N, N-diethyl-D-lysergamide) titrate 0.1 mg in 1 ampule of 1 ml. Hallucinogen.

Indications:

Lysergic acid diethylamide causes a short term passing mental alteration of a psychotic character, which can be intentionally used therapeutically or diagnostically:

In the context of systematic psychotherapy of some neuroses and psychoses (e.g. neuroses expressed as a component of anxiety or phobia, obsessions; characterological neuroses, alcoholism, and sexual deviance) as an adjuvant to accelerate and intensify the psychotherapeutic process.

Counter indications:

Severe illness of the liver, kidneys, or cardiovascular system, suicidal tendencies. The substance is counter indicated in women in the first days of menstruation and in the first trimester of pregnancy. Pregnancy should not take place within one month of last use of Lysergamid. Increased attention - according to present findings - should be given during the treatment of depressions, hysterias, and aggressive psychopathologies.

Dosing:

An active dose of Lysergamid Spofa is in the range of 0.0005-0.004 mg/kg (i.e. from 0.5 to 4 gamma per kilogram of body weight). Route of administration has an observable influence only on the onset of the substance's effects, which is one hour when taken orally, approximately 30 minutes when injected intramuscularly. The effects of Lysergamid spontaneously dissipates after 6-8 hours after administration; if needed it can be weakened or completed suppressed with the use of Chlorpromazine. The dosing of Lysergamid is based on the character of the illness, goal and methodological requirements of the elected therapeutic intervention. More detailed information and directions are presented in the professional literature (e.g.: M. Hausner, V. Dolzal: Practical experiences with hallucinogens in psychotherapy, Czech Psychiatry. 59, 328, 1963).

Warnings:

Distribution of Lysergamid Spofa is accompanied by untypical directions!

1. Access to a treatment of diagnostic administration of Lysergamid is limited only to professional in the medical system of the health authorities, and only if the following conditions are met:

a) A doctor, intending to administer Lysergamid, is sufficiently educated in the work with experimental psychic alterations and is completely familiar with the pharmacodynamic effects of lysergic acid diethylamide.

b) The safety of the person given Lysergamid is guaranteed, and professional oversight is continually provided throughout the duration of the effects of the pharma.

Lysergamid Spofa is dispensed in a pharmacy to those designated if:

a) The requester (prescription) must indicate that the distribution has been approved by the Ministry of Health's main expert for the profession of psychiatry (Ministry of Health, Tr. Wilhelm Piec, Prague 10 - Vinohrady), to whom the request form must been given or mailed for approval.

b) With this completed request form will the pharmacy dispense the substance only in the hands of a doctor (or approved health worker) or the doctor can send the package via registered mail. The identified doctor is required to record all instances of Lysergamid use and secure it at their worksite from unapproved individuals.

2. Scientific research institutions of theoretical focus (e.g. pharmacological institute, biological, etc), where Lysergamid is used for only experimental use on animals etc., can request Lysergeramid directly from the producer user a writer order form signed by the director of the institute. Record of Lysergamid's use is filed in work protocols and the securing of the substance from unapproved individuals is the personal responsibility of the supervisor of the worker in the department, where Lysergamid is being used.

Packaging:

Ampule of 1 ml per 0.1 mg: 10 ampules (64, - Kcs).

Note: Subject to established laws for opiates.

FIGURE 3 **Pharmaceutical information about the Lysergamide SPOFA — LSD manufactured by the pharmaceutical company SPOFA; verbatim translation.** Originally published in: SPOFA (1968). Seznam československých farmaceutických přípravků [Compendium of Czechoslovak pharmaceutical drugs]. *SPOFA*, Prague, 64. Kcs was an equivalent of approximately 10 US Dollars in 1971 according to the Czech National Bank (http://www.historie.cnb.cz/cs/menova_politika/prurezova_temata_menova_politika/3_kurzovy_vyvoj_a_zlata_mena.html).

the experience of his or her patient. According to Roubíček, the LSD experience enabled a mental health professional to gain understandings that are otherwise inaccessible and that lead to a better understanding of mental illness, which facilitates empathy toward the psychiatrically ill, as it clearly demonstrated that similar states could be induced chemically (Roubíček, 1961). His perspective is illustrated by the following citation from Roubíček's book (Roubíček, 1961):

> *Auto-experimentation is a way to broaden and complement scholarly knowledge as well as to enrich and deepen a medical doctor's understanding of those with mental illness; it is possible to say that it contributes to a more humane relationship to those with psychosis.*
>
> Roubíček (1961), p. 81

Another illustration of this kind of perspective comes from the interviews with those who autoexperimented with LSD under the supervision of Roubíček and his team. One of the respondents reported that during the intoxication he experienced states of pathological perception of time and space, which, as he believes, is something that can be experienced by people living with schizophrenia:

> *I myself was not able to distinguish what had already happened and what is only about to happen … I was not able to distinguish, for instance, whether the wardrobe is in front of the wall or whether it is behind the wall, although my visual acuity was quite good.*
>
> Respondent 7

Research

In addition to mental health professionals and artists, Roubíček's group was using LSD also to treat some mental health patients, e.g., those with neurosis, quite successfully (Roubíček, 1962). The main benefit, however, was seen in diagnostics: "The substance helped to manifest latent symptoms of an illness which helped in some diagnostically unclear cases" (Roubíček, 1960, p. 9).

An alternative was offered by one respondent from our study (Winkler & Csémy, 2014), who stated that during the intoxication a patient's personality is manifested as a kind of caricature (Respondent 7).

The group was greatly interested in the role of one's physical environment (setting) on an individual's experience with LSD. The researchers were observing the influence of various environments and situations on the subject's experience. Experimentally, they were trying to understand how a person under the influence of LSD can function in common everyday social situations. For instance, a volunteer was given a task to go to the library and borrow a book, or to join researchers for lunch (Respondent 5).

Roubíček's most famous book, entitled *Experimental Psychosis* (1961), emphasized the similarity between the LSD experience and psychosis. However, after years of research, the institution's view of a 'model psychosis' had changed in accordance with the findings of Grof and other researchers. It was acknowledged that there are greater differences than similarities between experimental psychosis and schizophrenia.

Impact

It was Roubíček and his group who introduced LSD to Czechoslovak psychiatry (Grof, 2009). Other central researchers and prominent persons in Czechoslovak psychology and psychiatry had gained their first experience with LSD under Roubíček's supervision. His research on the differences and similarities between experimental psychosis and schizophrenia contributed significant evidence for distinguishing between the two.

Roubíček summarized his experience administering LSD (and other hallucinogens) to 76 healthy volunteers in 130 experiments in the above-mentioned book (Roubíček, 1961). Although the dose administered within these experiments ranged between 20 and 250 μg, it was most frequently administered at 100 μg. Roubíček advanced the understanding of LSD's effect on the human organism, including methods to block or interrupt the effects of LSD. His book is rich, providing documentation ranging from artistic expressions of those under the influence of LSD, to electroencephalographic (EEG) findings. His work greatly influenced an entire generation of hallucinogen researchers in the former Czechoslovakia.

PSYCHIATRIC CLINIC IN SADSKÁ

Context

The Psychiatric Clinic in Sadská, located in a small town east of Prague, was one of the major LSD research sites in the former Czechoslovakia. It was led by one of the most prominent Czech LSD researchers, Milan Hausner. With more than 20 years of experience in working with LSD in conjunction with psychoanalytically oriented therapy, Hausner was among the major names in the psycholytic psychotherapy and was one of the most experienced clinicians who worked with psychedelics (Hausner & Segal, 2009). Hausner was also a member of the European Medical Society for Psycholytic Therapy, of which he became president after Leuner.

The Psychiatric Clinic in Sadská was 112-bed facility where psycholytic therapy was conducted between 1966 and 1974. As such, it was one of the longest-run units in the world to conduct LSD therapy and research. During these years, the clinic supervised more than 3000 therapeutic sessions with LSD. This involved more than 300 patients who were administered LSD in doses ranging from 50 to 400 mg (rarely at the dose of 600 mg). Patients underwent up to 90 sessions (the median number of sessions was between 5 and 20) on either an inpatient or outpatient basis and in conjunction with psychotherapy (Hausner & Segal, 2009).

Theoretical Orientation

Hausner and his group were primarily psychoanalytically oriented. They were conducting psycholytic therapy within both individual and group sessions (Hausner & Doležal, 1962). LSD, in their view, worked as a catalyst or a facilitator of psychotherapeutic processes.

As they were gaining more and more experience, they started to develop their own theoretical approach. This approach was entitled the "pathogenic confrontation model" (Hausner & Doležal, 1974).

It was used within a system of multigroup community therapy (Hausner, 1968) which is a form of therapy applicable to treatment of both outpatients and inpatients. In many aspects, this approach differed from classical psycho(ana)lyses as it integrated psycholytic, psychedelic, hypnodelic, and other forms of LSD psychotherapy.

Research

Hausner's team focused mainly in the area of personality disorders (Hausner, 1974; Hausner & Doležal, 1963), depression (Hausner & Doležal, 1963), and neurotic and anxiety disorders (Hausner, 1968; Hausner & Doležal, 1963). However, they also treated phobias, criminal psychopathology, alcoholism, obsessive-compulsive disorders, and various types of psychosomatic disorders, including psoriasis, migraine, colitis, asthma, and other problems in patients who failed to respond to standard forms of medical treatment or psychotherapy (Hausner & Segal, 2009).

After years of autoexperimentation and the training of his staff (doctors, psychologists, and nursing personnel), Hausner arrived at the conclusion that the LSD experience was of great benefit for mental health professionals (Hausner & Segal, 2009). He therefore strongly supported inclusion of psychotherapeutic LSD sessions in medical training. As many as 30 psychiatrists and psychologists received training in LSD therapy at Sadská, many of whom still speak positively about its effectiveness (Crockford, 2007).

This is illustrated by the following statement from a psychologist who underwent an LSD session at Sadská:

> *I recommend the experience to people who are working with other humans, psychologists and psychiatrists included. They are in medicine so they should know this. You cannot force them, of course, but it should be available. Available for autognostic purposes … Hausner used to say, take it to better understand your patients.*
>
> Respondent 1

Another respondent was of the opinion that this kind of didactic experience for psychologists and psychiatrists was valuable with regard to patients with schizophrenia, as well as psychiatric issues:

> *… it (the LSD experience) gives you the opportunity to see, experience and feel symptoms, such as depression, neurotic disorders, obsessive compulsive disorders, as well as emotional elation or confusion, which are experienced by those people (patients).*
>
> Respondent 20

Impact

The main contribution of Hausner's team may be the unique therapeutic approach developed and described by Hausner. Based on his own experiences with LSD and psilocybin, he formulated a theory titled the pathogenic confrontation model. According to his model, the objective of psychotherapy was for a patient to confront his or her own pathogenic situation, and to do so in a clinically supportive setting (Hausner & Doležal, 1974). Hausner (Hausner & Segal, 2009) was of the opinion that neurotic behavior is learned during childhood and early socialization, so the treatment should focus on unlearning these neurotic patterns. The pathogenic confrontation model used hallucinogens to touch upon five dimensions of these behavioral patterns: neurochemical, intrapsychic, interpersonal, psychosomatics, and the value system (Hausner & Segal, 2009). The practical application of the pathogenic confrontation model was applied within multigroup community therapy, a system developed and practiced at the clinic in Sadská with the objective to help patients (Hausner, 1968). What was unique to Hausner's approach was his use of LSD in group therapies—an approach during which patients would be at times under the influence of LDS themselves, while at other times they would take care of those who were administered the drug (Respondent 18; Hausner & Segal, 2009).

Hausner collected an astonishing number of drawings, studies, scientific articles, and other materials, which remain to this day in the archives of the Czech Academy of Sciences (Winkler & Csémy, 2014). An extensive summary of his theories can be found in the posthumously published text *LSD: The Highway to Mental Health* (Hausner & Segal, 2009).

PSYCHIATRIC RESEARCH INSTITUTE IN PRAGUE

Context

The Psychiatric Research Institute in Prague was established in 1961 and immediately attracted some of the country's most prominent researchers in the mental health sciences. This included Stanislav Grof, who would become known as a founding father of the transpersonal school of psychology. Grof was first administered LSD by Roubíček at the General University Hospital in Prague, and soon after began working with the substance himself.

Before joining the Psychiatric Research Institute, Grof was part of a team under the leadership of M. Vojtěchovský and at the Psychiatric Center in Kosmonosy. Vojtěchovský's group focused mainly on model psychosis and studied the effects of various hallucinogens such as LSD, psilocybin, and mescaline (Grof & Vojtěchovský, 1960), as well as lesser-known anticholinergic hallucinogens (Bultasová et al., 1960) and adrenochromes (Vojtěchovský, Grof, & Vítek, 1962). The team's effort focused primarily on comparing psychotic-like states induced by different hallucinogens (Grof & Vojtěchovský, 1960; Vojtěchovský et al., 1962; Vojtěchovský, Horáčková, Grof, 1960) and the potential for antipsychotics, mainly chlorpromazine, to suppress the psychoactive effects of hallucinogens (Vinař, 1959).

Theoretical Orientation

Grof and his colleagues Z. Dytrych and J. Sobotkiewiczová began their work at the Psychiatric Research Institute, utilizing experimental, psychotomimetic, and psycholytic perspectives. As research proceeded, however, Grof would gain a deeper understanding of LSD's effects and eventually conclude that these approaches were limited. He considered a purely psycholytic approach to be limited, and thus developed a new paradigm that would be more compatible with his insights from LSD sessions

(Grof, 1964). Although he developed his theory later in United States, Grof begun to observe perinatal experiences in his patients already while working in Prague. According to one respondent (Respondent 18), in the beginning these experiences happened only by chance, but later on experiences of perinatal states of mind were occurring more frequently, possibly because patients were supported to experience them. After his arrival in the United States in 1967, Grof mostly pursued a psychedelic approach, which employed a limited number of high-dose (300–500 μg) sessions, with the aim of facilitating a mystical experience. He considered the psychedelic approach to be much more internalized (Grof, 1973), but was convinced that the two approaches, psychedelic and psycholytic, were not entirely irreconcilable. This led Grof toward a more integrative approach, trying to combine advantages of psycholytic and psychedelic psychotherapies and to reduce their shortcomings (Grof, 1964).

Research

At the Psychiatric Research Institute, Grof and his colleagues used psychedelic drugs in a variety of subjects but mainly in healthy volunteers, including scientists, artists, philosophers, theologians, students, and nurses (Grof, 1973). Grof was very much in favor of self-experimentation with LSD, and he was of the opinion that LSD experience had an autognostic and heuristic value for psychiatrists (Grof, 1964).

Impact

Grof's main contribution took place after he moved to the United States, where he focused more on the therapeutic use of hallucinogens, such as the treatment of terminally diagnosed cancer patients (Grof, 1973; Grof & Halifax, 1978). He became well known for the use of psychedelics in personality diagnostics and psychotherapy, and also for his contribution to transpersonal psychology (Grof, 1973, 2008). This included the development of a technique for evoking altered states of consciousness known as "holotropic breathwork" and a description of transpersonal cartography of the human mind. According to Grof (1973), besides the postnatal biography and individual consciousness, the human mind contained also perinatal matrices and a transpersonal dimension. Well-known also is his theory of specific memory constellations, which he referred to as COEX systems (systems of condensed experience). These systems relate to the psychodynamic experience that would emerge during LSD sessions.

PSYCHIATRIC HOSPITAL IN KROMĚŘÍŽ

Context

Psychedelic research at the Psychiatric Hospital, Kroměříž, was led by S. Kratochvíl, who began his work there in 1958, just after he completed his university studies in psychology. Kratochvíl continues his work in Kroměříž today (2015), and is currently one of the most significant psychotherapists and authors of books on psychotherapy and hypnotherapy in the Czech Republic. In the era of legal research with LSD in the former Czechoslovakia, he founded and supervised a research group systematically studying the effects of LSD in healthy volunteers. "Lysergárium" was the name he had given to the room where most of the psychedelic experiments were conducted; this room was appropriately prepared to achieve an optimal setting for such experiences.

Theoretical Orientation

Kratochvíl, the leader of psychedelic research in Kroměříž, earned a degree in psychology, unlike his colleagues, who were more often trained in psychiatry.

Research

The research group in Kroměříž studies the effects of both mid-range and high doses of LSD (more than 400 and at times 800–1000 μg) in healthy individuals (Respondent 18). The individuals were often psychiatrists, psychologists, and students in these disciplines, as well as psychiatric nurses. Research protocols focused on changes in personal values and attitudes (Hrůza, Kratochvíl, & Fanfulová, 1969; Karševová, Kratochvíl, & Müllerová, 1969), but also investigated whether set and setting influenced the LSD experience. In regard to the latter, Kratochvíl (1970) stated that it has been shown that the reactions are different if intoxication is conducted as a scientific experiment, as a demonstration to students, as an inspiring experience for an artist, or as a therapeutic intervention, and that, depending on the behavior of the experimenter, the content of hallucinations and kind of emotional reaction can vary significantly. Kratochvíl's group was also experimenting with higher doses of LSD with the aim of inducing a mystical experience (Respondent 10).

There were also group intoxications with LSD conducted at this site. Kratochvíl's group found that group experience can proceed in a thoughtful way when used in a philosophically oriented environment, which included listening to classical music and reading philosophical texts. In one such philosophically oriented experiment conducted by Hrůza et al. (1969), 20 students of psychology, who were between 19 and 22 years old, were administered 300 μg of LSD. Statistically significant decrease in both rigidity and adherence to dogmas, as well as positive changes in attitudes toward extraordinary and mystical aspects of reality, was reported in the experimental group.

In another experiment supervised by Karševová et al. (1969), the same amount of LSD was given to 20 psychology students. Focus was on relationships between personality traits and the quality of LSD intoxication, and it was found that there was a consistency between behavior during intoxication and preexisting personality structure. These results supported the possibility of predicting a behavior during LSD intoxication on the basis of preexperimental personality examination.

According to one of the interviewees, some unpleasant experiences occurred during these experiments in Kroměříž. Respondent 10, who was the first one in Kroměříž to take 400 μg of LSD, reported that she was so scared of losing control that probably even blocked metabolism of LSD and started to dissimulate. She described that it led to postponing the effects of LSD, which she started to feel only after the session, when she was alone, and experienced paranoid psychosis which led to suicidal ideation. Another young man became extremely aggressive and caused

damage to the room where he was staying; another psychiatrist almost castrated himself; and one woman reported feeling like an 88-year-old in a deep depression (Respondent 10). When this particular respondent summed up her own experiences, she stated:

> *It [LSD] is very important for those who treat people living with psychological disorders because it illustrates what people with psychosis can cope with, what their motivations may be, even when these motivations may seem absurd. Many psychiatrists, particularly those who are biologically oriented, could benefit from this information.*
>
> Respondent 10

Impact

Dozens of Czech psychology students underwent LSD experiences under the supervision of Kratochvíl's team. The team focused primarily on didactic and autognostic sessions with LSD.

Kratochvíl's understanding of psychology, philosophy, mystical aspects of reality, and his own positive experience with LSD, led to his use of LSD more similarly to an entheogen than a psychomimetic, or psycholytic. Kratochvíl considered the effects of LSD on the mind to be healthy and beneficial when conducted in an appropriate setting. He and his team believed that there is "a significant purpose of the didactic experiments for understanding some mental states occurring during psychosis; for enabling the study of psychopathology at a graduate and postgraduate level; for expanding the understanding of oneself; and for personal growth" (Kratochvíl, 1967, p. 1).

REFLECTIONS OF THOSE INVOLVED IN LSD SELF-EXPERIMENTATION

A follow-up study was conducted with the aim of evaluating mental health professionals' own experiences with LSD. In 2008, a study was completed interviewing 22 psychologists, psychotherapists, and psychiatrists who participated in self-experiments in the era of legal research with this substance. We focused on long-term negative and long-term positive effects of these experiences. Interviews were semistructured and lasted between 45 and 60 min. All of the respondents had taken LSD in a clinical setting. Doses ranged from 25 to 1000 μg of LSD. None of the respondents reported any long-term negative effect as a consequence of their experience. On the contrary, 20 respondents reported some positive long-term effects. These were primarily related to self-understanding and the understanding of those with psychiatric diagnoses. More details about this study can be found in an article published in the Journal of Psychoactive Drugs (Winkler & Csémy, 2014).

RENEWED HALLUCINOGEN RESEARCH AT THE NATIONAL INSTITUTE OF MENTAL HEALTH

The National Institute of Mental Health (formerly the Prague Psychiatric Center, and Psychiatric Research Institute, co-founded by Grof in 1961) was one of the centers of psychedelic research in former Czechoslovakia. Decades after hallucinogen research was forbidden, research was reestablished under the supervision of psychiatrists T. Páleníček and J. Horáček. Páleníček began his investigations into the pharmacological model psychosis, and soon expanded his work into psychedelic research more broadly. Páleníček has studied the neurobiological effects and correlates of LSD (Páleníček, Hliňák, Bubeníková-Valešová, Novák, & Horáček, 2010), mescalin (Páleníček, Balíková, Bubeníková-Valešová, & Horáček, 2008), ketamin (Páleníček et al., 2011), psilocin (Rambousek, Palenicek, Vales, & Stuchlik, 2014), and 2-CB (Rohanová, Páleníček, & Balíková, 2008) on rats. Later he moved to human subjects, administering ketamine to 27 hospitalized patients with depression and studying its antidepressant effect (Šoš et al., 2013). Currently, with his team he is investigating the effects of psilocybin in human subjects.

APPLICATIONS TO OTHER ADDICTIONS AND SUBSTANCE MISUSE

Hallucinogens have been broadly researched as a tool for treatment of addictions in many countries (Halpern, 2007) but only occasionally in Czechoslovakia. Some studies were completed to facilitate the treatment of alcohol use disorder using LSD (Tauš & Stehlík, 1967), and LSD had also been studied to model delirium tremens (Vojtěchovský et al., 1969). The misuse of LSD was rarely recorded in the former Czechoslovakia (Hausner, 1966).

DEFINITION OF TERMS

Hallucinogens or psychedelics A group of non-addictive psychoactive substances, such as LSD, psilocybin, mescaline and DMT, effects of which can include altered perceptual and cognitive processes, changes in mood, and might produce spiritual experiences; these two terms are used interchangeably in this chapter.

LSD Lystergic acid dimethylamide or dimethylamide of lysergic acid, a hallucinogenic substance.

Mescaline A hallucinogenic substance contained in the certain cacti such as the peyote cactus traditionally used by Native Americans.

Psilocybin A hallucinogenic substance contained in some psychoactive mushrooms.

Self-experiments or autoexperiments Experiments when a subject intentionally takes a substance to study its effects directly on himself or herself; these two terms are used interchangeably in this chapter.

KEY FACTS

Mescaline

- Chemical name: 3,4,5-trimethoxyphenethylamine.
- Mescaline is a naturally occurring psychedelic compound deriving from, for example, the peyote cactus (*Lophophora williamsi*) or San Pedro cactus (*Echinopsis pachanoi*).
- Mescaline was first synthesized in 1897 by A. Heffter.
- Peyote continues to be traditionally used in Mexico and by the Native American Church in the United States, San Pedro in Peru, and Ecuador.

LSD

- Chemical name: Lysergic acid diethylamide or dimethylamide of lysergic acid.
- LSD was first synthesized by Albert Hoffman in 1938, but its psychedelic properties were discovered only in 1943.
- LSD was introduced commercially in 1947 by Sandoz Laboratories under the tradename Delysid as a drug with various psychiatric uses.
- Subsequent recreational use of this drug led gradually to prohibition at the end of the 1960s, including a ban on its therapeutic and experimental use.

Self-Experimentation

- Meaning: To experiment on oneself, or to use one's personal experience to understand the effects of an agent on oneself.
- Self-experimentation has a long history in medicine, including experiments with psychedelic compounds.

Psychedelic Approach

- Used as an adjunct to psychotherapy and in self-experiments among mental health professionals and healthy volunteers. Therapist prepares patient before the drug session and helps patient to integrate the experience afterward.
- Use of a few high-dose psychedelic sessions, aiming to produce profound introspection and/or mystical experience.
- Practiced mostly in the USA.

Psycholytic Approach

- Used as an adjunct to psychotherapy and in self-experiments among mental health professionals and healthy volunteers. Emphasis is placed on the therapist aiding the patient to process material during the experience.
- Use of repeated low dose psychedelic sessions, aiming to bring to awareness unconscious content and behaviors.
- Practised mostly in Europe.

Psychomimetic Approach

- The use of psychedelics to study and understand psychosis.

Experimental Approach

- Psychedelic compounds are given to healthy volunteers, mostly mental health professionals, to study their effects.
- Used in the early era of psychedelic research as well as by some contemporary researchers.

Entheogenetic Approach

- The use of psychedelics to evoke and study mystical experiences.

SUMMARY POINTS

- LSD was extensively researched in the former Czechoslovakia. Research was conducted between 1952 and 1974.
- There were four main mental health centers where experiments with LSD took place: The Psychiatric Department of the General University Hospital in Prague (under the leadership of J. Roubíček); the Psychiatric Clinic in Sadská (under the leadership of M. Hausner); the Psychiatric Research Institute in Prague (under the leadership of S. Grof); and the Psychiatric Research Hospital in Kroměříž (under the leadership of S. Kratochvíl).
- Due to the strict control of the totalitarian communist regime and the care of the psychiatric professionals handling the substance, LSD and other psychedelics were rarely misused in a public context in the former Czechoslovakia.
- Self-experimentation with LSD and other hallucinogens among mental health professionals had a prominent role in the history of Czechoslovak hallucinogen research, and many prominent psychologists and psychiatrists, including S. Grof, had been positively influenced by these experiences.
- Research into self-experiments was outstanding and influenced several generations of Czech psychiatrists and psychologists.
- Psychiatrists and psychologists who experimented with LSD on themselves value this experience even 40–50 years later.
- Although such hallucinogen research had been banned in 1974, was renewed in the beginning of the 21st century in the Czech National Institute of Mental Health.

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