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Remembrance and Renewal Spring 1993 • Vol. IV No. 1

THIS SPECIAL ISSUE of the MAPS newsletter commemorates the 50th anniversary of Mr. Albert Hofmann's discovery of LSD *(see page 6)*. Fifty years later, scientists are renewing the field of psychedelic research after being locked out of their laboratories for several decades. ■ In the United States, Drs. Albert Kurland, Richard Yensen and Donna Dryer are preparing to resume human studies with LSD investigating its use in the treatment of substance abuse *(see page 3)*. The first FDA-approved studies into the psychological and physiological effects of MDMA in healthy human volunteers will begin soon under the direction of Dr. Charles Grob *(see page 2)*. MAPS is raising funds for both these studies, while the National Institute on Drug Abuse is funding Dr. Rick Strassman's studies of DMT and psilocybin. ■ In Germany, Drs. Efi Gouzoulis and Leo Hermle are conducting research with the drug MDE *(see page 17)*. In the Netherlands, ibogaine, an extract of the African root Iboga, is being used to treat substance abuse by Dr. Hans Bastiaans *(see page 32)*. In Russia, the St. Petersburg Institute for Psychedelic Research and Therapy is being formed by Dr. Evgeny Krupitsky to conduct research with ketamine and MDMA *(see page 15)*. ■ Scientists are also paying close attention to the traditional use of psychoactive plants, the topic of a recent international conference in Mexico *(see page 25)*. The use of peyote by the Huichol Indians is only one example of such a tradition *(see page 29)*. The use of MDMA in communal settings within the context of "Raves" could be viewed as a modern version of a tribal ritual, though without the same degree of cultural sanction *(see page 22)*. ■ The renewal of psychedelic research and the associated interest in cultures that have successfully integrated traditions of psychedelic drug use raise questions about the proper role of government in regulating drug use. This issue is debated by Dr. John Morgan and Dr. Mark Kleiman *(see page 36)*. ■ The newsletter also contains an article on nutrition and phenethylamines *(see page 34)*, and lettters to the editor *(see page 43)*. ■ MAPS recently entered a new phase of growth and development. For the first time, MAPS has received a grant from a foundation. The Dartington Hall Trust in England has donated $28,000 to support research in Russia into the use of MDMA in the treatment of alcoholism and neurosis. MAPS also received a pledge of $50,000 from an individual in the Netherlands to support research into the use of smoked marijuana in the treatment of the HIV-related wasting syndrome (see page 2). Both these grants are to be spent entirely on the research projects. Funds for MAPS' operating expenses and other research projects comes from contributions from MAPS' membership, now approaching 500 strong. If you are not yet a member, I hope you will please consider joining. ■ On LSD's golden anniversary, MAPS enters its eighth year (Founded April 8, 1986) looking forward to a future of solid scientific psychedelic research.■ *Rick Doblin, MAPS President*

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MAPS' Research Budget

by Rick Doblin, MAPS President

MAPS was created as a non-profit research and educational organization focused on studying psychedelic experiences in the broadest sense of the word "psychedelic," which means "mind-manifesting." Appropriate topics of study for MAPS-funded research include MDMA, LSD, and marijuana as well as non-drug techniques such as Grof Holotropic breathwork, meditation, and guided imagery.

MAPS' growing membership base is the key to further progress.

To date, MAPS' research budget has been spent almost entirely on studies of MDMA. This focus on MDMA research will remain MAPS' primary area of interest for several reasons. First, MDMA is a unique drug that acts differently, and in some ways fundamentally better, than any currently available medication used as an adjunct to psychiatry or psychotherapy. Second, there are currently no other organizations, foundations or pharmaceutical companies directly funding research into MDMA's therapeutic potential. Third, each study that is completed adds to MAPS' MDMA Drug Master File at the Food and Drug Administration (FDA) and brings MAPS closer to securing FDA approval for the prescription availability of MDMA. Fourth, human studies with MDMA are possible. The California Research Advisory Panel has completed its review of the FDA-approved Phase 1 MDMA research protocol submitted by Dr. Charles Grob and has requested only one change in the pro-tocol. Subjects in the study will not be permitted to communicate with each other after they have been administered the test drug so as not to create a "contact high" in the placebo subjects.

Though MAPS does not have money in hand for this Phase 1 protocol, or for a subsequent study of MDMA in the treatment of pain and distress in terminal cancer patients, funding is actively being solicited for these projects. MAPS is co-sponsoring with California NORML an historic special benefit event on April 17 in San Francisco in an effort to raise funds for MDMA research.

MAPS has received a grant of $28,000 to study, in Russia, MDMA in the treatment of alcoholism and neurosis. This grant came about largely through the work of Nicholas Saunders, English entrepreneur and author of a book on MDMA, who submitted an application on MAPS' behalf to the Dartington Hall Trust in London *(see page 22)*. Conducting MDMA research in Russia has long been a goal of MAPS, both because scarce dollars can be stretched very far in Russia, and because Dr. Evgeny Krupitsky of St. Petersburg has the scientific expertise to conduct high-quality research that the FDA will accept as valid (see page 15). Dr. Krupitsky has submitted an application to the Russian Pharmacological Committee to begin research and we are hopeful that permission will be granted in the near future.

MAPS is trying to raise at least $5,000 for Drs. Kurland, Yensen and Dryer's LSD research project investigating the use of LSD in the treatment of substance abuse (see page 3). To raise these funds, MAPS, the Island Group and UC Santa Cruz student organization Millbrook West are co-sponsoring a benefit event in Santa Cruz, California, on April 16, fifty years to the day since Dr. Albert Hofmann accidentally ingested some of the LSD he was synthesizing.

MAPS has obtained a pledge of $50,000 for a medical marijuana study from an individual in the Netherlands. For several years, I have thought that the prescription availability of marijuana would not come to pass unless FDA-approved scientific research into marijuana's medical use was conducted. To this end, I have been working with Dr. Donald Abrams of San Francisco General Hospital to design, fund and obtain FDA approval for a study comparing smoked marijuana with the oral THC pill in the treatment of the HIV-related wasting syndrome. The protocol will be submitted to the FDA and the California Research Advisory Panel around April 15. If all goes well, the study will begin sometime this summer. The April 17 benefit will raise additional funds for this study.

MAPS is starting to generate a significant budget for research. If this trend continues, the future looks very bright. MAPS' growing membership base is the key to further progress. ■

LSD RESEARCH IN THE '90'S

By Donna Dryer, M.D. & Richard Yensen, Ph.D.
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IN THE SPRING OF 1991 the Food and Drug Administration's Pilot Drug Evaluation Program approved a study protocol submitted by Albert A. Kurland, M.D., Richard Yensen, Ph.D., and Donna Dryer, M.D. called, "The Relationship between Peak Experience and Outcome in LSD Assisted Psychotherapy with Substance Abusers, A Double-Blind Controlled Study". This protocol was an addendum to an Investigational New Drug permit that had been active since the early 60's under the administration of Albert A. Kurland, M.D.

Dr. Kurland was the first director of the Maryland Psychiatric Research Center (MPRC). The center was a multi-million dollar facility where the Clinical Science Division's mission was to study psychedelic drugs as adjuncts to psychotherapy. This research took place at the MPRC from 1968 to 1976 when, through a series of unfortunate political episodes, the Maryland state government decided to stop psychedelic research.

Richard Yensen was a research fellow at the MPRC from 1972 to 1976. He studied psy-chedelic psychotherapy with Stanislav Grof, M.D. and other senior staff. During this time he treated patients with substance abuse disorders, cancer, neurosis, and other health professionals seeking a training experience. Dr. Yensen did his Ph.D. dissertation on the use of MDA in psychotherapy with neurotic outpatients and conducted his research at the MPRC.

WHEN THE RESEARCH CENTER was closed in 1976, Dr. Yensen and Dr. Kurland began discussions regarding how to continue the LSD research. In 1985, Dr. Yensen met Dr. Dryer and began a collaboration based on a mutual interest in shamanism. After forming a non-profit corporation, the Orenda Institute, they decided to carry the LSD research forward The Institute's mission is to research, develop and support responsible clinical applications of altered states of consciousness and psychotherapy.

In 1990, Drs. Kurland, Yensen, and Dryer submitted a protocol to the FDA for LSD assisted psychotherapy in the treatment of patients with a substance abuse disorder (DSM III-R). The research objectives and hypotheses of this study are:

1) to determine the relationship between the occurrence of a peak experience, as an objectively measured event in LSD assisted psychotherapy, the number of exposures to LSD during psychotherapy, and clinical improvement as reflected in objective measures of therapeutic outcome. This outcome would be demonstrated by a statistically greater and/or more sustained improvement in the subjects having peak experiences as measured by both therapist evaluation and objective measure (Peak Experience Profile). At the end of therapy and throughout the follow-up period of one year the subjects with peak experiences would demonstrate less substance abuse (by weekly urine drug screens and other objective measures), report fewer psychiatric symptoms and demonstrate less psychopathology than the subjects without peak experience(s). The peak experience group would exhibit more stable personality characteristics, greater positive value orientation and superior social adjustment as compared to the non-peak experience group.

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2) the secondary hypothesis of this double-blind, controlled investigation is that LSD, in our psychotherapy environment, will demonstrate a dose response effect yielding statistically significant differential response to treatment. This outcome would be demonstrated by a statistically greater and/or more sustained improvement in the subjects receiving higher dosages of LSD. At the end of therapy and throughout the follow-up period of one year the higher dose LSD subjects would demonstrate less substance abuse (by weekly urine drug screens), report fewer psychiatric symptoms and demonstrate less psychopathology than the lower dose subjects. The higher dose LSD groups would exhibit more stable personality characteristics, greater positive value orientation and superior social adjustment as compared to the lower dose groups.

There are more than a thousand clinical papers (discussing over 40,000 patients), several dozen books, and six international conferences on the use of LSD in psychotherapy. Impressive claims have been made for LSD in the treatment of alcoholism and substance abuse, however, few studies have satisfied stringent methodological design. This study is a methodologically sound effort to evaluate efficacy using effective controls, objective measures of change, and an adequate period of follow-up. This approach addresses all of the deficiencies noted in earlier studies.

THIS STUDY also assesses the impact of a range of LSD dosage. This exploration of short-term intensive outpatient LSD therapy for substance abusers attempts to isolate significant factors (dose of LSD, occurrence of a peak experience) in the overall treatment process. The analysis of results should yield valuable information about predictive factors for positive outcome. This would allow accurate selection of patients likely to respond positively in future studies or treatment. The effective elements in this therapy could then be combined, with this selection criteria, into a superior treatment for substance abuse; one that provides the despairing substance abuser with an effective treatment for the loss of meaning at the core of any addiction.

The next step toward actually doing the study is to have it approved by an Institutional Review Board (IRB), an administrative committee that most universities and hospitals have in order to review the safety and ethics of doing research with human subjects. As soon as we find an IRB and have the study approved then we can begin the practical work of securing funding and conducting the study.

THE PROTOCOL as approved by the FDA allows the administration of LSD to sixty people who are randomly assigned to three groups. Each group receives a different dose of LSD, either 100µg, 200µg, or 400µg for up to 5 sessions. Each person entering the study will receive a comprehensive battery of psychological tests and up to twenty hours of preparatory psychotherapy. Then they will have an all day LSD session followed by at least five hours of psychotherapy over two weeks before they may have another LSD session. The decision to give them another session and the timing of that session is based on the experience of the person during the session and their ability to integrate the peak experience into their life. There are many ways we will use to evaluate this including the team's clinical judgment, more psychological tests, the person's own report and that of their significant others, and urine screens.

If we secure IRB approval and receive even modest funding, we will begin this process with a just a few patients. For example, with five thousand dollars, we could complete the first twenty hours and one LSD session with three people. Practically, this would also give us the ability to apply for more money to begin to train a few other therapists to work with us. Of course, completing the work with the first few people would be given priority before we would start with any more. Our offices and therapy practices are set up in such a way that we could continue at this few people at a time rate or increase the flow as funds become available. ■

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From Problem Child to Wonder Child: LSD Turns 50

- To Albert & Anita Hofmann, in commemoration, April 1993. By Michael Montagne

SUNBEAMS danced across meadows of the Jura mountains, capturing my gaze from Rittimatte's living room window. I quickly sensed what Albert Hofmann meant as he recounted the mystical experiences of his youth:

"As I was strolling through freshly greening woods illuminated by the morning sun and filled with bird-song, everything suddenly appeared in an unusually clear light. It radiated in a glow of eloquent beauty, touching the heart in a singular manner, as though it wanted to include me in its glory. I was filled with an indescribably blissful feeling of belonging and a blessed security."

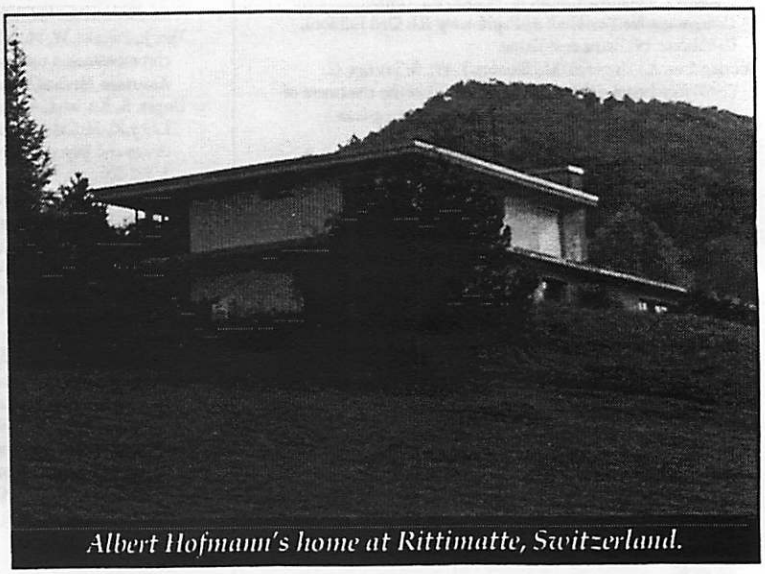
That mystical state awakened in young Albert a longing for deeper understanding of nature and the mysteries of life. Mystical experiences play an important role in our everyday lives, and they occur more often than we may realize, because most of us do not recognize their characteristics nor comprehend their meaning. Yet, we also strongly desire to relate our experiences to other people, but we usually cannot find meaningful words to describe them; in essence, they are ineffable.

Albert decided to study chemistry because he was attracted by the miracles of physical matter and the plant world.

Albert decided to study chemistry because he was attracted by the miracles of physical matter and the plant world. As he learned more about the chemical composition of plants, his respect and admiration grew for the wonders of nature. He eventually became most interested in those psychoactive compounds that under certain circumstances seemed to produce visionary experiences, similar to the spontaneous, mystical states of his youth.

After receiving his doctorate in chemistry from the University of Zurich in spring of 1929, he faced choosing a research position at one of the pharmaceutical companies, Ciba, Hofmann-LaRoche, or Sandoz, in Basle, Switzerland. Completing his dissertation on the chemical structure of chitin (it comprises the shells and skeletal parts of insects and crustaceans and is related to cellulose, the basic material of plants), he was interested in a position at a company with a plant chemistry program, so he joined Sandoz that year.

His early research at Sandoz focused on Mediterranean squill *(Scilla maritima)* and woolly foxglove *(Digitalis lanata)* glycosides for treatment of heart conditions, and ergot *(Claviceps purpurea)* alkaloids for use in obstetrics. He retired from Sandoz in 1971 as director of research for the department of natural products. With the business of pharmaceutical development behind him, and the tranquil surroundings of Rittimatte for comfort and inspiration, he began to reflect fully on his important discoveries.



Albert Hofmann's home at Rittimatte, Switzerland.

Photography by Shirley Stallings.

Birth of a Wondrous Molecule

"A personal, childlike perception of nature, to be equated with the mystical experience, as the one source, and natural scientific insights as the other, form the basis of the following work."

I had the great honor of meeting Albert Hofmann, and his charmingly elegant wife Anita, at their home, Rittimate, this past autumn. I was seeking his reflections for a book I am writing on psychoactive fungi. He kindly consented to describe life experiences that led to his discoveries and to share new insight into his work.

Albert thought many people received a particular insight from their use of LSD; through it, they perceived the existence of a Creator. The LSD experience provides a sense of wonder that creation does not seem possible by accident alone, something spiritual is behind it, something we call God. I thought of Albert as a creator, the father of the very molecule he was describing, lysergic acid diethylamide. That discovery has been chronicled by Albert and others (see background reading list). But today, many people cannot image the social and scientific environment in which the synthesis and subsequent uses of LSD occurred.

Albert's amazing discovery was based on work begun early this century at Sandoz, when a series of compounds were isolated from ergot (*Claviceps purpurea*, a fungus that grows on rye and other grains). There was great interest in the "mystery of ergot," because of its traditional use in childbirth by midwives, and a long history of epidemic outbreaks of ergot poisoning (ergotism, also known as St. Anthony's fire), especially during the Middle Ages in Europe.

An amorphous alkaloidal substance, called ergotoxine, had been prepared from ergot by English researchers Barger and Carr in 1906, the year of Albert's birth. But the first pure crystalline alkaloid, ergotamine, was isolated in 1918 by Arthur Stoll, later the director of Albert's laboratory. After the discovery of ergotamine (Gynergen®), and its application in obstetrics to treat postpartum bleeding, it seemed that the mystery of ergot had been solved. Sandoz decided not to pursue further research with these compounds.

In the early 1930s, however, English and American laboratories renewed research activity on ergot alkaloids, and Albert felt that Sandoz should resume its earlier work in this area too. He had finished his studies elucidating the chemical structure of scilla glycosides and was looking for a new project. Stoll told him that "ergot alkaloids are exceedingly sensitive, easily decomposed substances," and he warned him of the many difficulties in working with these unstable compounds. But Stoll let him proceed, and in 1935, Albert eagerly embarked on his investigations of ergot derivatives.

The chemical nucleus, common to all ergot alkaloids, had been identified by Jacobs and Craig at the Rockefeller Institute and named lysergic acid. Albert began his research by developing a procedure which allowed for the synthesis of ergot alkaloids and related compounds, starting with naturally occurring lysergic acid. By chemically bonding amino-propanol to the lysergic acid nucleus, he succeeded in synthesizing ergobasine, later called ergonovine (lysergic acid propanolamide). Ergonovine, the first naturally occurring ergot alkaloid to be synthesized in a laboratory, became an important medicine in obstetric therapeutics.

HE CONTINUED working on lysergic acid derivatives with hopes of producing an analeptic (a respiratory and circulatory stimulant), analogous to the well known drug nicotinic acid diethylamide (Coramine®). In November 1938, he synthesized the twenty-fifth compound in that speculative series, Lysergsaure-diathylamid (German for lysergic acid diethylamide), and it was given the lab code, LSD-25.

LSD-25 was tested (in animals) by the Sandoz pharmacology unit that same year (1938), but results were not that impressive. The report indicated LSD-25 showed strong activity on the uterus, about 70% that of ergonovine, and it also noted that the research animals became restless during anesthesia. These preliminary results did not arouse enough interest to encourage further investigation, and LSD-25 was all but forgotten, except by one →

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In the spring of 1943, Albert felt a peculiar presentiment, the feeling that this substance could possess properties other than those established in the first investigation.

person, for almost five years.

In the spring of 1943, Albert felt a "peculiar presentiment, the feeling that this substance could possess properties other than those established in the first investigation, and it induced me, five years after the first synthesis, to produce LSD-25 again." This premonition compelled him to repeat the synthesis to obtain sufficient amounts for renewed pharmacological testing. It was an unusual course of action because experimental substances that produced inconclusive results in pharmacological testing usually were dropped from further investigation in the company's research program.

During the purification and crystallization steps in the synthesis process, Albert's work was interrupted by unusual physical and mental sensations:

> *"Last Friday, April 16, 1943, I was forced to interrupt my work in the laboratory in the middle of the afternoon and proceed home, being affected by a remarkable restlessness, combined with a slight dizziness. At home I lay down and sank into a not unpleasant intoxicated like condition, characterized by an extremely stimulated imagination. In a dreamlike state, with eyes closed (I found the daylight to be unpleasantly glaring), I perceived an uninterrupted stream of fantastic pictures, extraordinary shapes with intense kaleidoscopic play of colors. After some two hours, this condition faded away."*

That experience intrigued him greatly. He decided to engage in a self-experiment with the compound he had synthesized, and thus began his adventures into the chemistry of phantastica drugs and into his inner self.

Albert Hofmann's Adventures

> *"It is impossible to predict the biological activity of a substance in man from the pattern of activity demonstrated in laboratory animals."*

Our adventure with Albert Hofmann began in his orchards and took us up the ridge to an early 19th century stone marker at the border. Imbued with history, this boundary marker serves Albert and his guests well as a nutcracker. I watched as he placed a nut from a nearby tree in the groove on top, Switzerland was on one side and France on the other, and brought a small stone down on it; image became metaphor as I contemplated how he solved another mystery of ergot in a daring exploration through self-administration of LSD.

SELF-EXPERIMENTATION, in which the researcher serves as his or her own subject, has led traditionally to major drug discoveries in pharmacy and medicine. It allows for direct personal contact with the empirical world and for gathering useful scientific information, and it also provides a moral justification for using specific therapies in patients. Drug researchers have self-administered pharmacologically active compounds in order to assess short and long term effects, dose-response relationships, toxic reactions, and therapeutic applications.

Albert Hofmann enhanced that great tradition when he engaged in the first planned self-experiment with a synthetic psychedelic compound. He reflected upon his strange and mystifying first experience, that previous Friday, with the lysergic acid derivative he had created. The nature of its effects did not coincide with what he knew to be symptoms associated with ergotism.

On Monday, the 19th of April, 1943, at twenty minutes past four in the afternoon, with his assistant in attendance, Albert dissolved in water a dose of 250 millionths of a gram (0.25 milligrams) of the LSD-25 he had prepared the previous week and drank it. He used what he thought was a very small amount, showing extreme caution for the compound's potential effects he supposed were responsible for his first phantastic experience. But it was still a high dose, and it produced more intense emotional states than before.

By 4:50 p.m., he had noticed no effects, but by 5:00 p.m., forty minutes into the experiment, he noted the following symptoms in his laboratory journal: "beginning dizziness, feeling of anxiety, unrest, difficulty in concentration, visual disturbances, desire to laugh." His last written words were barely legible.

> *"I requested my laboratory technician to accompany me home; we went by*

Photography by Shirley Stallings.

Albert and Michael at the Boundary Marker.

Nothing he had read or knew prepared him for what he actually did experience that day.

bicycle. This journey is about 4 miles and I had the feeling of not getting ahead, whereas my escort stated that we were rolling along at a good speed. I lost all count of time. I noticed with dismay that my environment was undergoing progressive changes. Space and time became more and more disorganized and I was overcome by a fear that I was going out of my mind. The worst part of it being that I was clearly aware of my condition. I was not, however, capable by any act of will, of preventing the breakdown of the world around me."

That intensely complex psychedelic experience developed into a terrifying state for him. He knew nothing of mescaline's pharmacology, and he knew little of hallucinations and nervous disorders associated with ergotism. Nothing he had read or knew prepared him for what he actually did experience that day. It was a profound psychic experience that lasted for about twelve hours. He had no idea if he would return to everyday reality and be restored to a normal state of consciousness.

The correct chemical formula for lysergic acid, the nucleus common to all ergot alkaloids, was elucidated in 1949 by Hofmann and his colleagues, and the total synthesis of lysergic acid was accomplished in 1954 by Kornfeld and his associates. More than thirty alkaloids have been isolated from ergot, and hundreds of chemical modifications of those natural compounds have been synthesized and →

Only human beings could evaluate, specifically and emotionally, substances with psychic effects, a lesson Albert learned from LSD.

analyzed. Yet even with the many alterations of the lysergic acid nucleus, as far as psychedelic properties, no molecule has been produced that is as active as lysergic acid diethylamide.

Albert's work on LSD brought Roger Heim and Gordon Wasson, who had rediscovered *teonanacatl*, the magic mushroom of Mesoamerica (*Psilocybe mexicana*), to his laboratory early in 1957. They thought that his experiences with LSD, which produced effects qualitatively similar to those of the mushroom, prepared him to find active compounds that produced the mushroom's effects. None of his colleagues, however, showed any enthusiasm for investigating the mushrooms. At that time, anything in anyway connected with LSD was becoming unpopular with the senior management of Sandoz, so he undertook the isolation experiments himself together with his trusty laboratory assistant, Hans Tscherter.

Tests of the mushroom material in mice and dogs produced insignificant results. Albert realized that the animal results were not due to inactivity of the mushroom, but to insensitivity of the animal assay. Only human beings could evaluate, specifically and emotionally, substances with psychic effects, a lesson Albert learned from LSD. He decided to test a precious sample of the mushrooms on himself. On the first of July, 1957:

> *"Thirty minutes after taking the mushrooms, the exterior world began to undergo a strange transformation. At the peak of the intoxication, about one and a half hours after ingestion, the rush of interior pictures, mostly abstract motifs rapidly changing in shape and color, reached such an alarming degree that I feared being torn into this whirlpool of form and color and would dissolve. After about six hours, the dream came to an end. I felt my return to everyday reality to be a happy return from a strange, fantastic but quite real world to an old familiar home."*

Additional self-experiments, eventually involving his co-workers and some of his colleagues as 'guinea pigs', allowed Albert and his research group to extract and isolate the active molecules, psilocybin and psilocin. Psilocybin was distributed in limited circles for psychiatric research, under the trade name Indocybin®, but it never was released to the pharmaceutical market.

WASSON and Hofmann followed that discovery with an exploration of the Mexican magic drug, *ololiuhqui*, the seeds of morning glories (*Rivea corymbosa* and *Ipomoea violacea*), in the early 1960s. Extraction, isolation, and identification of these compounds led to an astonishing, almost unbelievable result. The active compounds of *ololiuhqui* proved to be lysergic acid amide and lysergic acid hydroxyethylamide, which are very closely related to LSD. This means that LSD belongs to the group of magic drugs of Mexico with regard to its chemical structure and its psychic effects.

Albert continued his self-experimental approach in later years, during his inquiry into the role of ergot in the Eleusinian mysteries, and self-administered ergonovine to determine its psychoactivity. Even after decades of use in obstetrics, there had been no mention of hallucinogenic activity, probably due to the extremely low dosages that were used. His self-experiment, in April, 1976, showed that ergonovine possesses psychotropic, mood-altering, slightly hallucinogenic activity when taken in the same dosages as an effective dose of lysergic acid amide.

Albert Hofmann isolated and synthesized many other therapeutically beneficial molecules from ergot alkaloids, such as: methylergonovine (Methergine®) for use in obstetrics, dihydroergotamine (Dihydergot®) for treatment of postural hypotension and vascular headaches, l-methyl-lysergic acid (Sansert®) for prophylactic treatment of migraine, and ergoloid mesylates - a combination of three hydrogenated ergotoxine alkaloids (Hydergine®) for use as a nootropic or memory enhancer, mostly in geriatric medicine. Hydergine® has become a multi-million dollar success for Sandoz.

The wondrous discovery of LSD truly exemplifies the scientific method and the process of pharmaceutical discovery, intertwined with a personal modification of that method in order to explore new mindscapes. Albert's discovery involved; 1) making a new compound based on

speculation of what effects it might produce, but not really knowing what its pharmacological activity would be; 2) testing the compound, and experiencing effects, at dosages much lower than was known pharmaceutically for most drugs; 3) dealing with a profile of pharmacological activity that was impossible to measure in animals, and highly variable in humans, thus necessitating experimentation on himself; and 4) having difficulty comprehending, once the basic activity was known, its potential therapeutic applications, and even its very nature and meaning.

Nature & Meaning of LSD

"There are experiences that most people avoid talking about because they do not fit into the reality of everyday life and defy rational explanation."

Entranced by the expansive view of the Alsatian mountainside, relaxing in the cool alpine air with my traveling companion and Albert on his "meditation" bench near the border marker, we listened as he discussed the nature and meaning of the psychedelic experience. Albert pointed out that Hegel (Phenomenology of Spirit, 1807) is a relevant source of inspiration: "In the actual attempt to say it, it would therefore crumble away; those who started to describe it would not be able to complete the description, but would be compelled to leave it to others, who would themselves finally have to admit to speaking about something which is not."

Describing these ineffable drug experiences is quite a difficult task, and semantics become very important. Albert believes that psychedelic experiences are very complex, emotionally moving and even enigmatic on occasion, varying greatly from person to person and situation to situation. It is almost impossible to arrive at a generic listing of effects, a pharmacological description, that would apply to most users. In addition, as many users know, in attempting to describe a psychedelic experience, the ineffable becomes more so, and symbolic notions crystallizing to portray the whole phenomenon melt into a too complex swirl of bedazzling imagery and spiritual insight.

Louis Lewin's ideas about psychoactive compounds helped Albert understand his discoveries; they are still among the best descriptions of the pharmacology of psychedelics. Albert emphasized Lewin's concept of phantastica drugs "exercising their chemical power on all the senses, but they influence particularly the visual and auditory spheres as well as the general sensibility." These drugs of illusion bring about cerebral excitation in the form of hallucinations and related altered perceptions.

OUR WESTERN perspective on the world, and thus our attempts to understand psychedelics, is based on scientific naturalism of 17th century Europe. It developed with the creation of an ego that was capable of contrasting itself with the surrounding world; that regarded the world as an entity, an object; essentially, a mind that could objectify the world around it. From this foundation, scientific research of our century has concentrated more and more on the quantitative, measurable aspects of nature, employing increasingly complicated techniques and advanced technology to measure components of any phenomenon.

But this approach reduces experience, the various aspects of our living world, to a few chemical elements or atoms, thus expressing an incredibly exaggerated role for physical matter in our lives. As Albert noted, "it is nothing less than reducing the miracle of a cathedral to the number and physical make-up of the stones and building materials; ignoring its blueprint, its beauty and meaning, the object's context and dimension in everyday life."

Yet, contemporary science continues to amass formidable amounts of information on mechanisms of drug action, thanks to technology, but Albert strikes a discordant note:

"Today we can say of many drugs that we know how they act and in what way, but we are still quite unable to say why they act as they do. There are no known laws defining the relation between chemical constitution and pharmacological effects. All knowledge of the relations between chemical structure and pharmacological action is ultimately based on empirical data."

→

Albert believes that psychedelic experiences are very complex, emotionally moving and even enigmatic on occasion, varying greatly from person to person and situation to situation.

LSD changed him, got him interested in mysticism, and enhanced his conception of reality and the workings of the mind.

He began to recognize the meaningful connection between LSD experiences and spontaneous visionary states only after more self-experiments at lower doses and under different conditions broadened his psychedelic repertoire. LSD changed him, got him interested in mysticism, and enhanced his conception of reality and the workings of the mind. Experiences with LSD gave him insight into the borderland between mind and matter. He said that "if there were not something of mind in matter, how could matter change the mind?" The fundamental question that occupied him was whether use of psychedelic drugs "could not indeed represent a forbidden transgression of limits."

It also was difficult early on to realize fully the therapeutic and social benefits of LSD and related psychedelic drugs. These substances affect our perceptual systems and states of consciousness, the inner most essence of our being. They can produce intensely profound experiences. Experiences can be interpreted in different ways, and there is no such thing as an objective reality. As a result, those people interested in probing the mind and investigating consciousness had to practice care and prepare responsibly for the explorations they sought to undertake.

Phantastica Lost

"Deliberate provocation of mystical experience, particularly by LSD and related psychedelics, in contrast to spontaneous, visionary experience, entails dangers that must not be underestimated."

Walking among the colchicum and eating fruit from Albert's famous plum trees, I began to reflect on the difficult times that suppressed psychedelic inquiry. During the early years after his discovery, Albert was happy and gratified that LSD and other compounds were finding very useful therapeutic applications.

Psychiatric research with LSD-25 began in Switzerland in 1947. Sandoz supplied it to selected researchers under the trade name Delysid® (D-Lysergsaure-diathylamid). The company's drug product literature indicated two possible medical uses: 1) analytical, to elicit release of repressed material and provide mental relaxation, particularly in anxiety states and obsessional neuroses, and 2) to assist the psychiatrist, who self-experiments with it, to gain insight into the world of ideas and sensations of mental patients.

IN 1949, LSD was introduced in the U.S. Its use in American clinics involved psychedelic therapy, the administration of one single high dose (0.3-0.6 mg.) after extensive psychological preparation. LSD use in European clinics, in the form of psycholytic therapy, employed moderate doses administered over successive sessions at regular intervals. LSD also was used in research on normal subjects to induce "model psychosis." It had evolved into a major adjunct to psychotherapy and meditation, an important pharmacological tool in brain research, and a valuable medicinal agent in treatments for people with terminal illnesses and drug addictions.

The joy of having fathered LSD was tarnished for Albert when recreational use began to occur after more than ten years of uninterrupted scientific research and medical use. He held these events in disbelief, "since my self-experiment had revealed LSD in its terrifying, demonic aspect, the last thing I could have expected was that this substance could ever find application as anything approaching a pleasure drug."

As more and more LSD was disseminated and used, in careless and unsupervised ways, the untoward reactions began to occur with greater frequency. Accidents, poisonings, and criminal acts resulting from misuse of LSD escalated, and Sandoz became inundated with requests for information by a wide range of health professionals and governmental authorities. These enormous, unprofitable difficulties upset the business management of Sandoz. In fact, Arthur Stoll, the managing director of pharmaceutical research, reproached Albert during those troubled times, saying, "I would rather you had not discovered LSD."

The last of the Sandoz patents for the production of LSD expired in 1963, and none of the international drug control laws included LSD, so many people began to manufacture it. The hysteria of publicity,

both about LSD's wondrous effects and its potential for dangerous misuse, reached its zenith between 1964 and 1966. Many people began to use it primarily as a tool in the exploration of consciousness, and others applied it in religious ceremonies. Inappropriate use, LSD's relationship with the emerging counterculture, and the social and political implications of mystical experiences and consciousness research led to repressive laws and withdrawal of permission to perform further research on it. These events hindered greatly basic scientific research and clinical studies on LSD and related compounds for over 25 years.

On the 23rd of August, 1965, the management of Sandoz decided and announced publicly that LSD, as well as psilocybin, psilocin, and all of their derivatives, would no longer be produced and distributed by Sandoz. Was this the end for a phantastically therapeutic chemical substance?

The Magic Circle Closes

"The investigation of ancient magical and religious plants by means of modern scientific methods led to the discovery of potent drugs with a specific action on the psyche."

Our professional conversation and Albert's reflections ended with the setting sun. Enveloped by the familiarity of his library, he encapsulated for us the knowledge and wisdom that came with his psychedelic inquiries and experiences.

He regards his research on psychedelic drugs as having the symmetry and characteristics of a magic circle. Beginning with the extraction and isolation of ergot alkaloids and the synthesis of various lysergic acid amides, such as ergonovine, he then followed a logical sequence: synthesis of lysergic acid diethylamide as he searched for an analeptic; isolation and identification of psilocybin and psilocin from magic mushrooms, sent to his lab after he reported the hallucinogenic properties of LSD; and finally, investigations of another magical Mexican plant, *ololuihqui*, from which lysergic acid amides, ergonovine, and lysergic acid hydroxyethylamide were isolated; thus, closing the magic circle.

Albert views the 1960s as a cultural experiment with LSD and he wanted to observe and reflect upon it fully before writing about it. His professional autobiography (LSD: My Problem Child) was not published until 1979. He does not feel sad nor does he regret his discoveries just because his molecules have been misused. His original intention was to produce useful medicinal substances for applications in psychiatry and psychopharmacological research. In his opinion, "the last word has not yet been said about the possible medical applications of this drug."

WHAT DOES the future hold for LSD and its pharmaceutical cousins? Is the world rediscovering this wondrous molecule with celebrations of its birth fifty years later?

In the realms of psychedelic research and experience, Albert feels that "the scientific view of life contains truth, but it only represents half of reality, only its material, quantifiable parts. All of the personal, social, and spiritual dimensions that cannot be described in physical or chemical terms, which include the most important characteristics of that which is living, are absent." The future understanding of psychedelic compounds rests on augmenting rational knowledge with emotional experience.

After years of struggle with regulatory authorities and public misconceptions, scientific researchers and health professionals are beginning to return to these valuable drugs. Revitalization of psychedelic research for therapeutic utility is occurring around the world (as reported in the these pages). It is exciting to see and hear of the use of LSD, psilocybin and other compounds in therapies for cancer patients and in research on human brain mechanisms and psychic activity.

New clinical trials are being initiated in a number of countries. A group of Swiss psychiatrists formed the Swiss Medical Society for Psycholytic Therapy in 1985, →

He regards his research on psychedelic drugs as having the symmetry and characteristics of a magic circle.

Albert Hoffman in the laboratory at Sandoz in 1971.

A grand celebration will take place in Switzerland, in October, 1993, to commemorate the 50th anniversary of Albert's discovery.

and they have been granted permission by their government to use psychedelics in psychotherapy. The U.S. Food and Drug Administration's Drug Abuse Advisory Committee recommended, in July 1992, that medical research on psychedelics be expanded, that new therapeutic applications be considered, following recent approval of protocols for new clinical testing.

A grand celebration will take place in Lugano-Agno, Switzerland on October 21-22, 1993, when the Swiss Academy of Medical Sciences will hold an international symposium to commemorate the 50th anniversary of Albert's discovery. They have invited 15 presenters and 70 participants to discuss "50 Years of LSD: State of the Art and Perspectives on Hallucinogens." These are very positive signs of new, exciting inquiries into a class of drugs that almost were forgotten.

The time certainly has come for a full appreciation of the beneficial uses that LSD has to offer. With renewed interest, it becomes necessary to understand better this chemical substance, its origins, effects, and dangers to guard against misuse and to allow for therapeutic and spiritual applications that are compatible with its uniquely characteristic actions. Let the 50th anniversary of the discovery of LSD realize and celebrate Albert Hofmann's dream that "if people would learn to use LSD's vision-inducing capability more wisely, under suitable conditions, in medical practice and in conjunction with meditation, then this problem child could become a wonder child." ■

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New Transpersonal Bridge Between Russia and America

by Evgeny Krupitsky and Vladimir Maikov

FIVE persons from the Former Soviet Union — Vladimir Maikov, Ph.D., Evgeny Krupitsky, M.D., Ph.D., Farida Asadullina, Ph.D., Aleksander Neklessa and Kristina Klovaite (Lithuania) — recently visited the Institute of Transpersonal Psychology (ITP) in Palo Alto, California from January 12th till February 2nd, 1993. MAPS sponsored the visit of Evgeny Krupitsky while the ITP sponsored the visits of the other four people.

The purpose of the visit was to prepare the groundwork for bringing ITP's External Program to Russia and Lithuania and to start full scale cooperation in research and teaching in the field of transpersonal psychology. Attendees were being trained as future mentors and received a deep acquaintance with ITP's External program and with its unique approach to teaching transpersonal psychology. We also received an excellent set of books and printed courses. We attended several classes at ITP and it was an enriching experience for all of us.

FOR EXAMPLE, for Evgeny Krupitsky it was very useful to take a guided imagery class with Jeanne Achterberg and Frank Lawlis because he is going to carry out research with MDMA-assisted psychotherapy for alcoholics and terminal cancer patients in St. Petersburg, and in the framework of this project guided imagery will be used. The experimental group will receive MDMA and guided imagery while the control group will receive only guided imagery.

Our meetings in California were not restricted to ITP classes. We were also introduced to the main centers and researchers of transpersonal psychology. We also visited the California Institute of Integral Studies, the Institute of Noetic Sciences, JFK University School of Consciousness and Esalen Institute. We met prominent researchers such as Stan Grof, Frijof Capra, Ralph Metzner, John Broomfield, Alexander Shulgin, Miles Vich, Ruth-Inge Heinz, and others. Our visit was very exciting and helpful for all of us and we would like to thank very much Dwight Judy, Ph.D., chairperson of the External Program ITP, who worked very hard to organize our visit as productively as possible.

For our American partners it was quite unusual to recognize that the connections between academic and transpersonal psychology in the former Soviet Union are much more fruitful and reach deeper than those connections in the United States, where transpersonal psychology is still outside the mainstream of psychology.

As a first step, thirty Russian and Lithuanian students will be accepted this September and will participate at the weekly intensive with American teachers and Russian and Lithuanian mentors to begin their M.A. programs.

Evgeny Krupitsky is also working hard now to organize in St. Petersburg the Institute of Psychedelic Research and Therapy. Evgeny is the chief of the research laboratory which is situated in the Leningrad Regional Center for Chemical Dependence Therapy in the suburbs of St. Petersburg. The laboratory consists of three units — psychological, biochemical and neurophysiological units. Evgeny, his laboratory staff and associate researchers have been working with ketamine psychedelic therapy of alcoholism, drug dependence and neurosis since 1985. They practice a combined approach to their psychedelic research and are not →

Evgeny Krupitsky is also working hard now to organize in St. Petersburg the Institute of Psychedelic Research and Therapy.

This new Institute should be created under the umbrella of the "Harmony" Institute for Psycho-therapy and Counseling, the St. Petersburg Union of Scientists of the Russian Academy of Sciences and MAPS, Inc.

restricted only to investigations of the clinical efficacy of ketamine psychedelic therapy. They also conduct research into the different underlying mechanisms of ketamine therapy such as biochemical, neurophysiological and psychological (see MAPS Newsletter Vol. 3, #4, p. 24-28). Dr. Krupitsky's laboratory, which has its budget supplied by the Russian Ministry of Health, will form the basis for the Institute of Psychedelic Research and Therapy. This new Institute should be created under the umbrella of the "Harmony" Institute for Psychotherapy and Counseling, the St. Petersburg Union of Scientists of the Russian Academy of Sciences and MAPS, Inc.

THE MAIN directions of the study in the Institute of Psychedelic Research and Therapy will be the further investigations of ketamine psychedelic therapy of chemical dependence and neuroses, and also research into MDMA-assisted psychotherapy of terminal cancer patients, alcoholics and neurotics, if Evgeny Krupitsky's attempts to receive permission for MDMA research in Russia will eventually be successful. We are hopeful that the creation of the special Institute for psychedelic research will be an important step toward a new era when psychedelic therapy will flourish not only in Russia but all over the world.

The creation of the new Institutes for teaching transpersonal psychology and for psychedelic research will take a substantial amount of funding. If anyone cares to make a contribution to these projects, they are encouraged to make a tax-deductible donation to MAPS. ■

To support the work of MAPS see pages 47 – 48

ARE "*ENTACTOGENS*" A NEW CLASS OF PSYCHOACTIVE AGENTS? OR HOW WE CAME TO WORK WITH MDE!

HUMAN RESEARCH ON NEUROBIOLOGICAL AND SUBJECTIVE EFFECTS OF 3,4-METHYLENEDIOXYETHYLAMPHETAMINE (MDE; "EVE")

by Euphrosyne Gouzoulis, M.D. and Leopold Hermle, M.D. Department of Psychiatry, University of Freiburg, Hauptstrasse 5, D-7800 Freiburg, Germany.

HUMAN RESEARCH in the field of psychedelic drugs has a long and respected history in Germany and Switzerland. At the Psychiatric Department of the University of Heidelberg, K. BERINGER conducted numerous studies with mescaline. He described them as early as 1927 in his famous monograph on the psychological effects of mescaline in healthy volunteers (Beringer 1927). A few years later, M.G. STRINGARIS, a Greek co-worker of Beringer, described the subjective effects of marijuana (Stringaris 1939). In 1943, the famous Swiss chemist A. HOFMANN discovered the psychological effects of LSD in the Sandoz laboratories in Basel and conducted the first self-experiments with the substance. In the 1950's and 1960's, H. LEUNER investigated in Gottingen, Germany the utility of LSD and other psychedelics as adjuncts for insight-oriented psychotherapy and gave powerful descriptions of the altered states of consciousness (ASC) produced by these substances (Leuner 1962). About the same time H. HEIMANN worked in Bern, Switzerland with psilocybin and investigated the influence of the substance on cognitive functioning and facial expressions (Heimann 1961). Most of this early research work was done on the basis of the assumption that the psychedelic-induced ASC resembled endogenous psychoses and could be used as models for investigating psychosis-related phenomena. The term "model psychosis" derives from the very early work of Beringer, done in the Psychiatric Department of the University of Heidelberg. However, Beringer himself and all other scientists who worked with psychedelics pointed out the differences between the two states of mind, and never claimed that psychedelic-induced ASC are identical with endogenous psychoses.

Human research in the field of psychedelic drugs has a long and respected history in Germany and Switzerland.

AFTER the criminalization of psychedelics in the USA in the 1960's and a little later in Europe, human research with these substances was almost completely interrupted in Germany for over 20 years. A. DITTRICH, CH. SCHARFETTER and co-workers of the Psychiatric University Hospital in Zurich were able to conduct in the 1970's and 1980's human studies on ASC induced by a number of different psychedelics and psychological conditions like sensory deprivation and meditation (Dittrich 1985).

In the 1980's, a group of psychiatrists and psychologists at the Psychiatric Department of the University of Freiburg (L. HERMLE, G. OEPEN, M. SPITZER, E. GOUZOULIS, M. FUNFGELD, D. BORCHARDT, R. FEHRENBACH in collaboration with K.A. KOVAR from the Pharmaceutical Institute of the University of Tubingen) made efforts to continue the "model psychosis" research tradition in Germany using modern methodology and newly available technology. Our aim was to study subjective *and* neurobiological →

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We decided to study the subjective and some neurobiological effects of an "entactogen" in healthy volunteers and to try to characterize these substances.

effects of psychedelics in healthy volunteers and compare them to findings in patients with endogenous psychoses. It took about two years to get the first permission from the state authorities to conduct a study with mescaline. In this project we gave 12 healthy male volunteers 0.5 grams of mescaline sulfate. We studied the subjective effects, the effects on functional cerebral asymmetry (visual half-field task on a Gerbands 3-channel-tachistoscope with a face/non-face decision task), and the effects on cerebral blood flow (SPECT). The results of this study (Hermle et al 1992), particularly the SPECT-data demonstrating striking similarities to recent PET-findings in acutely ill patients with endogenous psychoses (Cleghorn et al 1989), encouraged us to continue with our investigations.

In the late 1980's we became aware of the large amount of literature on the amphetamine-derivative 3,4-methylenedioxymethamphetamine (MDMA; "Ecstasy") and some related compounds. MDMA was discussed controversially in the scientific and general press because of its increasing popularity and illegal abuse (Seymour 1986; Beck and Morgan 1986; Beck 1990), its possible neurotoxicity (Price et al 1989; Grob et al 1990) and its putative medical usefulness as an adjunct in insight-oriented psychotherapy (Grinspoon and Bakalar 1986; Greer and Tolbert 1990). MDMA was reported to exert unique psychotropic effects in humans, distinguishing them from the chemically related stimulant amphetamines and from the substituted psychedelic amphetamines like methylenedioxyamphetamine (MDA), 2,5-dimeth-oxy-4-methyl-amphetamine (DOM) and mescaline (Shulgin and Nichols 1978; Shulgin 1986). MDMA was reported to possess antidepressant and anxiolytic properties and to evoke a subtle, well controlled, emotional experience with relaxation, feelings of happiness, increased empathy and a drop in fear responses and defense mechanisms, mostly without distortion of sensory perception and without marked stimulation or mental confusion (Greer and Tolbert 1986, 1990; Peroutka et al 1988). It was hypothesized that MDMA and its similarly acting ethyl-analogon MDE might belong to a novel pharmacological class with a putative therapeutic value as adjuncts in psychotherapy. Drug discrimination experiments and pharmacological studies on the structure-activity relationships of MDMA and related compounds seemed to support the hypothesis of a distinct pharmacological class (Nichols 1986; Nichols and Oberlander 1990). Nichols (1986) proposed that the hypothetical new pharmacological class be designated "entactogens", meaning "to touch within". However, this view is not generally accepted, and other scientists describe MDMA as "just another psychedelic."

SO, WE DECIDED to study the subjective and some neurobiological effects of an "entactogen" in healthy volunteers and to try to characterize these substances. We chose to study the effects of MDE, which is much less neurotoxic in animal studies than MDMA (Schmidt 1987; Ricaurte et al 1987; Gibb et al 1990) and was not restricted in Germany until January, 1992. MDE was synthesized at the Institute of Pharmaceutics, University of Tubingen and was administered in a single 140 mg oral dose. We conducted two series of studies with MDE. Almost all volunteers were, like in the mescaline study, colleagues with a scientific interest in the substance who did not receive any payment for their participation. The studies were conducted in a randomized, double-blind, placebo-controlled, cross-over design, i.e. every volunteer took part in one active and one placebo experiment. In the first series we studied the subjective, neuroendocrine and cardiovascular effects, and in the second series the subjective and sleep-EEG effects of MDE. Studies of the neuroendocrine and sleep-EEG effects of centrally acting drugs can contribute to the pharmacologic characterization of these substances.

Eight healthy men participated in the first series of experiments. They received MDE at noon and stayed for the entire period of the experiment on a bed in a single sound-isolated room of the endocrinology laboratory of our Department. They were observed by a video camera with a monitor located in the neighboring

laboratory unit. The intravenous catheter for taking blood samples and the sphygmomanometer and ECG rate meter for registration of heart rate were connected to long tubes that passed through an opening in the wall into the adjacent laboratory. The taking of blood samples for the determination of cortisol (C), prolactin (PRL) and growth hormone (GH) and the registration of cardiovascular parameters were performed in the laboratory room every 20 minutes for a period of three hours. All volunteers participated in a series of psychometric tests, which were performed before ingestion of MDE, and at 2, 5, and 24 hours after ingestion of the drug, as well as 7 days after the trial. The psychometric tests we used were: Manic-State Rating Scale (Beigel et al 1971), state anxiety inventory STAI-X1 (Laux et al 1981), Depression Scale (von Zerssen 1986), scale for vegetative lability B-L (von Zerssen 1986), parts of the FPI revised (Fahrenberg et al 1984), and the questionnaire for the assessment of altered states of consciousness APZ (Dittrich 1985).

Another six volunteers participated in the second series of experiments. They spent four nights in the sleep laboratory: one adaptation night and one consecutive night on 140 mg MDE or placebo and two to six weeks later another adaptation night and one consecutive night on placebo or 140 mg MDE. The drugs were administered at 11:00 pm just before lights were switched off. Sleep EEG recordings were performed between 11:00 pm and 7:00 am using standard procedures. Those volunteers also participated in a series of psychometric tests which were conducted before ingestion of the drug, in the next morning, at 24 hours and at 7 days after the trial. Pharmacokinetics and drug metabolism were investigated in urine samples of the subjects in the Institute of Pharmaceutics, University of Tubingen. Evaluation of the pharmacokinetics and metabolism data is still in progress.

The data on subjective effects of MDE are difficult to interpret because they are very heterogeneous: however, they are indicative of the close relation of MDE to both psychedelics and stimulants (Hermle et al, in press). All volunteers displayed amphetamine-like effects with increased drive and desire to speak. Several subjects described their feelings in a way similar to the anecdotal reports about "entactogenic" effects: relaxation, reduction of anxiety, feelings of self-acceptance and peacefulness. But, in addition, they described depersonalization/derealization experiences, and disturbances of visual and time perception. One of the six subjects experienced a dysphoric state with anxiety and motor agitation, and another subject experienced a psychotic state with hallucinations and delusional ideation for the duration of three hours (Gouzoulis et al, 1993).

The cardiovascular effects of MDE with moderate, long-lasting rises in blood pressure and heart rate underline its sympathomimetic properties (Gouzoulis et al, in press). The neuroendocrine studies revealed elevations of plasma C and PRL and a trend towards decrease of GH secretion. The effects of C and PRL are similar to the effects of the chemically related amphetamines. However, the GH data might be indicative of distinct pharmacological mechanisms supporting the hypothesis of a novel psychoactive substance class (Gouzoulis et al, in press).

IN THE SLEEP LABORATORY study MDE caused a clear-cut deterioration of objectively evaluated sleep. After a normal sleep onset latency and sleep duration of 30-90 minutes, all subjects awoke and stayed awake for at least 150 minutes. One subject did not fall asleep again at all. Three subjects with the relatively long sleep time of 4-4.5 hours after again falling asleep, showed a sleep architecture with cyclic stage shifts from one non-REM stage to another and a remarkable amount of slow wave sleep (SWS). These subjects "caught up" with SWS, which was "shifted" from the first to the second half of the night. There was a trend towards increase of sleep stage 4 during the second part of the night after MDE compared to placebo. REM sleep was completely suppressed and did not occur in any volunteer after again falling asleep. Our data demonstrate to a large extent the similarity of the sleep EEG effects of MDE to the well documented effects of 10 mg and higher doses of d-amphetamine in →

All volunteers participated in a series of psychometric tests, which were performed before ingestion of MDE, and at 2, 5, and 24 hours after ingestion of the drug, as well as 7 days after the trial.

respect to onset and duration of action, decrease of total sleep time and suppression of REM sleep. But, in contrast to amphetamines, MDE allowed a cyclic sleep pattern to appear in three subjects after again falling asleep 2.5-3.5 hours after their initial awakening, i.e. 3.5-4.5 hours after drug intake. This sleep pattern appeared while MDE was still pharmacologically active in terms of REM sleep suppression. A cyclic alternative of light sleep and deep sleep, and a "shift" of SWS from the first to the second half of the night were observed in those three volunteers who slept 4 -4.5 hours in the second part of the night. This finding might indeed indicate a unique effect pattern of MDE on sleep. However, the interpretation of these data, as well as the data on GH secretion, must be viewed with caution because of the limited number of subjects and the lack of statistical significances (Gouzoulis et al, 1992).

In conclusion, it is still not possible to securely position MDE and MDMA within the range of chemically related stimulant amphetamines and psychedelics. Our personal opinion is that the "entactogens" really do exert unique psychological effects in humans. However, these "entactogenic" effects are only *one part* of the spectrum of actions of MDMA and MDE in humans. Further investigations, particularly direct comparative investigations with amphetamine and psychedelics, are needed in order to better understand the mechanism of action of MDMA and related compounds. At present, we are designing comparative studies with entactogens, stimulants, and psychedelics, and hope that we will soon get permission to conduct these studies. These investigations will include studies of the subjective, neurophysiological, neurometabolic, and neuroendocrine effects of the drugs. With these studies, we hope that we can give more definitive answers to the questions about MDMA and related compounds. ■

At present, we are designing comparative studies with entactogens, stimulants, and psychedelics, and hope that we will soon get permission to conduct these studies.

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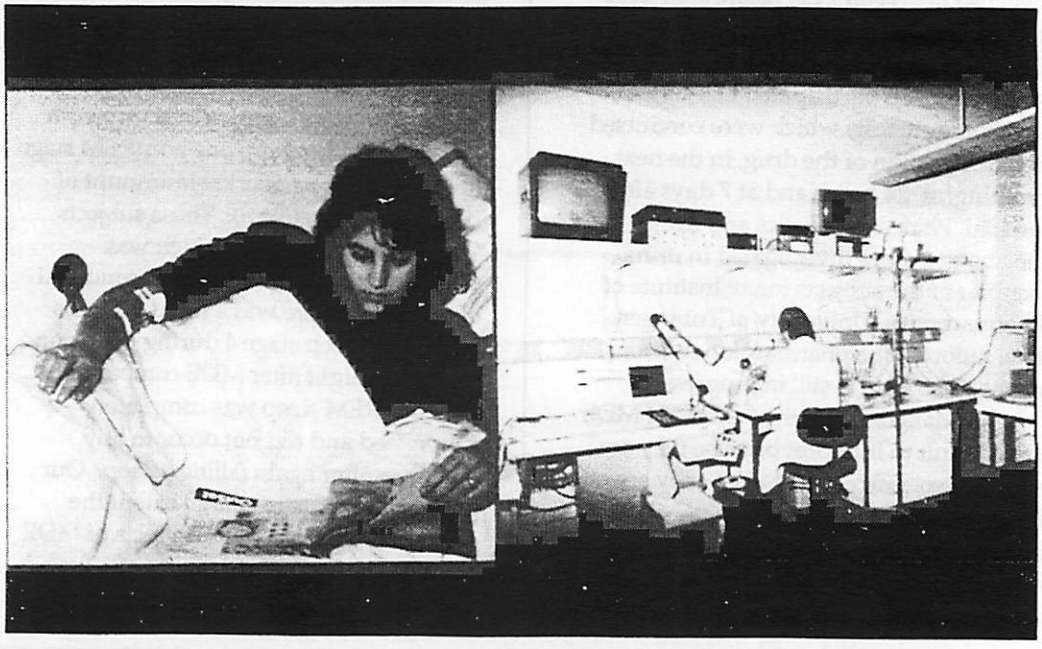

As she reads a magazine, the effects of MDE on Dr. Gouzoulis are monitored in an adjacent room.

Future Plans of the European College for the Study of Consciousness

by Dr. Hans Carl Leuner

THE NEXT SYMPOSIUM of the European College for the Study of Consciousness (ECSC) will take place in Zurich, Switzerland either on November 5-7 or 26-28, 1993. Further details about the conference such as exact dates, locations, speakers, and fees will be finalized in April.

The ECSC conference in Gottingen, Germany in September 1992 [reported on in the Winter,1992 MAPS newsletter] was generally very well received. However, some people for whom this was their first ECSC conference had difficulty appreciating that we are still in a pioneering stage and are trying to synthesize a dialogue between the multiplicity of objective and subjective aspects of the study of human consciousness.

We will soon start to design four research studies: 1) MDMA individual therapy, 2) MDMA group psychotherapy, 3) LSD in dynamically-oriented psychotherapy with adolescents who do not respond to any of the conventional psychotherapies, and 4) Adults who do not respond to psychotherapy.

In Germany, the main problem of psychotherapy is focused on the treatment of psychosomatic and neurotic subjects. A field study has shown that 65% of the population who need psychotherapy are unable to open up or do not respond to the official therapies accepted by insurance companies. Psychoactive drugs have been proven in many provisional studies to help a high percentage of these people.

An important distinction must be made between two types of pharmacologically-assisted psychotherapy, psychedelic therapy on the one hand and psycholytic therapy on the other. The first concentrates on guiding the patient toward a cosmic, mystical experience, the second focuses on the psychodynamic re-experiencing of early childhood traumas. Unfortunately, which sort of patients and which sort of clinical indications would respond best to which approach cannot be scientifically determined as of yet. ■

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MDMA - The View from England

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ALTHOUGH patented in 1913, MDMA was re-discovered in the seventies by Alexander Shulgin, a chemist who devoted his life to finding the perfect drug to facilitate psychotherapy, which was its first use. In the UK it has been illegal since 1977, and has had a high profile in the rave culture since the late eighties, though its use is not confined to ravers. Unlike LSD and amphetamine, MDMA is widely used among several distinct social groups - students, clubbers, football supporters, mortgage-holding ex-hippies and, in Liverpool at any rate, pot-bellied beer drinkers.

I HAD HEARD some amazing stories from California about how it dis solved fear and allowed love to flow, and I was curious to try it. My opportunity came some five years ago when, for £15, I bought a large white pill that tasted decidedly bitter. After half an hour I felt extraordinarily relaxed and enjoyed stretching out like a cat. Life was good, my mind was clear and my mood optimistic. It reminded me of being in love. It was exhilarating like parachuting from a plane, floating above the world: it was euphoria, elation... MDMA.

Taking MDMA was a turning point in my life. In one afternoon all my tensions and neuroses were washed away, and the real me was able to come out. I realised that what I had come to accept as my normal state over the past few years was actually a mild depression. And the memory of that afternoon stayed with me and helped me to kick it.

None of which squared with what I had read about MDMA ('E' or MDMA). Death, addiction, physical collapse, disorientation, madness and the risk of premature senility were among the disastrous effects reported in both the tabloid and quality press. The mismatch between my own - and my friends' - positive experience and these reports intrigued me. So I began an investigation into MDMA and what its effects really are. What I have found to date is that the scientific evidence is not nearly as conclusive or monolithic as is often suggested. In fact, the balance of evidence today weighs against MDMA being a significant health hazard.

It was exhilarating like parachuting from a plane, floating above the world: it was euphoria, elation... MDMA.

One of the most alarming claims to come out of research into MDMA is that it causes damage to nerve endings in animals, leading to speculation that the drug may have tragic long term effects such as early senility. But new research about to be published by the US National Institute on Drug Abuse (*Assessing Neurotoxicity of Drugs of Abuse*) has revealed that the usual method of assessing damage was unreliable as it assumed a link with reductions of a substance found in the brain called 5HT or serotonin. Dr. O'Callaghan, a researcher for The Environmental Protection Agency, was looking for a standard way of assessing neurotoxicity. For his trials on rats he needed some specimens with damaged nerve endings, so gave them high doses of MDMA. But, though serotonin was temporarily reduced, no damage to nerve endings occurred even with doses of 30 mg/kg (equivalent to a person taking 20 'E's) twice daily for a week. Of course humans may react differently to rats, but the previous conclusions based on serotonin reductions must now be re-evaluated.

There are some who argue that MDMA causes harm simply by reducing serotonin. In another paper (*The Neurotoxicity of MDMA and Related Compounds* in *The Neuropharmacology of Serotonin*, published in Annals of the New York Academy of Sciences 1990), Dr. Molliver showed that the reduction of serotonin in the brain caused by MDMA is precisely the same as that caused by Fenfluramine, a legal drug that has been widely prescribed for over twenty years as a slimming pill in doses equivalent to taking an 'E' every day. Yet there are no recorded cases of brain damage due to Fenfluramine.

THE SWISS Medical Society for Psycholytic Therapy, headed by Dr. Styk, claims particular success in using MDMA to treat addiction, traumas and emotional illness. Typically, a group of a dozen patients start the day by taking MDMA relaxing on the floor listening to music through headphones. This helps them to express themselves freely and honestly during the following group session, which lasts the whole day. "To date we have treated several hundred patients", says Dr. Widmer, "with great success... The suspicion of toxicity to the nervous system, which was considered a possible side effect of MDMA, was not substantiated by our use of therapeutic dosages of this substance." Dr. Ricaurte, one of the foremost researchers in MDMA neurotoxicity, found that doses as low as 5 mg/kg (equivalent to a person taking about three 'E's) slightly reduces serotonin in primates (*Brain Research*, vol. 446, 1988). Since then he has tested lower doses on primates and his latest, as yet unpublished, studies show that there is no reduction in serotonin levels at therapeutic doses.

Dr. Henry of the National Poisons Unit at Guy's Hospital, London, the researcher most quoted in alarmist reports, has been accused by one of his own sources of a misrepresentation of the facts. In a recent article in the *British Medical Journal* (*MDMA and the Dance of Death*), Dr. Henry claims that MDMA has no therapeutic potential. To support his argument he refers to a study by Dr. Greer where 29 volunteers were given the drug by psychotherapists and "All 29 experienced undesirable physical symptoms..." including nausea, stiffness and sweating.

In a letter in the *BMJ*, Dr. Greer accused Dr. Henry of omitting the positive results of this study. "Eighteen of my subjects reported positive changes in mood after their session; 23 reported improved attitudes, such as towards self and life in general; 28 reported improvement in interpersonal relationships, and three of the five couples reported benefits from a few days to up to two years; nine reported improvements in their working life; 14 reported diminished use of abusable substances (alcohol, marijuana, caffeine, tobacco, cocaine and LSD); 15 reported beneficial changes in their life goals; and all nine subjects with diagnosable psychiatric disorders reported considerable relief from their problems..."

The risk is reduced for people who look after themselves by drinking plenty of water and cooling off before they overheat; the risk is greater for those who use high and frequent doses.

THERE ARE NOW 15 deaths in England blamed on MDMA, and they cannot be taken lightly. Dr. Henry believes that the cause of death is due to overheating, dehydration and exhaustion from dancing in hot clubs without drinking enough. This does not happen in America where MDMA is usually used at home or at outdoor events - the five MDMA-related deaths in the US have been attributed to heart failure and asthma (Dr. Dowling in Peroutka's *MDMA* 1990). Ravers dancing on 'E' feel fine in conditions that would otherwise send them gasping for air and water, meanwhile increased body temperature can lead to strokes and internal bleeding. However, the risk is relatively small. Taking a conservative estimate of two million MDMA users and the number of deaths at 15 over the past two years, the risk of death per year is less than four in a million. Users are 33 times more likely to die on the road and would be ten times as likely to die playing soccer if that was their hobby (*Living with Risk* published by the British Medical Association). Guessing a total consumption of 50 million 'E's, the risk of death from taking an 'E' is about the same as taking five rides at a fun fair (1 in 16 million, *New Scientist*, 29 August 1992). The risk is reduced for people who look after themselves by drinking plenty of water and cooling off before they overheat; the risk is greater for those who use high and frequent doses.

However, I believe the real dangers are emotional. Unexpected insight can be acutely disturbing in some situations and, for immature users in particular, can be too much to handle. To lower defences is as valuable in therapy as it is dangerous in a situation where the user feels uncomfortable with themselves or those they are with. →

ONE TROUBLE with MDMA is that you never know what you are buying. Most recent figures of street sample analysis of "MDMA" in Amsterdam show that only one in three was MDMA. However some was MDEA and MDA (drugs with broadly similar effects), giving a two to one chance of producing the desired result. Of the remainder, half were amphetamine and/or caffeine and the other half, or one in six of the total, contained no active ingredient at all. Street testing is not allowed here, but I'm told that drugs seized by police here include more MDA. None contained heroin, broken glass or poisons.

It may well be that MDMA has actually had a beneficial effect in Britain. Last season saw a large reduction in football violence. Mark Gilman from Lifeline in Manchester is conducting a two year study of a sample of young men in the north west including 'football hooligans'. He says "In their transition from hooligan to raver these young men spurned excessive use of alcohol in favour of ecstasy. Conversations were no longer about which team's 'lads' could be ambushed where and when. Rave culture and ecstasy use have become more attractive than using large amounts of alcohol and running around the streets looking for fights with opposing football fans. MDMA use encourages a desire for friendship and togetherness, not aggression." It is not that MDMA is cheaper, the cost of a good night out is about the same. However, he tells me that the shortage of good 'E' this season has caused a return to alcohol along with other drugs, and he fears a return to the previous levels of violence.

MDMA is here to stay for a simple reason: it provides access to an experience that human beings value.

There is no reason to believe that this change of behaviour is restricted to football fans. Just as LSD in the sixties caused lasting cultural changes, I believe that the widespread use of MDMA now is laying down the foundations of new, as yet undefined, social values. And I believe it will be a largely positive change.

ACCORDING to a Harris poll last January, a third of all 16 to 25 year-old club goers admit to using MDMA. They, and all the other users are not influenced by proscriptive edicts. What people need is sound information, and that requires research. The problem is, as a senior American researcher in neurochemistry told me: "It's a matter of research grants. The government has no motive for handing out money to kick itself in the teeth."

However, the first steps are being made towards MDMA becoming a prescription drug in the US. A non-profit organization, the Multidisciplinary Association for Psychedelic Studies (MAPS), has opened a Drug Master File for MDMA at the FDA in order to conduct the necessary research. Studies into the effects of MDMA in human volunteers have been approved by the FDA. A recent report in which 20 psychiatrists describe how they have personally benefited from using MDMA was published (Dr. Leister in *Journal of Nervous and Mental Diseases*, August 1992).

There are those who think that MDMA can be stamped out by a scare campaign or heavy use of the law, and others who believe it is a passing fad. MDMA is here to stay for a simple reason: it provides access to an experience that human beings value. ■

The San Luis Potosi Conference— Plants, Shamanism and States of Consciousness: Hallucinogenic Plants and their Cultural Context

By Antonio Bianchi,
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THE MYTHICAL CITY of the Mexican desert, San Luis Potosi, which in past decades was the starting point for thousands of "adventurers of the soul" on their pilgrimage in the "magical land of peyote" seeking existential answers - some more than others - or, more simply, new "highs", was the venue for a singular conference on the use of hallucinogenic plants and entheogenous (from the Greek *entheos*=God inside and *gen*=to become) substances in their cultural contexts, held from November 16-20, 1992. The Conference was organized by the Department of Visual Arts of the International University of Florida through the indefatigable and inexhaustible figure of Manuel Torres, and the Museo Regional Potosino, the directors of which could hardly believe the arrival of so many international scholars (an international conference had not been held in San Luis Potosi for almost thirty years) in a town that is normally off the beaten track of cultural events in Mexico. It is more famous for its industry and livestock breeding than for the wealth of its architecture, the legacy of an era when the rich mines of the area made it a highly prosperous colonial town. In the past few years, only one type of tourist had been seen in San Luis Potosi, as they passed through with the sole obsession of reaching Real de Catorce, a semi-abandoned decaying village, outside time, around which the *Lophophora williamsii*, the mescaline cactus, better known as peyote or mescal buttons, grows in abundance.

The subjects of the conference had not been dealt with for fifteen years and so this meeting indeed represented a historic occasion.

THE SUBJECTS of the conference had not been dealt with for fifteen years and so this meeting indeed represented a historic occasion. The last conference on hallucinogenic plants had been held in San Francisco in 1978, in the then capital of a cultural movement that seemed destined to change the world but which, in two or three years, was to break up into a thousand totally unconnected ramifications. The opportunity to met in person the protagonists of that first conference in person thus became all the more significant: Shulgin, Furst and Ott; on the other hand, Mexican experts and scientists were conspicuous by their absence, with the exception of a few representatives of the Regional Museum of Potosi who were, moreover, rather removed from the context of the conference.

It was no coincidence that the plenary lecture was given by Alexander Shulgin, a highly creative figure, mid-way between the misunderstood scientist and the philosophical sage. Shulgin's research and personal experimentation for over thirty years with phenethylamines (mescaline, MDMA, etc.) have given him a charisma that goes well beyond the purely technical limits of scientific research. He gave a long informal lecture which more than anything else was aimed at defending the use of hallucinogenic substances, after all due consideration and for a specific purpose, as a means of interior investigation into the most hidden and surprising aspects of the human mind. His analysis of the United States' policy in the field of "drugs" was particularly perspicacious. He pointed out that, by virtue of a de-

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liberate legislative ambiguity, the police force, that is the body that ought to guarantee the application of the law, in fact becomes the party that interprets the law, thus effectively acting in place of the juridical body. We feel that the same situation is being recreated in Italy, with a coercive law that in fact defines nothing at all.

In the afternoon, Bradley Lenz explored the theories of Emboden on a possible initiatory role of Mandrake in ancient Egypt and a Chilean scholar of ethnomusicology, Jose Perez de Arce, tried to establish a connection between the archaeological finds of the desert of Atacama in Chile, and perhaps related to the use of *vilca*, Adenanthera columbrina, and the modern folklore rituals of central Chile in a totally different geographical and cultural context.

... the former is a collective and socially recognized shamanism, the latter would appear to be a more individual method, less publicly shared.

The next day, Peter Furst fascinated the audience with a learned disquisition on the role of *Kieri*, a Solanaea that has not yet been well identified, the use of which amongst the Huichols of Mexico has been underestimated so far. The famous U.S. anthropologist outlined the existence, in this ethnic group, of two initiatory lives; one involving the use of *Lophophora williamsii* or *peyote*, with at least five pilgrimages to Wirikuta, the desert where it grows, in the vicinity of San Luis Potosi, nearly 400 miles from the area where they live and the other based on a personal and individual relationship with Kieri, which grows in the subtropical areas of the Sierra Huichol. Whilst the former is a collective and socially recognized shamanism, the latter would appear to be a more individual method, less publicly shared. Two possible identifications are put forward: on the one hand Datura, in its metel or inoxia variety, and in favour of this interpretation there is the evidence of some symptoms of intoxication, whilst on the other hand Solandra, in its guerrensis and brevialix varieties. After having sustained the second hypothesis for years, Furst tends today to re-propose the dilemma which he will discuss in greater depth in a future paper.

Equally exhilarating was the second presentation by Stacy Shaefer of the University of Texas who analysed the cult of the mescal button with Huichols. Basing her study on over 18 years of ethnographical work, for the first time she outlined a description of the indigenous taxonomy of the peyote cactus, defining the various types on the basis of the morphology, color, flower and group growth. The author then analysed the stages of mescaline intoxication provoked by ingestion of the cactus, paying particular attention to the relationship between phosphenes (geometrical images of the first stage of mescaline intoxication and otherwise) and the artistic patterns of local handicrafts, as she herself has been initiated into a female Huichol society through which this knowledge is handed down. Schaefer and Furst are working at present on a volume which will collect contributions by various specialists on Huichol shamanism (People of Peyote, Univ. of Texas, in press).

THE AFTERNOON of the second day saw three Italian scholars as presenters: Mario Polia, Antonio Bianchi and Giorgio Samorini. Polia spoke of his own research, which has been ongoing for 19 years amongst the Curanderos of northern Peru on the use of the *Catcus San Pedro (Trichocereus pachnoii)* in initiation and therapeutic rituals. Particularly significant was the archaeological iconography he showed that highlighted a continuity of use going back to pre-Inca civilizations. Bianchi presented an ethnobotanical study on the use of Brugmasie in the same cultural context and their provisional identification as data is collected, despite the secrecy that surrounds the ingestion of these plants. It is of note to recall how in this geographical area, compared by many authors to the peyote area in Mexico (both cacti contain mescaline), the same ambivalence is recreated within a collective shamanism focalized on the use of the mescaline cactus and a parallel individual shamanism based on the ingestion of Sola-nacee (Solandra, Datura or Brugmasie).

At the end of the second day, Samorini presented a paper on the fascinating subject of the little-known (outside specialist literature) African syncretist cult of the Bwiti in Gabon, based on the use of the *Tabernathe iboga*. This cult is gradually becoming more widespread, and is

present today in Zaire, Cameroun, and Equatorial Guinea. The paper contained numerous points of interest as it was about one of the few traditional uses of hallucinogenic plants known in Africa and is especially a vital religious movement in continuous expansion. The approach of the speaker "from the inside" was also remarkable, in comparison with many other papers where the detachment of the scholar was all too obvious.

The next day began with the excellent presentation by Jonathan Ott, the well-known American scientist who now lives in Mexico, on a botanical, chemical and pharmacological analysis of the South American hallucinogenic drink known under the name of Ayahuasca or Yage and on the possibility of recreating its effects with plants from a temperate environments.

AFTER AN ANALYSIS of the scientific literature that has been published to date, in order to highlight the inhibitory effects of the B-carbolynic alkaloids contained in the basic plant of the potion, Banisteriopsis caapi, on MAO (monoamine oxidase) enzymes and consequently of the activation of DMT (dimethyltryptamine) contained in numerous added plants (otherwise inactivated precisely by the MAO enzymes when administered orally), the Author presented the results of 17 experiments he had carried out on himself.

Three of these experiments were with "authentic" *ayahuasca*, prepared by Quichua ayahuasqueros of the Rio Napo, Ecuador with or without added plants rich in DMT. Fourteen of the experiments were carried out with "capsules of ayahuasca" (mixtures of harmina crystals and purified DMT) and "analogous ayahuasca" prepared with mixtures of plants from temperate zones that contained B-carbolines and DMT. The purpose of the experiments were to identify first of all the threshold dose for a visionary effect (about 0.25 - 0.5 mg/kg of DMT in the presence of 1.5 mg/kg of harmina) and consequently the possibility of producing drinks of the "ayahuasca" type with plants of the temperate zone (Peganum harmala and Desmanthus illinoensis in the experiment carried out by the Author). J. Ott is collecting these and other data in a large volume on hallucinogenic plants available in a numbered edition (Jonathan Ott, P.O. Box 1251, Occidental, CA, 95465).

Dennis McKenna subsequently gave a brilliant presentation offering a panorama of the lesser known hallucinogenic plants, including one that came as a real novelty: a Mint from Turkmenistan, Longophilus inebrians, known in the past for its ritual use and today proposed for its sedative-hypnotic action in Russian pharmacopoeia.

The next afternoon was wholly devoted to papers by Chilean scientists who had worked on archaeological finds from the desert of Atacama, in relation to the use of Adenathera columbrina or other inhaled hallucinogenics. Some papers were perhaps excessively technical, but amongst these mention must be made of the paper presented by Manuel Torres, for the clarity for his exposition, and he is to be given the credit for having organized the symposium.

The presentations of two other key figures of the conference must also be mentioned: Luis Eduardo Luna and Josep Fericgla. Luis Luna again discussed his experience as assistant to Pablo Amaringo, an ex-ayahuasquero who has founded a school of painting in Pucallpa, Peru, where the themes of the paintings are directly inspired by the experience of the Ayahuasca. We met Luna about five years ago in Zagreb, when he began this type of work and we have to admit that at the time he did not convince us. Today we heard about an experience of life, rather than of study, which has grown beyond every reasonable expectation: the school, directed by Pablo Amaringo, has more than six hundred pupils from different ethnic groups of the region and has centers in Puallpa, Iquitos and Leticia, showing an extraordinary capability of creating networks and relationships. And alongside the artistic activities, experiences linked to the creation of botanical gardens and the cultivation of medicinal plants are coming into being, becoming a permanent workshop of global education on the world of the forest, unique in the Third World. (For contacts: Kathleen Harrison, Botanical Dimensions, P.O. Box 807, Occidental, CA 95465). →

... *experiences linked to the creation of botanical gardens and the cultivation of medicinal plants are coming into being...*

These hallucinogenic plants could have the function of allowing the individual belonging to shamanic cultures to have access to unconventional perceptive channels...

This is also reflected in the artistic production, where the paintings by Pablo Amaringo have been replaced by those of his pupils with themes increasingly linked to the magic world of plants and the forest... There can be no doubt that this was the most fascinating paper of the whole conference!

The paper by Josep Fericgla is also to be mentioned. After a brief experience amongst the Shuar of Ecuador, Fericgla put forward the term of cultural adaptogenes for hallucinogens like ayahuasca, San Pedro and Peyote, namely plants that still have a central roles in their cultures, borrowing the expression from phytotherapeutic terminology, where this term generally indicates plants such as Ginseng or Eleuterococcus, devoid of any specific action but which have an activity that increases the individual's performances of adaptation to the environment. These hallucinogenic plants could have the function of allowing the individual belonging to shamanic cultures to have access to unconventional perceptive channels in such a way as to foster adaptation to the spiritual presuppositions that such visions of the cosmos entail. Obviously, this function would be carried out only in those cultural contexts that approve of such experiences as qualitatively superior to those of the everyday world.

IN OUR CULTURE these would be "disadaptogenes", as the negation of certain spiritual values would lead to their identification as being pathological or deviant. This will certainly be discussed in the immediate future because Fericgla has the task of organizing the second edition of the conference which will be held in Barcelona, as an ideal bridge between Europe and America, in October of 1994. Anyone interested in receiving information on the next conference in Spain can contact Joseph Fericgla directly at the following address: Av. Gran Via Corts Catalanes, 457, 4 rt 10, 08015 Barcelona, or contact Dr. Stacy Schaefer, Dept. of Psychology and Anthropology, U. of Texas-Pan American, Edinburg, Texas, 78539.

The proceedings of the San Luis Potosi conference will be available in English in a special issue (vol. 5 and 6) of the German magazine Integration: write to Hermann DeVries, Eschenau #29, 8729 Knetzgau, Germany.

Italian Society for the Study of States of Consciousness

In December, 1990, in Rovereto (Trento, Italy), the Italian Society for the Study of States of Consciousness was established. The society promotes, encourages and facilitates the study of states of consciousness, with a particular stress on the means, chemical or not, suitable for the therapeutic and experimental modification of these states. The Society contains a nucleus of researchers interested in psychotropic plants from an interdisciplinary approach (botany, chemistry, pharmacology, psychopharmacology, and so on).The Society promotes cultural exchanges between scientific communities working on these issues at the international, national and local level.

The address of the Society is SISSC, Museo Civico di Rovereto, Via Calcinari 18, 38068 Rovereto (Trento), Italy. Membership is $50 for individuals (please send brief curriculum vitae), $90 for institutions. Members receive a bulletin several times a year, access to a data base, and more. ■

20 Years Visiting the Huichols

By Tom Mayers, P.O. Box 64, Longboat Key, FL 34228

HIGH in the Sierra Madre Occidental mountains of Mexico, northwest of Guadalajara, the Huichol Indians live in small villages called ranchos scattered throughout this remote, rugged terrain. They integrate peyote use into their lives, culture, and religion today as they have done for at least a thousand years and most likely for thousands of years.

A complex pantheon of gods and goddesses is discussed around a campfire as wood collected during the past week evenly burns. The details and descriptions of this other world are so intricate and exact that they rival theological discussions of the worlds greatest religions. This religion of the Huichols has been passed from generation to generation by word of mouth for probably the same length of time as these great religions. The core of Huichol religion was even brought from east to west during the great migrations 10 to 30 thousand years ago. Today's teller has their own version of the original text. These versions are discussed with the familiarity of craftsmen with their trade. Each version is defended by the teller, sometimes argued by the audience, and maybe even changed slightly by the next telling, but there always remains the ancient themes and storylines.

They integrate peyote use into their lives, culture, and religion today as they have done for at least a thousand years

KAUYUMARIE and Tatewari come to life in the smoke where the sky is their church. "Most people have heads full of thoughts; I try to empty my mind" said a shaman, Don Jose. "I am like an antenna that receives messages from the gods." He relays these mesages to his people as shamans of his tribe have done from the beginning. The healthy children play in the brook with clean, clear, fresh water and a hallo of butterflies as Don Jose talks about his plans for the day. At 96 years old he planned to clear an area for another hut. Machete under his arm, he set out to organize the project.

Small seminomadic microbands remind us of our own proto-evolutionary state. The ranchos are based on nuclear families. The larger ones may have a population of 50 to 100 residents with their own shaman. The smaller ranchos could consist of a husband, his two wives, their children and a mother-in-law. They may all go or just send a representative to attend the many scheduled fiestas at larger ranchos or meeting places.

In the larger ranchos there are large extended families and interpersonal relationships that can make soap operas look tame. If there is a big difference of opinion within the group, as there often is, a split can occur producing two small →

Photo: Tom Mayers

ranchos. As the dwellings they build last only five to ten years and firewood becomes increasingly scarce, a regular move can be in order. Like an amoeba, these organic units split to form two similar but not exact biological units.

Sometimes a shaman takes along some followers chasing after a vision he saw in the flames at the temple the night of the fiesta. Sometimes a hunter takes his family and friends to where the deer are not so far away. Evolution takes its course and some new and old ranches succeed and some fail. The most conservative way is not always right and sometime the young ranchos are resilient with new found strength.

It replaces alcohol at some of the fiestas where an "all nighter" on peyote can be quite different from one on alcohol.

PEYOTE is not used by all the Huichols but is familiar to them all. Sometimes babies are introduced to it through their mothers milk. As the principal agent for a tribe described as healers, peyote is considered a panacea and a health aid as well as a hallucinogen. It is sometimes given as a pain reliever or as a stimulant to make work easier among other uses. It is also a catalyst to meditation and for religious ceremonies and fiestas it is a purgative and empathetic agent. It replaces alcohol at some of the fiestas where an "all nighter" on peyote can be quite different from one on alcohol.

"Americans are looking for a Saturday night high" a Huichol told me. Peyote is not like that. "Four is the ticket" I was told by an old man as many of his friends agreed. Peyote is a cactus about the size of a medium to small potato and grows in central Mexico in the desert at a place the Huichol call Wirikuta and it tastes terrible. To eat a spoonful of something that tastes terrible is difficult, to eat four potato sized peyote that taste terrible one has to be determined. That is a reason why some Huichols don't like it. But others have an affinity for it, they even say it is good, but you never know what a Huichol says means because they have a good sense of humor and sometime speak in opposites: good is bad, cool is hot, etc. Like groups within our culture that use opposites to confuse outsiders; if someone is good they are "bad". Did I mention that peyote causes nausea? It is definitely not material for a Saturday night high.

Some Huichols fast for days and then eat only peyote. At Wirikuta, peyoteros walk in the desert sun by day and dance by the fire at night while they talk to the gods and collect peyote to take home to the rancho. The family of the peyoteros wait for their return from the long journey to Wirikuta and keep the home fires constantly burning as a symbol of their vigil. These peyoteros are Huichols who travel the 300 miles from their homes in the Sierra to the distant desert to collect the peyote for the ranchos' use during the years fiestas and religious ceremonies. They have the time, the desire and the money to allow them to take a one to two week trip and they have usually been asked by someone with a car or truck to make the journey. Some Wirikuta trips are made by those who want to be cured of an illness or to help cure others of their illness or by older Huichols who want to see the sacred land one time before they die.

Photo: Tom Mayers

THE OLD SHAMAN bends over and removes a rock from a footpath in the Sierras. His grandchildren walk that path now, the same one he walked as a child: the path to San Andres. Now San Andres has an airport where DC 3 cargo planes land with corn, alcohol, limes, Cokes, teachers, doctors, and more. But these conditions are becoming commonplace among the Huichols. Each nearby city extends its

tendrils high into the Sierra. The battery powered cassette players and radios of 10 years ago are now amplified by major electric sources from the city and roads that bring ease of access.

National Geographic Magazine did a nice article in June of 1977 on the Huichols and predicted that they soon would be absorbed by assimilation as most other distinct Indian groups have been. In my 20 years of visiting the Huichols I have found them to remain remarkably intact, but they are definitely threatened. Their identity and cultural survival may in a large part depend on interest and support from the outside. The Mexican government and the local government in the state of Nayarit have recognized the Huichols' value as a colorful element of their national cultural diversity. Many tourists seek out Huichol handicrafts and are fascinated by the Huichol story. By buying their handicrafts and art work and by learning more about them we can help them. We may even be able to turn the paradise lost scenario around into paradise found. We can learn about ourselves, before cities and macrobands: no electricity, fire for heat, animals that are brothers and the sky for a church.

Is peyote *soma*? Like many other psychoactive agents used by native peoples throughout the world since before written history, there are many qualities about it that would qualify. Like these other agents, there is so much we do not know. Hopefully through the work of MAPS and other organizations we can find if there are properties that can aid our culture to better health and psychic well being. It is ironic that the older element of our society that could most benefit from new sources of pain relievers and energizers is the most resistant to research in the areas where these answers are most likely to be found. ■

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Unknown Mexico, Explorations in the Sierra Madre and Other Regions, 1890-1898. Carl Lumholtz, author. In two volumes, Dover Publications, Inc., New York.

In my 20 years of visiting the Huichols I have found them to remain remarkably intact, but they are definitely threatened.

Photo: Tom Mayers

The First International Ibogaine Treatment Symposium

by Bob Sisko
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IN THE FIRST CONFERENCE of its kind, researchers from Holland, Germany, Israel and the United States gathered in a rustic country inn just outside of Leiden, the Netherlands, to attend the first International Ibogaine Treatment Symposium. Once there, they were joined by another group of Americans who were also going to participate in the conference. They were the addicts, who had come from New York to be treated with an experimental drug which is still unavailable in the United States.

...they were joined by another group of Americans who were also going to participate in the conference. They were the addicts...

Also coming from New York was Dr. Robert Clark, of the Department of Psychiatry of Harlem Hospital, and Rommell Washington, Clinical Director of Reality House, Inc., a Harlem-based treatment facility. They were joined by University of Miami researchers Drs. J. Sanchos Ramos and Debra Mash, both of whom had previously filed an Investigational New Drug Application (IND) with the Food and Drug Administration (FDA) to commence Phase 1 clinical studies of the effects of ibogaine on cocaine dependent persons.

DURING the three week seminar, participants were able to observe the treatment of patients by the world renowned Dutch psychiatrist Prof. Dr. Jan Bastiaans, widely known for his work treating Holocaust survivors and victims of trauma with LSD-assisted psychotherapy. Despite his eighty-odd years, Dr. Bastiaans was still able to treat six patients, four Americans and two Dutch, during the conference.

Assisting Dr. Bastiaans was a round-the-clock team of trained para-clinicians and peer counselors, under the supervision of Howard Lotsof, President of NDA International, Inc., which sponsored the conference. It was Lotsof who first observed ibogaines' ability to interrupt drug dependency. He has since been awarded five United States patents for his discovery.

Two treatments per week were scheduled. Groups One and Two were Americans, and the third was Dutch. Of the Americans, three were male, one female. Two were addicted to free base cocaine, the other two were in methadone programs but were also concurrently using cocaine and heroin and were unable to stop on their own. The methadone dosage range was from 30 mg. per day for the male patient to an astonishing 125 mg. per day for the female. Patients in Group Three, the Dutch, were both addicted to opiates, one to heroin and the other to methadone.

From the addict's perspective, ibogaine offers, without question, the most humane method of detoxification yet devised. It offers the addict the ability to detoxify rapidly, in just two or three days, without the pain and discomfort normally associated with narcotic withdrawal.

The treatments, which occurred in separate private rooms, were monitored on a closed circuit television system from a medical station set up in an adjacent room. The observers were given opportunities to speak with and examine the patients from time to time during the course of the treatment, but most of the observations were conducted from the medical station.

The conference, though small, attracted a lion's share of media attention. In between sessions, two German television crews conducted extensive interviews with doctors and patients alike. Not to be outdone by their European counterparts, ABC/TV, which is producing a special on ibogaine for its new Sunday newsmagazine, ***Day One***, flew a crew to Holland to cover the event. They will also be conducting follow-up interviews with those treated and plan to air the show in late April or May.

For those present, it was a historic event. Although it had been reported for years that addict self-help networks were successfully utilizing ibogaine to detoxify their own; that ibogaine made recovery rapid; and that ibogaine eliminated the craving to use drugs, no group of American doctors or researchers had actually witnessed an ibogaine treatment from beginning to end, until January, 1993. In the next issue of the MAPS newsletter, we will present a summary of the case histories of the patients treated at the conference along with about six month follow-up data.

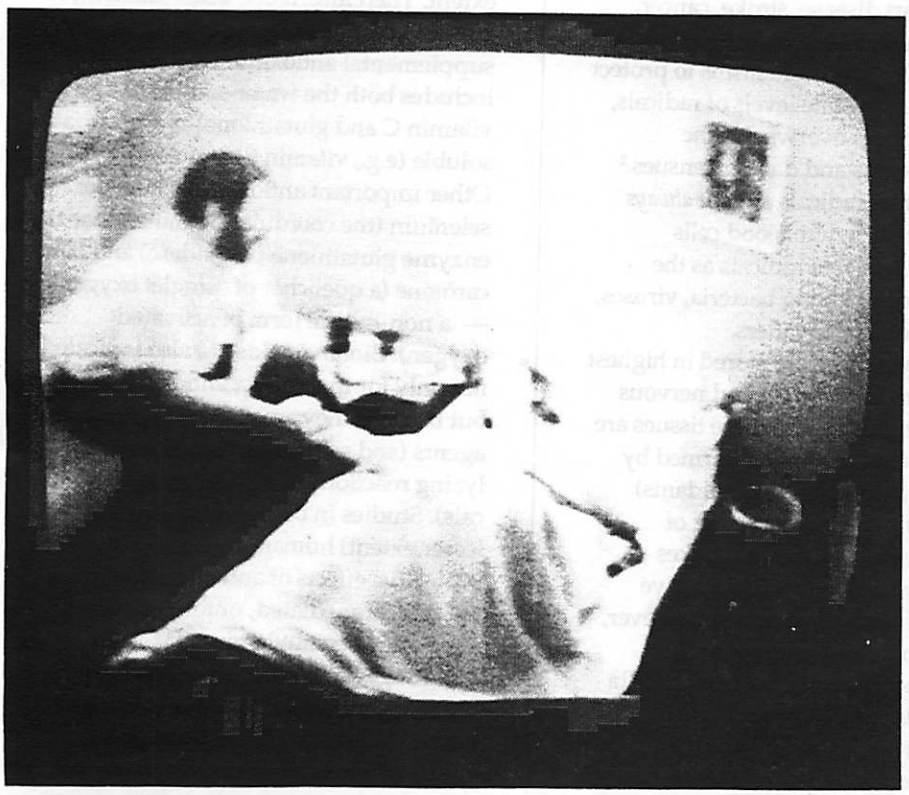
For information on attending the second international ibogaine conference to take place sometime in late 1993, contact Bob Sisko (ICASH) or Howard Lotsof, NDA International, 46 Oxford Place,Staten Island, NY, 10301. (718) 442-2754.

Ibogaine Media Watch

ABC's new news magazine, DAY ONE, will feature Ibogaine's use in treating chemical dependency in April or May. Videotaping has already taken place in the United States, the Netherlands, Belgium and France. DAY ONE is broadcast nationally on Sunday at 8:00 PM Eastern Standard Time. Keep an eye out for this program. Our understanding is that DAY ONE will present a fair and balanced view of the research and present interviews with three chemically dependent persons treated with Ibogaine as well as with Professor Dr. J. Bastiaans (Dutch psychiatrist using Ibogaine to treat addictive disorders), Howard S. Lotsof (President of NDA International, Inc. - the corporation developing Ibogaine) and Dr. Frank Vocci (Director of the Ibogaine research program at the National Institute on Drug Abuse).

OMNI magazine will also be reporting on Ibogaine reseach in an issue appearing in the next few months. ■

For those present, it was a historic event.



American patient being treated with ibogaine, as observed through a closed circuit video system by conference participants. Photo by Boaz Wachtel

PHENETHYLAMINES, FREE RADICALS, AND ANTIOXIDANTS

By Brian Leibovitz, Ph.D.

THIS INFORMATION is for those who experiment with phenethylamines as well as those with patients who use these compounds. Phenethylamines are a class of compounds chemically, and functionally, related to adrenaline — the fight or flight neurotransmitter made from the amino acid tyrosine. Phenethylamines all contain a benzene (C_6H_6) ring linked to an ethyl-amine ($-CH_2-CH_2-NH_2$) group, and include: amphetamine (a stimulant), ephedrine (a naturally-occurring decongestant), and methylenedioxymethamphetamine (MDMA, a psychotherapeutic agent that facilitates communication).

If one takes phenethylamines, it would be prudent to take supplemental antioxidants as well.

STUDIES in the last few years have established that phenethylamines can undergo "redox cycling," a ping pong-like process that liberates copious quantities of oxygen free radicals. Free radicals are substances with extra, unpaired electrons, whose characteristic is reactivity, and whose hallmark is cell biochemical and cellular damage. Indeed, oxygen radicals are linked to a wide variety of diseases and conditions, including: heart disease, stroke, cancer, emphysema, and neurologic disorders.[1] While our body has mechanisms to protect against the steady-state levels of radicals, excessive amounts overwhelm the protective systems and damage ensues.[2] Incidentally, free radicals are not *always* the bad guys; our white blood cells produce, and use, free radicals as the primary means of killing bacteria, viruses, and other microbial invaders.

Phenethylamines are stored in highest concentrations in the brain and nervous system. Not surprisingly, these tissues are at the greatest risk for being harmed by free radicals (and associated oxidants) formed during the redox cycling of phenethylamines. Moderate intakes appear to be handled well. Excessive quantities of phenethylamines, however, may cause oxidative damage as the protective mechanisms just can't handle the load.[2] It is the overproduction of radicals that causes, in large part, the fatigue and mental dysfunction associated with sustained amphetamine abuse.[3]

The key, as always, is protection, and knowing the mechanism of action can only yield one conclusion: those who take phenethylamines should also take antioxidant supplements. All phenethylamines are prooxidants by nature, and can redox cycle. This means that there will be a dose-dependent increase in free radical production, so even at a low dose there will be free radical generation to some extent. Therefore, if one takes phenethylamines, it would be prudent to take supplemental antioxidants as well. This includes both the water-soluble (e.g., vitamin C and glutathione) as well as fat-soluble (e.g., vitamin E) antioxidants. Other important antioxidants include: selenium (the coordinating mineral for the enzyme glutathione peroxidase) and beta-carotene (a quencher of "singlet oxygen" — a non-radical form of activated oxygen). Bioflavonoids are also indicated, not only for their direct antioxidant effects, but because they are good metal-chelating agents (and so prevent iron from catalyzing reactions that generate free radicals). Studies in both animals and (to a lesser extent) humans document the protective effects of antioxidants against the radical-mediated, untoward side-effects of phenethylamines.[2,4,5]

I suggest that the combination of vitamins, minerals, and non-vitamin nutrients listed in **Table 1** would be valuable for the prevention and/or

treatment of the adverse effects that may result from phenethylamine overdose or overuse. There is nothing magic about the doses listed; it is my best estimate based on present knowledge in nutrition. Note that N-acetyl cysteine (NAC) is recommended instead of glutathione as it is more effective in raising tissue glutathione levels; in addition, it is less expensive than preformed glutathione. L-Carnitine and CoQ_{10} have also been included, as both are known to increase cellular energy (adenosine triphosphate, or ATP) generation, thereby enhancing cellular integrity.

The bottom line is that, by using an appropriate combination of antioxidants and other nutritional supplements, one can ameliorate the prooxidant, and potentially harmful, side-effects of high-dose phenethylamines.

I would also like to mention my new journal, The *Journal of Optimal Nutrition* (JON). JON's focus is on supplements of macronutrients and micronutrients for the prevention and treatment of disease as well as for the maintenance of optimal health. An enormous, and ever-increasing, volume of data supports the concept that increased dietary levels of nutritional factors are effective against a wide variety of ailments.

JON is the first journal specifically dedicated to the study of optimal nutrition — and to the most crucial question of modern nutrition: the elucidation of optimal nutrient intakes. JON's Editorial Board includes Drs.: Linus Pauling, Jeffrey Blumberg, Mohsen Meydani, Karl Folkers, Mark Levine, Richard Kreider, and many (75+) other distinguished nutritional scientists and physicians. JON is published quarterly; the subscription rate is $75 per year ($25 for students). ■

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Journal of Optimal Nutrition ***is the first journal specifically dedicated to the study of optimal nutrition***

Table 1: Nutrients For Blocking Phenethylamine Damage

Nutrient	Preventive Dose	Therapeutic Dose	Form
β-Carotene	5 mg	15 mg	Consider supplements of other carotenoids (e.g. lycopene) as they become available
Bioflavonoids	2 grams	6 grams	Mixed bioflavonoids from a variety of sources
Coenzyme Q_{10}	100 mg	300 mg	Only one form available
L-Ascorbic acid	2-4 grams	6-12 grams	Free acid or calcium magnesium salt
L-Carnitine	1 gram	3 grams	L-Carnitine HCl or, if possible, less hygroscopic salts (e.g., L-carnitine magnesium citrate)
N-Acetylcysteine (NAC)	2 grams	6 grams	Only one form available; do not use L-cysteine
Selenium	250 mg	500 mg	Form not critical – inorganic (e.g., selenite) as effectiveand less expensive than organic forms (e.g., selenomethionine)
Vitamin E	1,000 IU	3,000 IU	Available data indicate that form is not critical

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AGAINST WHOSE EXCESS?

John P. Morgan, M.D.

John P. Morgan, M.D.

DON'T MISINTERPRET THE TITLE of Mark Kleiman's big book. You would be right most of the time in assuming that a book about American drug policy called *Against Excess* would be committed to a radical reform of current prohibition. However, this book, at its heart, is a defense of prohibition as a workable policy. It is unusual because most people with prohibition in their hearts do not write books defending it (although they frequently generate quotes for newspapers or book jackets) and unusual because it is,not merely an emotional defense of prohibition, but a text that is informed, often witty and knowledgeable. It is also truly weird. Like most critics of current drug policy, Kleiman understands that the harms of drug policy often outweigh the harms of drugs. However, he believes this is true only because prohibition reduced previous drug harms by decreasing abuse. Thus, although the harms associated with drug prohibition appear to be greater than drug harm itself, *...this situation is a result of the success of prohibition in limiting abuse.* [P. 4].

FORTUNATELY, Kleiman himself (182 pages later) warns us to be wary of vagrant opinions—those without visible means of support. Yet, this pattern of illuminating the follies, failures and general foolishness of prohibition and following up with vagrant opinion favoring drug outlawing is his favorite literary device. Does Kleiman understand drug law abuse? You bet he does.

Suppressing drug dealing with arrests and punishments...is likely to swallow enforcement resources...in great greedy gulps. [P. 15]

But drug law enforcement is as likely to increase predatory crime by dealers and users as to decrease it. [P. 21]

To employ the forces of the state to ban voluntary behavior that is not demonstrably harmful is to legitimize the use of democratic policies to wage cultural holy wars. [P. 59]

Prohibitions create illicit markets. Illicit market transactions make forbidden goods available and thus partially frustrate the purpose of the Prohibition. The markets also create problems of their own: violence, corruption and disorder. [P. 104]

...interdiction—seizures of bulk drugs—is of only limited usefulness since the drugs that are cheap for the government to seize are also cheap for the dealers to replace. [P. 134]

I'll resist the urge to continue to quote Kleiman's well-formed prose in support of reformist opinion because in the end (and beginning and middle) he is not a reformer. He, like elected drug hawks, wants to send the right message:

The arrest and punishment of vice producers and consumers reflects and reinforces public disapproval of the activity involved. [P. 107]

and;

Enforcement is also sometimes thought to reduce lawbreaking by reinforcing social disapproval of the acts punished. [P. 129]

Most important for Kleiman though is his commitment to the idea that prohibition decreases drug abuse and creates a false impression of bad policy outweighing drug harm.

None of this is to say that drug laws are bad in themselves only that they are likely to replace some of the evils they regulate with evils of their own. [P. 169]

Having no evidence that current drug prohibition reduced drug-related harm, Kleiman offers instead a set of heavily promoted ideas regarding the positive benefits of historic alcohol prohibition in the USA, written about by his colleague at the Kennedy School, Mark Moore, among others. The gist of their

argument is that prohibition caused a decrease of alcohol consumption which, in turn led to a decrease in the harmful effects of ethanol, particularly hepatic cirrhosis. Neither of these claims is supportable and both are vagrant in the extreme. The cirrhosis rate had declined steadily in the United States from 1907 and reached its nadir in 1922, Prohibition, if it accomplished anything, reversed this decline since prevalence of cirrhosis actually increased steadily from 1922 to the end of Prohibition, probably because of the replacement of beer with more potent distilled alcoholic products. An increase in potency always occurs in prohibition – of any and all substances. It is cheaper and easier to smuggle gin than beer; cocaine than coca leaves etc. The impact of the law believed in by Kleiman is so undemonstrable that there was not even an *increase* in consumption at the end of Prohibition until World War II.

Kleiman refers in consecutive footnotes to three recently published studies which have not only questioned the healthful effects of prohibition, but have pointed out the essential error in the work of Moore: attributing to prohibition the decline in consumption and cirrhosis prevalence that actually began 20 years earlier. Kleiman has read these arguments, but they do not seriously engage him and he does not refer to them in the text, and ignores them with his claim,

> *...that the ban on selling alcohol actually reduced the volume of alcohol consumed is not open to serious debate.* [P. 102]

The serious debate not opened by Kleiman is that the decrease in total consumption came almost completely in beer and that the rate of potent distilled beverage consumption actually increased. Kleiman thinks that those who criticize Alcohol Prohibition from 1920–1933 are arguing with him about the balance of bad (black market, criminal enterprise, poisoned potent alcohol) versus good. I am not.There was no good. There were no health gains from this misguided morality exercise and Kleiman's illusory balance of the bad and good of prohibition is the genesis of most problems of this text.

THROUGHOUT the book, Kleiman has an evidentiary blindness regarding the harm that drug regulation generates. This blindness to drug policy harm and to the stunning failure of prohibition to accomplish any of its goal leads him to support continued prohibition in some areas, to support stunning layering-on of regulation in others, and to plan for new prohibitions (of tobacco) as soon as regulation drives down abuse sufficiently.

Kleiman is a supporter of the 21 drinking age—a prohibition of legal alcohol to those who once could legally consume alcoholic beverages at 18. He accepts uncritically that these laws have been responsible for a recent decrease in alcohol-related youthful vehicular fatalities. He examines none of the evidence which disputes that point including the decline of fatal accidents in drivers of all ages. He also ignores the laws' harms including again the inexorable effect of prohibition on potency of the illicit product. On college campuses, the keg party is now illegal, so users consume smuggled distilled beverages and the incidence of alcohol-related intoxication, vandalism, and emergency room visits near colleges have increased as a result. So, the familiar impact of the new prohibition is the absence of documentation of benefits, the increase of potency-driven toxicity and, oh yes, the absence of efficacy—18–21 years olds still drink. Prohibition for 18–21 year olds is nothing more than a cultural holy war.

Kleiman has obtained favorable mention in some reformist views because he favors the use of smoked marijuana in medical circumstances. He also recognizes the continued attempt by anti-reformists to cast marijuana as a particular toxic agent.

> *The research results on the the adverse behavioral and health consequences of casual marijuana use are unimpressive, given the commitment of research funds to the effort to discover dangers and the effort by...drug education agencies to publicize what negative findings there are...*[P. 255]

Despite this understanding and a clear understanding of the harm generated by criminal justice involvement in marijuana regulation, Kleiman remains ambivalent about marijuana legalization. After a lengthy discussion of the possible impacts of marijuana decriminalization and legalization, he ultimately waffles. In fact one can read pages 266–280 and be unsure of his decision except that he is surely reticent to act. He most favors a peculiar licensing system which strikes me as an administrative nightmare. It grants to employers and others the right to know who possesses a marijuana use license and assumes that employers could require employees in →

Kleiman thinks that those who criticize Alcohol Prohibition from 1920–1933 are arguing with him about the balance of bad (black market, criminal enterprise, poisoned potent alcohol) versus good. I am not There was no good.

Again, we note the favorite Kleimanesque theme—indeed the center of his argument, philosophy and being: prohibition significantly decreases use and abuse and if we stop it because of its harm and idiocy, we face expanded abuse.

some categories not to be licensed. His proposal also includes the release of license information to insurance underwriters to that they could surcharge licensed marijuana users. Throughout, Kleiman seems absolutely entranced with legislative regulation. He can write enthusiastically and endlessly about regulatory nuance and marijuana license application, requiring a call to your marijuana outlet 24 hours in advance, and employing a central agency linked to credit card numbers to audit the quantity purchased by individuals and on and on. Why other than sheer administrative joy and excitement would he want such foolishness in place? Because he still fears the explosion of marijuana use after the "restraint" of law goes away. Again, we note the favorite Kleimanesque theme—indeed the center of his argument, philosophy and being: prohibition significantly decreases use and abuse and if we stop it because of its harm and idiocy, we face expanded abuse. Here, evidentiary failure is most profound. There is ample evidence that the reforms of the 1970s, including the application of decriminalization to one third of the U.S. population, caused no increase of use and in fact the greatest expansion of use occurred in non-decriminalization states. When it comes to the Dutch experiment with de facto legalization, Kleiman both refuses to examine the available data and dismisses the Dutch claims with a decidedly cavalier attitude.

> *Even taking at fact value reports by Dutch officials that there has been no increase in marijuana use in the wake of this policy, it would be too optimistic to expect the same results if such a policy were put into place in the United States.* [P. 285]

One monograph missed by Kleiman is that of Geoff van de Wijngaart, a Utrecht University Professor (Contemporary Perspectives on Drug Use: The Dutch Experience. Amster-dam, Swets and Zeitlinger, 1991). Marijuana has been sold in amounts up to 30 grams without penalty in Holland since 1976. In 1976, 10 percent of those 17–18 had occasionally used hashish or marijuana. The prevalence in 1985 had declined to 6 percent. A 1991 survey indicated that 12 percent of high school seniors in the Netherlands had ever used cannibis. This compares to a 59 percent prevalence in the U.S. Current use in Dutch high schools is 5.4 percent against 29 percent in the USA where we cannot legalize the drug because of the potential explosion of use and the effective suppression of abuse by the law (Is my irony showing?).

There is no surprise that Kleiman as a committed regulator favors non-criminal administrative pressures. He likes the idea of inner-city residents copying license plate numbers of those suspected of driving to the neighborhoods to buy drugs. He acknowledges problems of forfeiture, but does not oppose it. He congratulates a Detroit suburb for establishing a traffic check point where drivers were stopped and asked for their license, registration and proof of insurance as a simple matter of harassment. He supports the actions of police selling fake "crack" to drive-through buyers and then without prosecution, seizing their cars under state forfeiture statutes. He encourages evictions by landlords or housing authorities to close down dealing locations. He is wildly enthusiastic for any and all urine testing in the criminal justice system, a maneuver beloved of judges, courts, probation systems, some criminologists and criminal justice administrators. True, it does give them something to do which they can claim relates to treatment and rehabilitation. There is, however, no evidence that testing pre-trial, pre-sentencing, pre-parole or pre-execution ever accomplished any goal having to do remotely with rehabilitation. Despite this, Kleiman would:

> *...screen all arrestees for the presence of drugs and assign all drug-involved offenders to mandatory absti-nence and testing.... Testing would start out on a random once-per-week basis: each offender would call in once per day to find out whether his term had come.* [P.195]

INCIDENTALLY, Kleiman, like many supporters of criminal-justice and workplace-based testing, has insufficient knowledge of technical issues in testing. He more than once (for example, on page 195) announces that using alcohol tests is not possible because ethanol has no distinct metabolite. This is wrong, ethanol is excreted as ethanol in the urine and can be sought there by a number of tests. He nowhere mentions the information that poppy seed products frequently cause true tests for morphine in the urine and the presence of urinary morphine is accepted as evidence of heroin use. The most creative decision regarding the ingestion of poppy seeds in criminal justice testing is to tell probationers, parolees and those awaiting trial "don't eat poppy seeds."

AS A PHARMACOLOGIST writing about drug policy, I have not always been humble about my discourses on broader problems of policy. I recently experienced the proper and sobering experience of having a colleague wag a finger in my face while inquiring where I had been trained in labor economics. It is essential for all who strive in the interdisciplinary sweatshop of policy to remain humble and get someone to explain technical essentials more than once or twice. The problem for non-pharmacologists is often not that they fail to grasp the essence of drug effect on humans and their behavior, but that they fail to grasp the inadequacy of pharmacology as an explanation for drug consumption and behavior. There is a tendency for those involved in drug policy to be *pharmacocentrists*—to overvalue the drug as inducer of violence or more importantly as seducer of the innocent into problematic drug use. Pharmacocentrism focuses on the drug and its characteristics in humans and ignores the issues of cultural, economic and other contextual determinants of outcome from the interaction of humans and drugs. There are great benefits to pharmacocentrism. Addiction-ologists can believe that they are treating drug problems and diseases and until recently have convinced insurance companies invariably to pay them to do so. Post-addicted counselors and anti-drug spokesmen can blame all of their past sins and excesses on the drug and demand that we take them seriously. Reporters can conceptualize urban horror stories as drug-related and politicians can blame drugs for the cause of crime, poverty, violence, child abuse, etc.

Kleiman is a pharmacocentrist. He believes that the lessening of legal pressure on crack would lead to an explosion of use because of its seductiveness. He believes that it cannot be safely consumed by the poor, in particular, because they lack the ability and wherewithal to resist its call. Crack has the power to make the calm violent, the obsessive paranoid, the welthy destitute and the healthy sick. I do not imply that Kleiman does not know that the set and setting of drug use are critical determinants of outcome and he, of course, often focuses on markets, costs and internal sanctions to modify ingestion. However, he accepts what a number of pharmacological writers believe regarding the power of cocaine and crack to corrupt and destroy. I am dismayed by Kleiman's heavy reliance on Mark Gold as a source for much of what he believes to be true about cocaine and its volatile format. Not only is Gold careless about his writing and facts, he is a committed propagandist who generates absurd ideas about drugs and is currently subject to criticisms and investigations regarding the standards of diagnosis and admissions at a private chemical-dependency hospital under his direction. The essence of those criticisms, which caused Gold's New Jersey–based operation to close, were that all subjects with 3rd-party insurance somehow needed a 28-day inpatient treatment for any cocaine problem.

BECAUSE volatile cocaine has a rapid onset of effect followed by a rapid declination of concentration and effect, it is to pharmacocentrists damn-near irresistible and crack is the most seductive drug of all time. The dilemma for these theories is that they have no empirical support—just narrative-tale repetition. A series of studies of cocaine users by clinicians based in Amsterdam and Toronto and San Francisco lend no support to cocaine's long-term "addictiveness" and its rate of "continuation" in the High School Senior Survey is not particularly high. Of the approximately 4.8 percent of high school seniors who have smoked crack, less than one-fifth have smoked it in the past month. Crack remains largely confined to impoverished inner-city culture, although committed non-city users will drive there to buy product. The upper west side of Manhattan constitutes an interesting urban laboratory experiment. It is near very large market places for crack and it is populated with many well-to-do adventuresome youths. I can locate *no* (that is *no*) evidence that crack has made the slightest foray into neighborhoods south of 116th Street and west of Central Park despite its high availability and visibility.

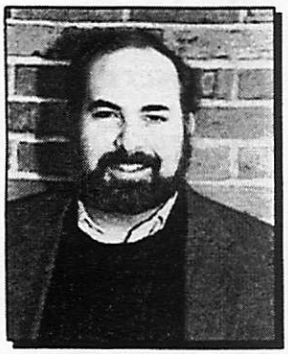
The importance of a drug like cocaine (or nicotine or heroin) is that although the quick high followed by a quick low is a somewhat adequate explanation for binging, it is a wholly inadequate explanation for long-term misuse. Although it may cause "acute addiction" it does not cause in a high percentage of users, chronic addiction. Most cocaine users that I know (like most ice-cream eaters I know) have gone on binges. In fact the wear →

There is a tendency for those involved in drug policy to be pharmaco-centrists—to overvalue the drug as inducer of violence or more importantly as seducer of the innocent into problematic drug use.

...government does not have the right to criminally prosecute any individual for the possession and use of any psychoactive substance.

and tear of a binge may be just what the doctor ordered to remind one of the futility of this as a way of life. So the increased availability of cocaine in a post-prohibition scheme will not lead to 50 million crack heads; in fact the immediate legalization of cocaine and the provision of it in some safer formats (such as beverages) is the right thing to do right now, but I'm just reviewing Professor Kleiman's big policy book, not writing my own.

Kleiman has gotten much credit for being "non-ideological" because he is willing to make marijuana available as a medicine and would consider some regulatory scheme for marijuana to reduce criminalization harm. I congratulate him for this and hope that he continues to be prominently consulted in the halls of power. However, he is ideologically a heartless liberal. He favors both income redistribution and significant constraints on those whom he believes will not control their behavior or drug use. He is accepting of forced therapy and other coercions. He acknowledges that drug control in a free society is not for the faint of heart, but I believe he thinks he might be just the man to take it on. Actually he is not, in my opinion, ideological enough. It is essential, for any progress, that we accept as a starting point the proposition that government does not have the right to criminally prosecute any individual for the possession and use of any psychoactive substance. If Kleiman, by some Burkean analysis, could convince me that government has the right, he should admit that it has long-since forfeited that right forever by expending it to the benefit of none on moralizing and holy wars. ■



Mark Kleiman, Ph.D.

MARK KLEIMAN RESPONDS:

I AM ALWAYS sorry to disappoint my friend John Morgan, from whom I have learned much, but I am not sorry to have written the book I wrote rather than the one he would have had me write.

"Against Excess" is a work of analysis rather than an essay in persuasion. It takes seriously the risks of excess drug-taking as well as those of excess regulation, and tries to show how policies could be crafted to minimize total harm. Morgan would have preferred a blanket denunciation of all governmental intervention in drug-taking; but why should I try to compete with Thomas Szasz? A world which already has "Ceremonial Chemistry" and "Our Right to Drugs" stands in no need of my services as an anti-prohibition polemicist.

"Against Excess" is a work of analysis rather than an essay in persuasion.

SZASZ, of course, cheerfully acknowledges that drug-taking may do harm to drug-takers and that they may in turn do harm to others, and that some of those harms might increase as a result of repealing all drug laws. He simply denies as a matter of principle that self-harm is ever an appropriate premise for legal restriction, and proposes to limit harms to others by enforcing criminal laws and eliminating social programs that spread costs rather than by restricting drug-taking itself. Szasz's position does not rest on any claim about the costs and benefits of prohibitions or lesser regulations: for him, any interference with drug-taking is a denial of fundamental rights.

Morgan adds to this normative position a sweeping empirical claim: that drug laws have no benefits, since they never decrease drug abuse and sometimes

increase it. Thus he asserts that repealing the current cocaine laws would not lead to an increase in cocaine abuse. I doubt it.

I base this doubt not on pharmacology, a field in which, as Morgan notes, I am an amateur subject to correction by professionals, but on economics, the field in which I have most of my formal training. The best-established proposition in economics is that prices matter: when something costs more, people use less of it.

Black-market cocaine costs twenty times its free-market price. Snorting or smoking it is therefore an expensive pastime; if it were cheaper, more people would do it more often. Running out of cocaine or the money to buy it is reportedly a frequent cause of ending a cocaine binge; if it were cheaper, people would not run out as quickly. Thus I conclude that repealing the cocaine laws would lead to a substantial (perhaps severalfold) increase in consumption.

SOME OF THIS INCREASE, as Morgan points out, would be in casual, recreational, controlled use; the proportion of all cocaine users who are problem users might actually fall as the total number of users rose. (The opposite, of course, is also possible, insofar as the high price of illicit cocaine serves as an aid to moderation.) But the large number of casual users of any drug use only a modest proportion of the total drug supply: half of all alcohol is used by only 10% of all drinkers. An additional ten million five-rock-per-week crack smokers — surely the upper limit of casual use by the most generous definition — could account for no more than a 50% increase in the physical volume of cocaine consumed. Therefore, if cocaine consumption rises substantially, there must be more frequent, high-volume users, or the existing heavy users must be increasing their frequency or dose.

It is reasonable to argue that the surge in cocaine use consequent to legalization would be temporary and self- correcting; after all, the gin craze of 18th-century England largely died out after sixty years or so, partly due to Methodism and the Temperance movement, both of which it helped to create. It is reasonable to argue that the damage consequent to increased use would be less than the damage now consequent to prohibition, though I have not seen that argument made in detail. It is reasonable to try to invent regulatory controls short of prohibition, in order to have less black-market crime than we have now and less cocaine abuse than we would have under full legalization. (My reasons for believing that such attempts are likely to fail are laid out in the book, and in my subsequent essay in the issue of "Political Pharmacology" issue of *Daedalus* from last summer, under the title "Neither Prohibition nor Legalization: Grudging Toleration in Drug Control Policy.") But it is not reasonable to deny that a substantial increase in heavy cocaine use will occur.

The Prohibition experience is only tangentially relevant here, since Prohibition was never able to curtail the availability, or increase the price, of alcohol nearly as effectively as the cocaine laws and their enforcement have restricted the supply of cocaine. The failure of Repeal to engender a workable set of alcohol controls is, I submit, much more instructive. The one substantial piece of restriction still in place — the ban on sales to minors — is, as Morgan notes, massively evaded. Morgan's answer: repeal the age restriction! This is surely a more intellectually honest answer than that of the run of anti-prohibitionists, who pretend that we can legalize cocaine for adults but ban it for minors, "just as we do with alcohol." But is Morgan truly convinced that allowing teenagers to buy twenty-five-cent rocks of crack in convenience stores will not get some of them into trouble?

IF WE PUT ASIDE the fantasy of repealing all of the drug laws and having nothing bad happen as a result, we are left with the question of what to put in their place. Answering that question involves a complicated juggling act, weighing the damage done by abuse, the costs of alternative controls, their administrative feasibility, and the likely extent and forms of evasion.

I am not, in fact, obsessively fascinated with Rube Goldberg regulation devices; laws, like theories, should be as simple as possible, but no simpler. However, designing a policy to keep

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The book's proposal for a marijuana-licensing scheme represents an attempt to end marijuana prohibition without creating a marijuana problem that resembles the current alcohol problem.

alcohol away from drunken drivers and drunken assailants and simultaneously make it conveniently available to the tens of millions who enjoy it and use it safely is not a problem with a simple answer. It is not surprising that some of the results seem, to Morgan and others, "weird." I don't much like them myself, except compared to the current situation, in which freely available alcohol accounts for more ill health, more deaths, more crime, and more arrests than all of the illicit drugs combined. The book's proposal for a marijuana-licensing scheme represents an attempt to end marijuana prohibition without creating a marijuana problem that resembles the current alcohol problem.

The only serious competitor to alcohol as America's #1 drug problem is tobacco, which kills even more users but accounts for much less dangerous behavior. Morgan is alone among the reviewers of *Against Excess* in noticing its proposal to make this killer drug, in its most dangerous form as cigarettes, unavailable to all but current addicts. The book argues in detail why neither taxation nor limits on promotion can do enough to reduce the cigarette death toll, about 400,000 Americans per year at most recent count. If Morgan or anyone else has a better alternative, I'm all ears, but I'm not willing to settle for the status quo.

Morgan accuses me of "pharmacocentrism": attributing to drugs irresistable powers of seduction. I deny it. The complex of drug, user, and circumstance is capable of yielding a wide variety of responses. Most users of every drug except nicotine in the form of cigarettes — including volatile cocaine — control their drug-taking without much effort, and most of those who develop bad habits break them off after a while without formal help. But some don't, and there is no good way to tell in advance who the vulnerable ones will be; almost certainly, they won't be the same for every drug.

The questions to ask about any drug/population combination are:

- What is the probability that someone who never becomes a "problem user" will nonetheless hurt herself or someone else as a result of using the drug? How serious are those injuries? (Many kids who kill themselves and others while driving drunk are not "problem drinkers," just a combination of unwise and unlucky.)
- What proportion of users develop problem use patterns (i.e., bad habits)?
- What is the rate of spontaneous recovery? What if any residual damage is left after such recovery? What is the rate of damage to those who develop more-than-transient bad habits, how long do those habits last, and how hard are they to break?

THE COSTS of long-term bad drug habits are high enough so that even a small probability constitutes a serious worry. Five out of six persons who play Russian Roulette once emerge without injury, and perhaps with an enhanced appreciation of the joys of being alive. With a twenty-chambered revolver, the odds of injury would fall to one in twenty, roughly the odds of someone who drinks becoming a chronic drunk; I doubt that the ratio would be lower for free-market cocaine. Those seem to me like lousy odds, and I'm willing to incur some costs to reduce the number of people exposed to them.

Morgan has my gratitude for attacking me as the tough-minded (not, I hope, "heartless") liberal that I am; the bizarre comedy of being mistaken for a reactionary quickly wears thin. Every liberal needs a guardian libertarian and a guardian conservative to keep him honest, and I appreciate Morgan's willingness to fill the libertarian role for me. But libertarianism, like everything else, is best if it stays within the bounds set by moderation, and if it walks humbly with the facts. ■

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For readers interested in purchasing a copy of "Against Excess", contact Botec Analysis at (800) 536-1277.

CORRESPONDENCE

Dear Rick,

In your report on the European College for the Study of Consciousness conference in Gottingen ("Worlds of Consciousness Researchers" MAPS Vol III, No.4) you made some remarks about terminology with which I have to disagree. You say that "the Europeans seem to have wholeheartedly adopted the idea that MDMA and MDE are part of a new class of drugs and that the word to describe that class is 'entactogen',... (meaning) 'to touch within.' " While it's true that different people may read the sense of a conference differently, I did not get any idea of such a terminological consensus (the idea of a different class of drugs, yes). You then go on to sat the you prefer "entactogen" to "entheogen", because the latter terms ignores the role of set and setting. But "entheogen", as far as I know, was proposed as an alternative to "psychedelics". I agree with you that "en-theogen" is not a good term: while these drugs/plants *can* facilitate a sacred, spiritual experience, this appears to be very much a function of set and intention. "Mind-manifesting" (psychedelic) is a more neutral term: the experiences elicited can be sacred/spiritual, or profane/diabolical, or mundane/prosaic. Like the alchemists' *mercurius* it can go the the heights of awe and beauty, or to the depths of filth and degradation (remember Manson).

My strongest disagreement however is with your argument against "em-pathogen." (If I may be allowed to defend the term I coined myself). You say "empathogen is too positively loaded to be scientifically precise". But psychologists and pharmacologists have long used precise language to precisely describe positive states: consider "euphoria" and "euphoriants", or "tranquilizers", or "mood-elevators", or "analgesics" for that matter — the dulling of pain is a positive experience. Actually, the main argument against "empathogen" that I heard from Dave Nichols [ed.note: Dave Nichols coined "entactogen"] and other scientists, is that it reminded them of something pathological or sick, like "pathogenic bacteria".

In my admittedly biased opinion, "entactogen" is a kind of meaningless term: "touching within" doesn't really tell you anything about this class of drugs, and it certainly doesn't distinguish them from "psychedelics" or "entheogens". Plus it ignores the single most obvious and striking aspect of MDMA experiences, which is the relatedness, the feeling of connectedness or communion with others, that ability to feel what others feel — in short the "empathic" resonance that is evoked. Which is the main reason why it proved to be such an outstandingly valuable therapeutic tool. Psychology graduate schools spend years trying to teach budding clinicians how to be empathic, and research studies have demonstrated repeatedly that therapist empathy is the crucial variable that makes a difference, not theory, not diagnosis, and not technique. Empathy is the conscious attunement with another's (or one's own) emotional state, together with understanding. It is not always necessarily a pleasant experience— particularly if the emotional state you are tuning in with might be one associated with abuse or trauma. While psychedelics like LSD *can* also yield this kind of empathic or compassionate resonance, they are often more likely to spin you into other dimensions of reality in which the emotional state of others is regarded with bemused indifference, if at all. On the other hand, MDMA and its phenethylamine relatives do seem to specialize in the healing intelligence of the heart.

My last point concerns the term (hallucinogen", a misunderstood concept. I agree with you of course about "psychotomimetic" and "model psychosis" being inappropriate terms for the LSD experience. Except if you are trying to model or mimic psychosis, then you can do it with LSD — all you have to do is to arrange the set and setting in the appropriate setting. This is exactly what the early research in the Army and CIA did. "Hallucinogen" comes from hallucination, generally taken to mean "seeing something which isn't really there". This would be an apt term for certain kinds of amphetamine and alcohol intoxications; but it clearly doesn't fit for psychedelics. You're seeing something that *is* there, that you normally don't see, because the "doors of perception" have been closed.

But this is not what 'hallucinate' originally meant. According to Eric Partridge's Origins, hallucinate is derived from the Latin *hallucinari* or *aluinari*, "to wander in one's mind", itself derived from the Greek *aluein*, "a homeless wandering, a restless roaming", which the etymologist add is "o.o.o." - "of obscure origin". To hallucinate is to wander in one's mind, to roam restlessly in the psyche, which Heracleitus said was boundless. So a "hallucinogenic" plant or drug is one that generates mind wandering, mental movements, restless roaming on inner journeys — and that, I submit, is a pretty accurate description of the effects of psychedelics.

Regards,
Ralph Metzner
18210 Robin Avenue
Sonoma, CA 95476

The following exchange of letters was prompted by a newspaper interview with Rick Doblin.

January 19,1993

Dear Mr. Doblin,

Allow me to be the self-appointed witness, voice for the many who lost theirs when psychedelic drugs robbed them of their sanity. The roll-call is long and varied.

I remember the young father, son on an internationally known father, who in '62 was treated with LSD for alcholism in New Jersey. He became a chronic schizophrenic, unable to work or raise his family. I gave his 3 year old daughter a birthday party, which the family was gradually falling apart.

I remember the promising musician, a future star, at 21 who, after ingesting LSD at 28, has since then spent more time in hospitals than out and some time in jail.

I know of two sons of phsyicians, in two different parts of the country, who became chronic schizophrenics. One is roaming the country, one of the faceless mentally ill/homless, the other committed suicide in a lucid moment, rather than live haunted by nightmares; he spent most of his time in state hospitals.

I am quite familiar with the status of research on the causes of schizophrenia and the fact that the onset usually is in the early 20's. Thus there is no absolute proof that these tragic case histories were caused by LSD alone. But I was also careful in the choice of examples: none of these young men had a family history of mental illness and none showed early premorbid signs; in each case the course was more like a "bad trip" that never ended.

I do not necessarily oppose renewed research but find the tone of the statements made by you a bit polemic rather than dispassionately scientific, as evidenced also by the lack of reference to casualties of past experiments and an absence of a statistical approach. I am also wondering about your knoweldge base of the psychiatric literature on this matter, public policy studies being an important but different area of knowledge.

Sincerely,
E. Veronica Lenard

February 9,1993

Dear Ms. E. Veronica Lenard,

I'm writing in response to your thoughtful and concerned letter of January 19, 1992 about the risks of LSD. Only rarely do I receive a written response to news articles about my work, rarer still are letters that acknowledge the complexity of the topic. When I do receive such letters, I try to respond as fully as possible.

You inquired about my knowledge base of the psychiatric literature on psychedelic research since public policy is a separate discipline. You are totally correct as to the differences, three of my qualifying exams for entrance into the Kennedy School's Ph.D. program were in mathematical problem solving (analytics), microeconomics, and strategic management in the public sector. Only the fourth exam, in experimental methodology, applies both to psychedelic research and public policy.

Though my Kennedy School education had nothing directly to do with the literature on psychedelic research, my undergraduate education did. I attended a small, experimental school in Florida called New College of the University of South Florida, the honors college of the state system. Students could design their own major and senior theses were required of all students. My major was in psychology with a special focus on psychedelic research and my thesis was a long-term follow-up to a classic experiment in the psychedelic literature, which I am enclosing for your review. You should note that I specifically discuss the casualties of the research.

As a complement to my academic training in traditional psychology, I have studied the field of transpersonal psychology for three months at Esalen Institute under the guidance of Dr. Stan Grof, one of the founders of transpersonal psychology and the leading LSD researcher in the world. In addition, I graduated from Dr. Grof's three year training program (two weeks every six months for three years) in holotropic breathwork, a therapeutic approach that uses breath to catalyze deep inner experiences. Furthermore, I have undergone my own psychotherapy for many years.

The main point I take from your letter is the concern that psychedelics, especially LSD, can catalyze schizophrenia in unpredictable ways in people without previous symptoms. You cite several cases of people who may have been driven mad, even suicidal, as a direct use of LSD. My response is that the LSD experience is a complex interaction between the drug, the mind set of the person, and the setting in which the drug was taken. While we can agree that LSD did help to catalyze some people's schizophrenic episodes, both acute and chronic, I do not feel that LSD itself is solely responsible. Nevertheless, LSD is a very powerful drug not to be taken lightly without preparation and careful attention to set and setting.

What these problems from uncontrolled use suggest for research is an open question. The incidence of these events in controlled studies is exceedingly rare and are discussed by Drs. Yensen and Dryer in their FDA-approved protocol for the study of the use of LSD in the treatment of substance abuse. They write as follows:

"A study by Dr. Sidney Cohen (Lysergic acid diethylamide: side effects and complications. Journal of Nervous and Mental Disease, 130:325-33, 1960) reviewed the experiences of 44 researchers, 5000 patients, and more than 25,000 sessions, with dosage of LSD of between 25 and 1500 micrograms and dosages of mescaline of between 200 to 1000 milligrams, with frequency of administration of between 1 and 80. The rate of suicide for experimental subjects was 0/1000 and for 0.4/1000 for

psychiatric patients. For purposes of comparison, the suicide rate for the general population is .11/1000 and the rate for schizophrenic psychiatric patients is 40/1000. According to Cohen, the rate of psychosis lasting more than 48 hours was 0.9/1000 for experimental subjects and 1.8/1000 for psychiatric patients. For comparison, the incidence of schizophrenia in the general population is a little under 1% (10/1000). If the estimated frequencies of depression with psychotic features, mania with psychotic features and schizophrenia with affective syndromes are combined the sum is the total estimated frequency of between 0.7 and 1.6%.

From these statistics and our previous clinical experience with LSD in the target population for this study, we conclude that the dangers of the experimental procedure with LSD are no greater than those involved with the conventional psychiatric treatment."

In my view, the risks are worth taking in an experimental context, especially when one is trying to treat conditions that have risks of their own and have not been successfully treated by conventional medicines.

Yet another question concerns the use of these drugs by healthy persons for personal insight, religious inspiration, or even simple pleasure. Here my view is that these sorts of decisions are best made by individuals rather than by the government. Sanctions on personal consumption infringe too much on personal liberty, sanctions on inappropriate conduct are a better way to control problem behavior associated with drug use.

If you have any comments or questions, I would welcome the continuation of our dialogue. In addition, I am enclosing the latest copy of the MAPS newsletter for your review.

Thanks for taking the time to write.

Sincerely yours,

Rick Doblin

February 20,1993

Dear Rick Doblin,

Thank you for the informative material you sent me and specially for the personal letter. I ocassionally express my response to published articles in personal letters and usually do not get any response...

I am reassured that you and others in your organization do have a background in psychiatry and related fields. The research proposals sound carefully thought out. Here and there, in the newsletter, an ideological bias peaks out but, then, we do have our reasons to invest our energies where we do. And, no, not all my misgivings are put to rest but quite a few are.

Thanking you again,

Veronica Lenard

The following letter is from the graphic designer who donates many long hours of his time to producing the MAPS' newsletter.

November 28,1992

Dear Rick,

...why do I continue to do this? See the attached photocopies of two items from the local newspaper this week. First day: a front page, feature story, with color photo, of a local pot bust using high-tech, infra-red heat sensing, gestapo equipment. The following day, an editorial endorsing more of the same and equating marijuana with violence to rationalize continued and ever more... When I read stuff like this I get very angry, and depressed. There are *so many* other things our taxes *could* be used for...

But, why let that negative energy burn me out? Instead, you and MAPS allow me an opportunity to put that energy to a good use. That, added to what I believe about the role of psychedelics as an evolutionary catalyst is why I welcome the opportunity to be of *any* assistance to the MAPS agenda, and is why I keep on. Thank you for letting me be a part of it!

Roger

Psychedelic Prisoners Newsletter

A group of prisoners has begun publication of "The Psychedelic Prisoners Newsletter" to aid and network with those imprisoned for psychedelics. They request donations of postage stamps. The contact address is:

PPN,
107 Tall Trees Court,
Frankfort, KY 40601

Any letters, articles, etc. would be greatly appreciated. ■

Dear Mr. Doblin,

I had to write this "thank you" note for the information you gave me over the phone. Unlike most people I like to be informed about what I am using. I have taken an interest in MDMA and ketamine for the possibilities it seems to offer, especially for me and persons suffering from head injuries. I am not a medical person and I have no education in this field. But in 1986 I was a Canadian National Team Cyclist. Well, I was hit by a car and suffered a head injury and nerve damage. I was left with depression, memory loss, mood swings, etc. I spent 9 months in a head injury day clinic and had a few unsuccessful sessions with a psychologist and psychiatrist. After putting everything away in a corner of my mind, I got on with my life (I thought). In May, 1992, I did MDMA (illegally) for the first time. It made me deal with a large number of locked up problems and seemed to open "closed off" or injured mind areas and allowed me to recall in great joy some of my past I had lost due to my head injury. I can never look back now and I am interested in being involved in any testing for medical research that I can. I will be waiting to join your group and receive and promote your newsletter and cause.

Many good trips,

A.L.

PUBLICATIONS AVAILABLE FROM MAPS

(Simply circle the ones you want and enclose payment)

1. Exploring Ecstasy: A Description of MDMA Users. Final Report to the National Institute on Drug Abuse. Marsha Rosenbaum, Principal Investigator, Patricia Morgan, Co-Principle Investigator, Jerome Beck, Project Director. 253 pages. Cost - $30.
2. The MDMA Controversy: Contexts of Use and Social Control, Jerry Beck's Ph.D thesis for a Doctor of Public Health from the U. of Cal., Berkeley. 271 pages. Cost - $30.
3. Hallucinogen-Assisted Psychotherapy: A Survey of the Swiss Association for Psycholytic Therapy, Dr. Ernst Benz's Ph.D. thesis for the University of Zurich, 100 pages. Available only in German. $30.
4. Through the Gateway of the Heart, edited by Sophia Adamson and Ralph Metzner and signed by Ralph Metzner, $9.95 plus $1.50 postage.
5. Proceedings of the MAPS Swiss Psychedelic Research Methodology Conference, talks and papers by Albert Hofmann, Lewis Seiden, George Ricaurte & others. 150 pages, $25.
6. PIHKAL by Sasha and Ann Shulgin. $18.95 (+$4.00 p/h), California residents add $1.38 tax.
7. MDMA Psychotherapy in End-Stage Cancer Patients -The Protocol - 49 pages, $10.
8. The Good Friday Experiment Follow-Up, the article on psychedelics and experimental mysticism by Rick Doblin, published in the August, 1991 *Journal of Transpersonal Psychology*, $8.
9. Against Excess: Drug Policy for Results, Mark A. R. Kleiman - $26.
10. Journal of Nervous and Mental Disease paper analyzing self-reports of 20 psychiatrists about their own MDMA experiences, Revision Magazine article on MDMA, and December 1992 High Times interview with Rick Doblin, 23 pages, $8.
11. Complete set of MAPS Newsletter back issues, 1988–1p., 1989–4p., 1990–10p., 1991–12p., 1991–4p., 1991–12p., 1992–16p., 1992–24p., 1992–36p., $25.

Now Available – A Complete Set of Back Issues of the MAPS Newsletter

AUDIOTAPES AND VIDEOTAPES AVAILABLE FROM MAPS

1. MAPS February, 1990 Benefit Video – 3.5 hour Extended Version, $35.
2. MAPS February, 1990 Benefit Video – 1.5 hour Artistically Edited Version, $35.
3. Stanford, February, 1991 Conference Video – 2 hour Artistically Edited Version, $35.
4. Prague, June, 1992 Video – 2 hours Rough Unedited Version, Panels #1 & 2, $35
5. Prague, June, 1992 – 3 hour audiotape of MAPS discussion on working with the terminally ill with psychedelics, Ram Dass, Ken Ring, and Richard Yensen, $20.

On February 24,1990 a unique group of speakers gathered to discuss "Psychedelics in the 1990's-Regulation or Prohibition" as part of a benefit for MAPS. These speakers included Jerry Beck, Ram Dass, Rick Doblin, Bruce Eisner, Laura Huxley, Emerson Jackson, Mark Kleiman, Timothy Leary, Dennis McKenna, Terence McKenna, Ralph Metzner, Andrew Weil, and Robert Zanger.

On February 2 and 3, 1991, a large conference on psychedelics was held at Stanford University featuring Tim Leary, Terence McKenna, Francis Huxley, Ralph Metzner, Robert Anton Wilson, Steven Gaskin, Mountain Girl, John Lilly, Rick Doblin, Charles Grob, David Nichols, Alison Kennedy and others. Compilation by Sound Photosynthesis.

On June 24 & 25, 1992 the International Transpersonal Association held a conference in Prague. Speaking about the past history of psychedelics were Ram Dass, Stan Grof, Ralph Metzner and Richard Yensen. Speaking about current research were Rick Strassman (DMT), Yevgeny Krupitsky (Ketamine), and Juraj Styk (LSD and MDMA).

1801 Tippah Avenue
Charlotte, NC 28205
Phone (704) 358-9830
FAX (704) 358-1650

❑ YES! I would like to join the Multidisciplinary Association for Psychedelic Studies.
Enclosed is my tax-deductible contribution of: ❑ $30 ❑ $100 ❑ $250 or more ❑ $ other____
❑ If outside the US, add $10 for postage. **NOTE: Your donation *will not* be spent on animal studies.**

Name

Address

City State Zip Country

PATRONS – CHECK THE MEMBERSHIP BENEFIT YOU PREFER:

❑ I prefer the Prague 2-hour rough unedited videotape of Panels #1 & 2.
❑ I prefer the MAPS Benefit 3.5 hour Video.
❑ I prefer the MAPS Benefit 1.5 hour Video, artistically edited by Sound Photosynthesis.
❑ I prefer the Bridge Conference 2 hour Video, artistically edited by Sound Photosynthesis.

MAPS Membership Information

Rick Doblin, MAPS President

MAPS is a membership-based organization working to assist psychedelic researchers around the world design, obtain governmental approval, fund, conduct and report on psychedelic research in humans. Founded in 1986, MAPS is an IRS approved 501 (c)(3) non-profit corporation funded by tax deductible donations from about 450 members. MAPS' founder and current president, Rick Doblin, is on leave of absence from the Ph.D. program in Public Policy at Harvard's Kennedy School of Government and has previously graduated from Stan and Christina Grof's Holotropic Breathwork 3 year training program.

MAPS has previously funded basic scientific research in both humans and animals into the safety of MDMA (methylenedioxymethamphetamine, Ecstasy) and has opened a Drug Master File for MDMA at the U.S. Food and Drug Administration. MAPS is now focused primarily on assisting scientists to conduct human studies to generate essential information about the risks and psychotherapeutic benefits of MDMA, other psychedelics, and marijuana, with the goal of eventually gaining governmental approval for their medical uses.

Albert Einstein wrote that *"Imagination is more important than knowledge."* If you can even faintly imagine a cultural re-integration of the use of psychedelics and the states of mind they engender, please consider joining MAPS in supporting the expansion of scientific knowledge in this area. Progress is possible with the support of individuals who care enough to take individual and collective action. In addition to supporting research, your contributions will return to you the following benefits:

The MAPS Newsletter Each quarterly newsletter will report on MAPS research in progress. In addition to reporting on our own studies, the newsletter will focus on psychedelic research both in the US and abroad and on conferences, books and articles of interest. Issues raised in letters and calls from members will be addressed, as will political developments that effect psychedelic research and usage.

General Membership: $30. *(If outside US add $10 postage.)*

General members will receive the newsletter and the June 1992, **Journal of Nervous and Mental Disease** article on the self-reports of 20 psychiatrists about their personal use of MDMA, with critique and commentary by Dr. Charles Grob, **Revision Magazine** article on MDMA by Ralph Metzner.

Supporting Membership: $100. *(If outside US add $10 postage.)*

Supporting members will receive all the benefits sent to the General Members plus the Prague audiotapes of the MAPS discussion on working with the terminally ill with psychedelics, featuring Ram Dass, Ken Ring and Richard Yensen.

Patron: $250 or more. *(If outside US add $10 postage.)*

Patrons will receive all the benefits sent to Supporting Members plus one item of your choice from among the four different videotapes. Patrons may also request research updates at any time on matters of personal interest and will receive advance information and discounts to MAPS events .

"We must free science and medicine from the grasp of politics and give all Americans access to the very latest and best medical treatments."

President W. J. Clinton, January 22, 1993

"4/19/43 16:20:0.25MG TARTRATE. TAKEN DILUTED WITH ABOUT 10CC WATER. TASTELESS. 17:00: BEGINNING DIZZINESS, FEELING OF ANXIETY, VISUAL DISTORTIONS, SYMPTOMS OF PARALYSIS, DESIRE TO LAUGH. I ASKED MY LABORATORY ASSISTANT, WHO WAS INFORMED OF THE SELF-EXPERIMENT, TO ESCORT ME HOME. WE WENT BY BICYCLE, NO AUTOMOBILE BEING AVAILABLE BECAUSE OF WARTIME RESTRICTIONS ON THEIR USE. ON THE WAY HOME, MY CONDITION BEGAN TO ASSUME THREATENING FORMS. EVERYTHING IN MY FIELD OF VISION WAVERED AND WAS DISTORTED AS IF SEEN IN A CURVED MIRROR. I ALSO HAD THE SENSATION OF BEING UNABLE TO MOVE FROM THE SPOT. NEVERTHELESS, MY ASSISTANT LATER TOLD ME THAT WE HAD TRAVELLED VERY RAPIDLY. FINALLY, WE ARRIVED AT HOME SAFE AND SOUND, AND I WAS JUST BARELY CAPABLE OF ASKING MY COMPANION TO SUMMON OUR FAMILY DOCTOR AND REQUEST MILK FROM THE NEIGHBORS." - "L.D, MY PROBLEM CHILD" BY ALBERT HOFMANN

50TH ANNIVERSARY
ALBERT HOFMANN'S
BICYCLE RIDE

APRIL 19, 1943 • 1993