

MAAPS

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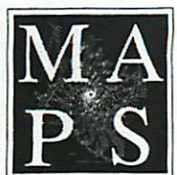
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Cover: "Ripple" – photos and digital assembly by a MAPS contributor.

"During the night, fog moves over the dunes. Morning breezes carve delicate shapes in the moist sand. The sun chases away the fog. The sand dries and these ephemeral creatures return to dust."

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MAPS (Multidisciplinary Association for Psychedelic Studies) 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. MAPS has previously funded basic scientific research into the safety of MDMA (3,4, 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 government approval for their medical uses. Interested parties wishing to copy any portion of this newsletter are encouraged to do so and are kindly requested to credit MAPS including name and address. The MAPS newsletter is produced by a small group of dedicated volunteers. Your participation, financial or otherwise, is welcome. © 1995 Multidisciplinary Association for Psychedelic Studies, Inc. (MAPS) 1801 Tippah Avenue, Charlotte, NC 28205. Phone: (704) 358-9830. Fax: (704) 358-1650. Internet: rick@maps.org or sylvia@maps.org, and on Web: <http://www.maps.org>



MAPS

BULLETIN OF THE MULTIDISCIPLINARY ASSOCIATION FOR PSYCHEDELIC STUDIES

Baby Steps



engaging in a struggle (chase) to recreate Eden here on earth. ■ Eden has turned our family life utterly upside down, constantly tugging at our hearts with his joyous smile, perplexed and quizzical look, and poignant cry. My wife, Lynne, took maternity leave for four months, then returned to work. Then I became Mr. Mom, foolishly assuming I could work as before with just a few touching interludes for diaper changes and feeding while Eden amused himself alongside me in the MAPS office. I was just as vulnerable to the myth of Supermom as many others. I thought I could work on MAPS, take care of a baby, make progress on my dissertation and have time for a relationship with my wife all at the same time. Now I know better. Sometimes it seemed that Eden was more of an obstacle to my work than the War on Drugs. We finally decided to get help in the form of part-time child care. We now seem to have a workable balance as evidenced by this latest, bigger-than-ever MAPS newsletter, thanks in no small part to the skills of Sylvia Thyssen who still manages to get a lot done with Eden crawling around her feet. ■ At a recent conference, I spoke with a genuinely idealistic DEA official who believes in the value of his work. He suggested that my new status as a parent might change my attitude toward drug policy, making me prohibition to protect children. I've given see Eden look up at me, vulnerable and drug abuse. However, I also want to pro-aggerates the risks of drug use (for ex-new MDMA neurotoxicity research, p. didn't suppress scientific research into juana (p.33), hinder the establishment of psychedelics (pp. 35 and 39), or create teristic of the War on Drugs. As food for this issue contains an article that dis-ics in rites-of-passage for adolescents (p. 41), a feature of every society that has successfully integrated the use of drugs into its culture. ■ This issue reports on most of the psychedelic research projects in humans currently underway around the world, including studies of MDMA, ibogaine, psilocybin, DMT, ketamine and LSD. Of special note is the last in a multi-year series of articles about Dr. Rick Strassman's psilocybin and DMT research (pp. 16, 17, and 23). Dr. Strassman has moved to Canada, where psychedelic research is not yet permitted. His pioneering work will be sorely missed. ■ Evidence demonstrating that psychedelics can be used safely in research continues to accumulate, laying the foundation for further studies into therapeutic uses. Given the lack of financial support from the government or the pharmaceutical industry for research into the beneficial uses of psychedelics or marijuana, the efforts of private citizens are all the more important. This issue contains the reports of two organizations, the Albert Hofmann Foundation (p. 45) and the Heffter Research Institute (p. 49), that are working along with MAPS to find support for preserving the psychedelic research of the past and catalyzing the psychedelic research of the future. The first collaborative project of all three organizations is to create a psychedelic research bibliography on the Internet (p. 52). MAPS' annual financial report is included in this issue for your review (p. 60). ■ Out of our collective vision emerges a fledgling scientific renaissance. ■ Rick Doblin, MAPS President, September 1995. ■



DEN CHASE DOBLIN, MY FIRST CHILD, was born on December 12, 1994. Eden's name is meant to remind us that our challenge is to live in a state of joy and delight, while also en- gaging in a struggle (chase) to recreate Eden here on earth. ■ Eden has turned our family life utterly upside down, constantly tugging at our hearts with his joyous smile, perplexed and quizzical look, and poignant cry. My wife, Lynne, took maternity leave for four months, then returned to work. Then I became Mr. Mom, foolishly assuming I could work as before with just a few touching interludes for diaper changes and feeding while Eden amused himself alongside me in the MAPS office. I was just as vulnerable to the myth of Supermom as many others. I thought I could work on MAPS, take care of a baby, make progress on my dissertation and have time for a relationship with my wife all at the same time. Now I know better. Sometimes it seemed that Eden was more of an obstacle to my work than the War on Drugs. We finally decided to get help in the form of part-time child care. We now seem to have a workable balance as evidenced by this latest, bigger-than-ever MAPS newsletter, thanks in no small part to the skills of Sylvia Thyssen who still manages to get a lot done with Eden crawling around her feet. ■ At a recent conference, I spoke with a genuinely idealistic DEA official who believes in the value of his work. He suggested that my new status as a parent might change my attitude toward drug policy, making me prohibition to protect children. I've given see Eden look up at me, vulnerable and drug abuse. However, I also want to pro-aggerates the risks of drug use (for ex-new MDMA neurotoxicity research, p. didn't suppress scientific research into juana (p.33), hinder the establishment of psychedelics (pp. 35 and 39), or create teristic of the War on Drugs. As food for this issue contains an article that dis-ics in rites-of-passage for adolescents (p. 41), a feature of every society that has successfully integrated the use of drugs into its culture. ■ This issue reports on most of the psychedelic research projects in humans currently underway around the world, including studies of MDMA, ibogaine, psilocybin, DMT, ketamine and LSD. Of special note is the last in a multi-year series of articles about Dr. Rick Strassman's psilocybin and DMT research (pp. 16, 17, and 23). Dr. Strassman has moved to Canada, where psychedelic research is not yet permitted. His pioneering work will be sorely missed. ■ Evidence demonstrating that psychedelics can be used safely in research continues to accumulate, laying the foundation for further studies into therapeutic uses. Given the lack of financial support from the government or the pharmaceutical industry for research into the beneficial uses of psychedelics or marijuana, the efforts of private citizens are all the more important. This issue contains the reports of two organizations, the Albert Hofmann Foundation (p. 45) and the Heffter Research Institute (p. 49), that are working along with MAPS to find support for preserving the psychedelic research of the past and catalyzing the psychedelic research of the future. The first collaborative project of all three organizations is to create a psychedelic research bibliography on the Internet (p. 52). MAPS' annual financial report is included in this issue for your review (p. 60). ■ Out of our collective vision emerges a fledgling scientific renaissance. ■ Rick Doblin, MAPS President, September 1995. ■

phase 1 mdma research update

Charles S. Grob, MD
Harbor-UCLA Medical Center

THE HARBOR-UCLA PHASE I MDMA research study is nearing completion. After fifteen months of comprehensive investigation, only three additional

subjects remain to be evaluated. Acute physiological and psychological reactions to MDMA have been measured, as have long term effects on central nervous system function. Although final analyses of collected data await inclusion of our remaining subject group, to date we have observed overall responses to the effects of MDMA administration to be within the safe and acceptable range in normal volunteers pre-screened to exclude those with significant medical or psychiatric disorders.

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MDMA's risk/safety profile

As the issue of MDMA's relative safety has once again achieved prominence and notoriety in recent news publications, under such lurid headlines as "Ecstasy Found to Cause Brain Damage," it appears to be pertinent and timely to once again comment on the issue of MDMA's relative risk/safety profile. Whereas our subjects were administered MDMA assayed to be 99.8% pure, what passes for the drug "on the street" is assuredly not always what it is purported to be. And although our volunteers are subjected to the rigors of a medical research unit setting, they are assured of intensive monitoring of their physiological and psychological status and control of extenuating factors which may influence acute response to the drug. Indeed, observations of some of the basic physiological parameters measured do point to the need for users of MDMA to maintain vigilance regarding their personal health and safety.

Physiological effects

Two areas in need of mention are the measured reactions of body temperature and blood pressure to MDMA administration. We have observed, particularly with the higher range of MDMA dosages we have administered, a mild elevation of core body temperature during the first few hours of the drug's

effect. Given the occasional reports of apparent MDMA induced fatal hyperthermia, particularly in the British medical literature, our observations lend further credence to the need for MDMA users to take necessary preventive measures to minimize dehydration and exposure to environments with excessively high ambient temperature. Our second observation pertinent to the question of MDMA's relative safety has been a mild yet persistent elevation of blood pressure, particularly during the "peak" period of the drug's effect. While not of such magnitude as to be injurious to individuals in good health, these changes to both systolic and diastolic blood pressures may put individuals with preexisting cardiovascular disorders at some risk. Furthermore, the potential dangers of drug interactions must also be raised in this context, as the combination of MDMA with a variety of prescription and over-the-counter drugs is known to exert more severe effects on blood pressure. Although our findings reinforce the importance of pre-screening MDMA users, monitoring environmental factors which could affect vital signs and avoidance of particular polypharmacy regimens, it should also be noted that many (if not most) drugs used in contemporary medical practice similarly possess risks and inherent dangers if used unwisely.

Central nervous system effects

Our work at Harbor-UCLA examining the effects of MDMA has also involved intensive scrutiny of central nervous system response. Our design has been to study neuropsychological testing profiles, neuroendocrine challenge assays, SPECT (single photon emission computerized tomography) scans and MR (magnetic resonance) spectroscopies. The latter two investigational technologies, SPECT scans and MR spectroscopies, have yielded particularly valuable information. Although detailed description of these findings must await inclusion of data from our remaining subject group, it appears from preliminary analyses that at least some of the MDMA users we have studied do exhibit significant differences in brain function, as measured by the procedures we have utilized, when compared to control subjects recruited for similar evaluation. [See back cover of this issue.] Given the degree of medical attention and consequent public concern aroused by the specter of "neurotoxicity," however, we believe it is essential to employ caution in interpreting such findings. Indeed, it is far from certain that if such changes as we are observing are replicated with further studies, that in fact they will prove to be evidence of "brain damage."

For the past decade, discussion of MDMA's central nervous system effects has been dominated by reports on laboratory animals of serotonergic axonal degeneration. By labeling such findings as "neurotoxic," and interpreting the significance of subsequent evidence of axonal regeneration in an entirely negative light, comprehensive and impartial assessment of MDMA's potential for salutary effect has been impeded. There is no doubt, as laboratory findings reveal, that MDMA may exert profound effects on the brain. That these effects will inevitably lead to adverse clinical outcomes, however, is far from proven. Similarly, the possibility that such alterations in brain function may be the substrate for therapeutic change has neither been proven nor explored. The only means by which we will be able to determine the full range and implications of MDMA's effects in humans is through diligent, objective and open investigation. It will only be then that we will fully establish MDMA's risk/benefit ratio, and clarify its potential for injurious effect versus its inherent capacity to facilitate healing and positive change.

Acknowledgements

Special acknowledgment needs to be accorded the volunteer subjects of the Harbor-UCLA Phase I research investigation of MDMA, who have generously given their time and energy to this study. Each has had to make multiple visits to the Medical Center for the many evaluations essential for a study of this type. The procedures they have had to endure, from physical examinations, psychiatric interviews and neuropsychological testing, through SPECT scans and MR spectroscopies, to their three experimental drug sessions, have been a demonstration of their tremendous commitment, persistence and stoicism. Without their dedication to this project, it would not have been possible to collect the valuable data necessary to achieve our task of rigorously and openly exploring MDMA's range of effects.

Request for funding support

Funding for the Phase I MDMA study was obtained from the Harbor-UCLA Research and Educational Institute, MAPS and individual donors. In these days of decreasing allocations of government funding for all scientific research, it has not proved possible to obtain the level of grant support standard for investigations of this sort. Indeed, given the controversial history surrounding MDMA, the reticence of federal agencies to provide funding has come as no surprise. Nevertheless, given the great need to learn more about this unique drug, which has been the object of self-experimentation by millions of individuals in the United States and Europe and about which unfortunately so little is truly known, it is our intent to actively pursue additional investigations. Vital public health and safety questions persist and necessitate definitive answers, new areas of potential application in the treatment of disorders and conditions refractory to conventional therapies need to be explored. In order for this work to continue, however, additional funding must be obtained. It is our fervent hope, indeed our expectation given the gravity of these explorations as we approach the final years of this century, that such support will be made available. It will only be then, with the continued generosity of our donors and dedication of our subjects, that the critical questions which remain before us will be answered. •

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diary of an mdma research subject: harbor-ucla phase 1 study

handyman@wla.com

Friday, May 26th

I WAS SUNNING on the apartment porch reading my latest copy of MAPS. Finished the research update article on Dr. Grob's MDMA study at Harbor UCLA Medical Center. A bold-typed excerpt stuck in my mind: "We are interested in recruiting individuals who have personally used MDMA in excess of several hundred times and who are willing to undergo brain imaging procedures as well as psychiatric and neuropsychological evaluation." Perfect, I thought. I had just concluded two years of MDMA self-therapy in which I dosed two to four times a week and I wanted to know if there was any evidence of toxicity. I called Dr. Grob and told him briefly what I'd been doing with MDMA. He said he'd be interested in having me in the study. Said his assistant would call within a few days to work out the details.

Wednesday, May 31st

Got a call from the assistant and she took a verbal history of my drug usage (recreational and medicinal). Felt myself being a little defensive about the substances and frequency and asked her if I seemed testy. She said yes, so I apologized and said I didn't want to self-select myself out of the study before I even got in. She chuckled and asked if I could come in the following Tuesday. I said yes.

Tuesday, June 6th

Met with the assistant and answered a two hour battery of questions called a Structured Clinical Interview for DSM-III (SCID). Appeared to be a standard screening interview designed to screen those with mental disorders. Looked like I was passing until I brought up my predilection for becoming involved in relationships that sooner or later sent me into an emotional tailspin. The ensuing depressions I would feel apparently weren't considered pathological enough to disqualify me. I felt mildly comforted by not being diagnosed as having a history of clinical depression.

Tuesday, June 13th

Underwent two hours of neuropsychological testing. Had fun. Felt like I was in pre-school. When it was all over, the psychologist seemed impressed so I said, "Well, looks like drugs don't turn your brains to fried eggs after all." "Yeah, you could have been a rocket scientist," she somewhat seriously scolded. "And blown up the world," I countered. She smiled and let it drop.

Went to a nearby building and got a mini-physical and answered questions about my medical and health history. There was no physical reason precluding my participation in the study so all that remained was to begin the preliminary MRI and SPECT brain scans. I was told that it could be weeks before I could get those scheduled.

Saturday, July 22nd

It had been over five weeks. Finally the scans were scheduled for today. I arrived at the imaging center and got an injection of radioactive dye for the SPECT scan. Since it would take around a half hour for the dye to get into the brain, I was sent over to the MRI building and spent the next hour and forty minutes with my full body encased within what I imagined an iron lung must have been like. In spite of the humming and clanking sounds which the assistant told me were due to the electricity involved, I was able to drift in thought enough to make the time seem shorter. Went back for the half hour SPECT scan afterwards and felt much more comfortable as this procedure only required the enclosure of my head and it was comparatively noise free. I left feeling excited about having finished all the preliminary steps prior to the actual MDMA sessions.

**Friday, July 28 -
Medicine Day One**

6:30 AM: Woke up! Much earlier than usual. Arranged for a ride to the hospital - otherwise I would have had to stay overnight since they won't release anyone unless they're picked up at the end of the day. Having grown

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up a military brat I can be quite comfortable with institutionalized surroundings and procedures. I even welcomed them in this study. But on a Friday night after taking pharmaceutical MDMA, I thought I'd rather go dancing than stay overnight in a hospital (thank you very much anyway for the concern over my safety).

8:30 AM: Arrived at the Clinical Studies Center (CSC) on the fifth floor of the hospital. Found out there are always several ongoing studies of various kinds in progress – the MDMA study was just one of them. Felt cranky from not enough sleep. I was sad over being in the midst of what seemed to be another failed attempt at a relationship resurrection. Figured that the way things were going, today would be the placebo day.

8:45 AM: Greeted nurse. Signed consent form while she took initial blood pressure, pulse and temperature. Had height and weight measured. 73.5 kilos — that would mean that if this is not placebo day, today's dose would be either 1.75 mg or 2.5 mg times my weight, i.e. 128 mg or 183 mg. Felt a little better.

9:00 AM: Was taken to my room and got my official patient wristband. A urine sample was collected. I was then served a decent breakfast by hospital standards. There was another guy already assigned to my room from a diabetes study. I felt concern over having to watch the O.J. Simpson trial during my MDMA experience.

9:30 AM: Dr. Grob came by to meet me and talk. Fortunately, he saw to it that I got a private room and I was transferred before we started talking.

10:00 AM: The nurse reviewed the stuff I'd be filling out at regular intervals for the rest of the day. Starting at 1:45 PM, I was to indicate my alertness and mood every 15 minutes by marking the appropriate places on the "Altered States Graphic Profile." Several other times I'd be filling out a "Profile of Mood States" and a "Self Evaluation Questionnaire." Only once, near the end, would I be completing the "Hallucinogenic Rating Scale." All this seemed clear and there was not much to do for a couple of hours so I took a nap.

12:30 AM: Before my blood was drawn, a butterfly needle was inserted into my arm to facilitate the blood-draws that would be done every half hour until 8:00 PM. I didn't find this distracting at all. Next my pulse and temperature were taken. This would also be done every half hour until 8:00 PM.

2:00 PM: Nurse came in and said she had my "medicine." It was charming to hear MDMA referred to in that way. I sat up eagerly as she opened the first little manila envelope labeled "Session 1, MDMA Study, Capsule A." I would have preferred the full dose all at once but an FDA rule required that 20 percent be given first to see if there would be an adverse reaction.

2:20 PM: It was time for capsule B of my medicine. Was a little excited as I swallowed the second large blue capsule and wondered if I had gotten a full dose of sugar or of MDMA (128 mg or 183 mg). Put my pen and paper in hand, looked out the window and waited.

3:00 PM: It wasn't placebo day. Felt a familiar little tingle in my mouth and lightness in my limbs. The room seemed brighter and so did my mood. My sense of smell was heightened and I wished I'd worn a fresher T-shirt. When the nurse came in for the vitals and the blood-draw, I apologized for being cranky in the morning. The MDMA felt milder than what I was used to so I thought I had probably taken the lower of the two doses. I wasn't used to taking MDMA alone so I didn't feel the added euphoria of cannabis. I used to take a beta-blocker to avoid any teeth clenching or muscular tightness but I didn't feel any need for that at all.

3:30 PM: Nurse came by to take an EKG. Wished I had a Polaroid so I could have an EKG photo taken as a souvenir similar to Rick Doblin's photo in MAPS (Vol IV #4). Blood pressure was up to 164 over 94. Felt very pleasant with none of the tiredness or crankiness mentioned earlier.

4:00 PM: Called my ex-girlfriend to wish her a nice weekend. Felt no resentment that she was going to be spending it with another guy.

4:30 PM: Blood pressure began to drop. Still felt in that familiar place of physical and psychological comfort. A wonderful effect. No sense of urgency or speediness yet a pronounced feeling of heightened energy and relaxed musculature. My voice was deeper and more resonant. Chronic tightness in the throat as well as elsewhere was suspended. The energized calmness felt like it could be the birthright of optimum human neurochemistry achieved through a loving upbringing and a nurturing environment. Fear and pain seemed to be the main obstacles to such a state of consciousness. I knew that MDMA suspended pain and increased energy, empathy and relaxation while offering the potential of mental clarity and self insight. I hoped it would also

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be free of neurotoxicity as well. I felt that such a tool could be more than helpful for individual and social healing. A thought seemed clear – the problem with the War on Drugs is that it targets the pain killer instead of the killer pain.

5:00 PM: Blood pressure still up at 152/98 and effects began subsiding but remained as an emotional backdrop. I did a little stretching and spent some time reading. Found myself enjoying thoughts of dancing later in the evening.

8:00 PM: The last vitals and blood-draw were taken and my ride showed up a few minutes later. I gathered up my stuff, signed the release form and made my departure official by having my patient wristband cut off. It felt wonderful to go out into the night air of summer and ride home to get my dancing clothes.

Friday, August 4th – Medicine Day Two

Arrived at the hospital around 8:30 AM and enjoyed the familiarity of seeing some of the staff I'd met last week. Went through the same preliminary procedure as before, only this time I was a couple of pounds lighter. I felt a little disappointment as I realized that meant a loss of a few milligrams in dosage if today was to be another non-placebo day. I could also feel some jealousy over my ex's trip last weekend so I was hoping I'd get the real thing today.

Got my first capsule at 2:00 PM and thought I'd gotten a mouth tingle twelve minutes later. Got capsule two at 2:20 PM. By 2:45 PM I knew I was having another non-placebo day. I assumed it would be stronger than last week and therefore would be the 180 mg dose. Took a deep breath, relaxed and started paying attention to changes in myself. As expected, the room brightened up, my mood elevated and my limbs felt light. I found myself in that familiar place of being relaxedly energized. Began having loving thoughts toward my ex. I could feel my inner tension dissipate as I imagined holding her. I remembered that sex with her had been loving, present, honoring and sometimes ceremonial when I felt the passion of spirit connecting through flesh. It felt like we were a part of the Earth loving itself through the embrace of our clay bodies. It seemed so natural to think of loving times while on MDMA - times when life is without strife - when life is clay at play.

By 4:00 PM the effects were diminishing and I felt less influenced than I remembered feeling at this time last week. I figured I must

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have taken the smaller dose – unless of course, I had already taken the placebo. I found this idea tantalizing and fantasized that the effects of MDMA could be created without the drug. It seemed that the neurochemical configuration is what is important – not so much the mechanism of configuration (unless it's toxic). Even if MDMA proves to have some toxicity, the positive effects are worth documenting and creating with some other delivery system – meditation, yoga, bowling, whatever. By 4:45 PM I was a little tired and bored compared to earlier. Found myself looking forward to leaving and dancing. After being discharged at 8:00 PM, I did both.

Friday, August 11th – Medicine Day Three

The only thing that really seemed interesting about this day was the possibility that I had already taken the placebo and that today would be a real dose. By 3:00 PM however, I knew that this was indeed the placebo day and the absence of an increase in blood pressure and pulse served to confirm my conclusion. I cuddled up with my book and made the best of the situation by having a relaxing day in bed. I was served a tasty dinner at 8:00 PM and released shortly thereafter. Said my goodbyes to the staff that was still there and left for home. I didn't go dancing that night.

Follow Up

I did the MRI and SPECT scans on the next day (Saturday). The MRI was only about an hour and the SPECT was a half hour as before. Hard to imagine that much could have changed from two doses.

On the following Monday I met with the same psychologist as before and took some more neuropsychological tests. Only took around a half an hour instead of two hours. I enjoyed the tests as much as before. As I was leaving, the doctor said, "well, you can go ahead back to doing whatever it is that you do." I thanked her, then drove home feeling pleased with my participation in the study.

Comments

Dr. Grob will be furnishing me with all the data collected from me during the study and I look forward to reviewing it in detail. I thoroughly enjoyed participating in the study and I hope Dr. Grob achieves all his objectives. I also hope that MDMA proves to be safe when responsibly used. I know one thing, if I were a terminal cancer patient, I would definitely volunteer for his next study. •

experiences of an mdma research subject: dr. ricaurte's neurotoxicity research – round two

I do believe in research

fIVE YEARS AGO I WAS A SUBJECT in Dr. George Ricaurte's MDMA research study at Johns Hopkins Bayview Medical Center in Baltimore. I wanted to be in the study because scientific testing is necessary if sanity is ever to come to drug policy and I wanted to know what my personal tests would show. I had used MDMA about 200 times at that point.

Most readers of this newsletter are familiar with Dr. Ricaurte's work. The protocol consisted of psychological testing, sleep studies, a spinal tap and an L-tryptophan challenge. I did not fare well from these tests. I came home with a headache from the spinal tap and feeling hostile, angry and loathe to be touched from the L-tryptophan.

When Dr. Ricaurte called again in May 1995 and asked me to go to Baltimore to undergo an MRI and two PET scans, I was not at all enthusiastic. In fact, I told him "No." I have permanent eye make-up with a ferrous base, so an MRI might cause skin irritation. I have silicon breast implants and thought the radioactive drug used in the PET scan might adversely effect whatever balance my body has with them. I had never been furnished my personal results from the first study. However, I do believe in research and have now used MDMA about 375 times so I have a personal interest. After Dr. Ricaurte changed the MRI to a CAT scan (no magnets) and a rheumatologist called and said that in her opinion breast implants would cause no condition that the PET scan would exacerbate, I agreed to be a subject again. I also agreed to be the first MDMA user to undergo an m-CPP challenge. This is a drug used to diagnose anxiety disorders.

I arrived at Johns Hopkins nuclear medicine department at about 1:00 PM on a Tuesday. That afternoon technicians made my mask and Dr. Szabo did the CAT scan. When I first saw the mask it looked like a white board with two holes and two slits. The technicians heated it until it became pliable, then pressed it very snugly over my head from just above the top of my forehead to the end of my nose. The holes went over my eyes and my ears went through the slits. It became rigid. They used it to bolt my head to the table during the CAT scan and the PET scans! The CAT scan was a piece of cake. It involved lying still on a table for about 30 minutes while images were made of my brain.

The night nurse at the clinical research center awakened me at 5:15 AM Wednesday morning to go to the nuclear medicine department for the PET scans. An anesthesiologist attached a complicated device to my right wrist. Technicians put other needles with IV tubes in both arms. Then they bolted and strapped me to the PET scan table. For 95 minutes a radioactive drug went through my system while the PET "camera" made images of my brain and a technician periodically took blood from my wrist. When they finally unbolted my head, I sat up and saw two images of my brain on a monitor. Then I walked around the halls for 30 minutes pushing my IV bag holder. Then they did it all again! It was really hard to lie down on that table the second time.

I felt "drugged" and began getting a slight headache while the PET scans were going on. When I got back to the clinical research center, about 3:00 PM, I ate lunch. Mistake! By 6:00, I was throwing up and my head was in a vise. By design, no tests were scheduled for me the next day. If anyone is going to get sick from a test, it will be me. I slept until about noon Thursday and was feeling normal by about 3:00 PM.

Friday I was taken to Bethesda to the National Institute of Mental Health to undergo the m-CPP challenge. I was injected with a placebo through an IV tube and monitored for about two hours and then was injected with m-CPP and monitored for about two hours. Dr. Una McCann, the psychiatrist who supervised the procedure, asked me not to discuss my reaction to the drug because I might influence other subjects. So I won't.

The m-CPP wore off as expected and Friday night I had a very nice soft shell crab dinner, not controlled by the research center's dietician. I flew home Saturday morning. This time I did not get home sick. Huge relief!

I was given most of the results of my tests of five years ago while I was at Johns Hopkins for the second round of tests - CSF monoamine metabolite level 9.9, everything within normal parameters. I have been promised preliminary results of my PET scans in a few weeks, after they have been analyzed. The results will not be considered final until the study is complete.

I am very hopeful that all this will someday do someone some good. •

Dianne

and have

now used

MDMA

about

375 times.

mdma neurotoxicity: new data, new risk analysis

Rick Doblin

READERS OF THE MAPS newsletter may have come across recent articles in the media claiming that new evidence shows that MDMA may cause permanent and potentially harmful brain changes even in typical recreational doses. As in most other news reports involving research about illegal drugs, the stories oversimplified the scientific findings, took data out of context, exaggerated the dangers, and ignored possible counter-balancing benefits (pp. 14 and 33). This article reviews the latest study from Dr. Ricaurte and associates at the Johns Hopkins Medical Institutes (Fischer et al. 1995)¹ as well as some earlier findings. The best available data regarding MDMA neurotoxicity reveals a picture that is neither as simple nor as frightening as these recent news reports would have you believe.

MDMA is no exception to the rule that every drug has serious side effects in some users. Reports indicate that a small number of the millions of people who have taken MDMA over the last several decades have suffered negative consequences. Some people may be predisposed to react unfavorably to typical amounts of MDMA while heavy users may be placing themselves at special risk. MDMA increases blood pressure, posing a risk to people with preexisting heart conditions. MDMA can also increase body temperature which, in combination with hot environments, exhausting physical exercise (prolonged dancing) and lack of fluids has been linked in very rare cases to death from heat exhaustion. MDMA's psychological effects have been occasionally associated with acute anxiety, panic and depression and are substantially context-dependent. Several cases of longer-lasting effects have been identified. While no causal link has been established connecting serotonin reductions to any negative consequences, the potential risks as well as the benefits of MDMA must be carefully weighed before any decisions can be made concerning appropriate uses.

We owe our gratitude to Dr. Ricaurte and associates for conducting this latest study and to the National Institute on Drug Abuse (NIDA) for funding it. Now that this new study is completed, each of us entitled to make our own risk assessment

after a careful look at the data. Below is my risk assessment, made with what I hope is a healthy dose of common sense.

The latest scientific study

In August 1995, the Journal of Neuroscience published a scientific study by Fischer et al. investigating the regrowth of rat and primate brain neurons previously exposed to extremely large doses of MDMA.

The study was designed to determine whether there was long-term restoration of normal levels of serotonin in those brain regions in which serotonin levels were previously reduced as a result of exposure to very large amounts of MDMA. Also examined was whether the regrowth of serotonin nerve terminals (reinnervation) restored the original brain structures.

The study concluded that "in some rats and most monkeys, there is a lasting reorganization of ascending 5-HT [serotonin] axon projections following severe MDMA injury. In particular, while some projections (e.g. those to the neocortex) fail to recover for up to 18 months after drug administration, others (e.g. projections to the basal forebrain) recover fully, sometimes in excess." The authors of the paper noted that the "aberrant serotonergic brain reinnervation" had no known functional consequences, but that "if 5-HT [serotonin] function declines with age, MDMA-exposed individuals could be at increased risk for developing age-related cognitive impairment."²

The media coverage

The results of the study were reported in newspapers all across the United States and Europe. The reports began with an article in the August 15, 1995 New York Times Science Section incorrectly stating that the animals were given "recreational doses of MDMA - the amounts taken by many young people." In terms of human use, Dr. Ricaurte was cited as stating that "people could probably take normal amounts of MDMA three or four times a year without noticing any neuropsychiatric problems but people who took seven or eight doses a night could be inviting problems."

Published at the same time, but with a decidedly more alarming spin, was a report by the Associated Press (AP) wire service in which Dr. Ricaurte was quoted (he feels misquoted) as stating simplistically that "Results suggest that people who have used (Ecstasy) in the past have some kind of (brain) damage." To emphasize the point, the article quoted Dr. Robert Daroff, chief of staff at University Hospitals in Cleveland and editor-in-chief of the journal *Neurology*, as saying that "It makes you feel good, but you are going to probably get hurt."

The only counterpoint to these reports that I'm aware of was a letter to the editor that I co-wrote with Neal Goldsmith, Ph.D. (p.54), published in the August 24, 1995 New York Times. We pointed out that the doses used in Dr. Ricaurte's study were roughly 45 times larger than the typical human dose, and that MDMA had been used "in therapeutic, sacramental and recreational contexts for over 20 years by hundreds of thousands of people without evidence of harmful neurotoxic effects on appetite, sleep, mood, impulsiveness or other neurological functions."

On August 31, 1995 another story about the study was published in the British *New Scientist* magazine, and the London branch of the Reuters News Service distributed a story that was widely disseminated on the Internet. In both these stories, Dr. Ricaurte was quoted as stating, "If there is a margin of safety, it is not a large margin."

On September 2, 1995, yet another letter to the editor was

Abstract (Fischer et al. 1995)

The recreational drug (\pm) 3,4-methylenedioxymethamphetamine (MDMA, "Ecstasy") is a methamphetamine derivative that selectively destroys central 5-HT axons and axon terminals in animals and possibly, humans. The fate of 5-HT neurons following MDMA injury is uncertain. In particular, while it is known that central 5-HT axons can undergo regenerative sprouting after MDMA injury, it has not been determined whether they reestablish the original innervation pattern. To address this question, the present studies examined 5-HT innervation patterns in animals lesioned with MDMA 12-18 months previously. Both rodents (rats) and nonhuman primates (squirrel monkeys) were examined, since there is indication that serotonergic recovery after MDMA injury may be species dependent. 5-HT axon projections were studied neurochemically, autoradiographically and immunocytochemically. In both rodents and nonhuman primates previously lesioned with MDMA, substantial serotonergic axonal sprouting was observed. However, in a few rats and in most squirrel monkeys, the reinnervation pattern was highly abnormal: distant targets (e.g., dorsal neocortex) remained denervated, while some proximal targets (e.g., amygdala, hypothalamus) were reinnervated or hyperinnervated. Although the specific determinants of axonal recovery after MDMA injury remain to be identified, it appears that axons which initially sustain more severe damage, are longer, or are more highly arborized have low probability of recovering. The observation that some brain regions remain denervated, while others are reinnervated or hyperinnervated suggests that, under some circumstances, MDMA injury can lead to a lasting reorganization in ascending 5-HT axon projections. Such lasting changes in brain innervation, documented here in MDMA-treated animals, may have implications for humans using MDMA recreationally.

published in the New York Times, this one by Richard A. Friedman, MD, Assistant Professor of Psychiatry, NY Hospital-Cornell Medical Center. He accused Dr. Goldsmith and me of entertaining ideas that were "dangerously naïve and without scientific merit." He went on to assert that reports that MDMA had therapeutic benefits were pure speculation because "there are no long-term scientific studies of the effects of MDMA in humans," and that "lack of evidence of MDMA's possible dangers is by no means proof of its safety." Of course, Dr. Friedman was correct to assert that MDMA has not been proven safe; such a proposition can never be proven, only disproven. Furthermore, Dr. Friedman makes the valuable observation that drugs sold as MDMA "on the street" risk being contaminated. This risk of con-

tamination complicates the question of "MDMA neurotoxicity."

Implications for human use

To evaluate what implications the Fischer et al. study has for humans using MDMA therapeutically, sacramentally and recreationally, the following questions must be addressed:

- How does the amount of MDMA administered to the animals relate to human use patterns?
- What are the consequences of MDMA-caused serotonin reductions in animals?
- What evidence is there that MDMA causes serotonin reductions in humans?
- If there are MDMA-caused serotonin reductions in humans, what are the consequences?

Animal vs human doses

The Fischer et al. study was designed to investigate whether the regrowth of serotonin nerve terminals (reinnervation) restored the original brain structures in the rats and primates in this study. Therefore, it was necessary to cause large initial reductions in serotonin levels in multiple brain regions so that regrowth would have an opportunity to occur.

The study was not designed to evaluate the effect of the typical human dose of MDMA, which is about 1.7 milligrams of MDMA for each kilogram of body weight (mg/kg) taken orally.

Typical human doses do not cause neurotoxicity in primates. Dr. Ricaurte has previously determined in primates that 2.5 mg/kg given orally once every two weeks for four months caused no significant reductions in serotonin levels.³ He did find that significant reductions in serotonin levels in primates first occur with a single oral dose of 5 mg/kg, an amount of MDMA that some recreational users do self-administer.⁴ This dose produced no reductions in most brain regions tested two weeks after administration, but there was a 21% reduction in serotonin in the thalamus and a 16% reduction in the hypothalamus. Thus, the "no-effect" level in primates for serotonin reductions is somewhere between an oral dose of 2.5 mg/kg and 5.0 mg/kg. Whether there is a direct linkage between these initial reductions in serotonin levels and structural damage (neurotoxicity) has been questioned⁵ (p.13). In addition, no associated functional or behavioral consequences have been noted either from these minor and localized reductions or from the larger reductions caused by the higher doses administered to the primates in this experiment.

In order to cause substantial serotonin reductions in multiple primate brain regions, it was necessary to administer subcutaneous injections of 5 mg/kg twice daily, four days in a row, for a total of eight injections. The relevance of the data from this study to the human therapeutic or recreational use of MDMA is not clear. Virtually all human use of MDMA involves oral administration, not injection. In addition, it is almost unheard of for someone to use MDMA for four days in a row because a tolerance to the desired effects develops that cannot be overcome by increasing the amount consumed, distinguishing MDMA from drugs such as cocaine or heroin.

The 5 mg/kg dose of MDMA injected in the primates is about 3 times larger than the typical human dose of 1.7 mg/kg. Dr. Ricaurte has previously shown that subcutaneous injection of MDMA is roughly twice as toxic as oral administration (this varies somewhat depending on brain region), and that repeated dosing is more toxic than single administration.⁶ Therefore, each injection received by the primate is equivalent to slightly less than 6 times the typical oral human dose. Since there were 8 injections, each primate received the rough equivalent of 45 times the amount of MDMA that a human would self-administer in a typical MDMA session. This is a very rough estimate since it multiplies dose, frequency and route-of-administration effects, even though there may not be a linear relationship between these factors and serotonin reductions. In addition, the typical human dose varies from person to person. The smaller figure of 25 times the typical dose is used by Dr. O'Callaghan (p.13) to estimate the relationship between the doses given to the primates in this study and the typical human dose.

Data from this study can be used to generate hypotheses

...each primate received the rough equivalent of 45 times the amount of MDMA that a human would self-administer in a typical MDMA session.

about the effects of MDMA in humans, but no clear conclusions can be drawn because there are dramatic species-dependent differences in response to the administration of drugs. For example, rats respond differently to MDMA than mice in some studies. In this study, the rats responded differently than the primates in that most rats but only some primates reestablished normal serotonin levels. Primate data is most useful in estimating the effect of a drug in humans,

but even primate data needs to be confirmed by human studies. Neither the relative safety nor risk of MDMA can be determined conclusively without human studies.

Consequences of serotonin reductions in animals

The long-term functional or behavioral consequences in animals who have been administered large amounts of MDMA is still unknown. No obvious impairments have been noted. According to Fischer et al., "Hyperinnervation of the hypothalamus may lead to neuroendocrine abnormalities, but this has yet to be documented. Hyperinnervation of other limbic structures (e.g. amygdala) might be anticipated to produce changes in emotion, motivation, learning or memory (Aggleton, 1992), but, again, few such changes have been documented (for review, see Steele et al. 1994)." Evidence demonstrating that serotonergic denervation leads to problems is also lacking. If there are consequences of MDMA-caused serotonin changes in animals, they are very subtle.

Evidence for serotonin reductions in humans

There is no conclusive evidence demonstrating that MDMA causes serotonin reductions in humans. Studies using spinal taps and/or brains scans to evaluate people before and after administration of MDMA will be needed to determine definitively whether MDMA causes serotonin reductions in humans. Dr. Ricaurte is currently conducting valuable studies using PET scans to investigate brain structure in heavy MDMA users, though he is not administering MDMA to human subjects. If any readers have a prior history of extensive MDMA use, and wish to spend about a week in Johns Hopkins Hospital volunteering to be a research subject, contact Dr. Ricaurte at (410) 550-0993.

The best indirect evidence for MDMA neurotoxicity comes from a study by Drs. McCann and Ricaurte that is the most comprehensive and controlled research project to date investigating the long-term effects of MDMA on experienced MDMA users.⁷ The study showed that a group of MDMA users (average exposure of 95 times) had roughly 32% less serotonin metabolite in their spinal fluid on average than a group of controls. To put this finding in context, it is important to note that the normal range of serotonin metabolites in spinal fluid is quite large. Some people naturally have twice as much or more than

others. A difference of 32% between groups, although statistically significant, is a relatively small shift within the normal range of serotonin metabolite levels.

Whether the 32% difference can be attributed to MDMA use is uncertain, primarily because the serotonin metabolite levels of the MDMA users were not measured before they began to use MDMA. This study used a matched control group design instead of pre- and post-measures on the same subjects. Therefore, the difference in serotonin levels could be due to uncontrolled factors resulting from an imprecise matching process. For example, some personality factors such as risk-taking behavior (i.e. illegal drug use) have been linked to lower serotonin metabolite levels. In addition, the volunteers in this study had extensive exposure to other drugs as well as MDMA, while the control group was relatively drug naïve. Furthermore, MDMA sold illegally is often impure. Serotonin reductions, if they occurred as a result of drug use, could be due to impurities and not to MDMA itself.

Anecdotal evidence raises the question of whether a long-term neurochemical process is at work. Some MDMA users report that the quality of the MDMA experience eventually begins to decline as the number of MDMA experiences increases. While this may be due to a long-term neurochemical process, it could also be due to the loss of novelty of the experience or some kind of learning-based tolerance. Whether such changes are harmful or beneficial is an open question. This frequent loss of quality of the experience over time serves as a kind of built-in antidote to long-term compulsive use, as does the increase in the ratio of unwanted side effects to desired effects that accompanies the attempt to take increasingly larger doses.

Consequences of serotonin reductions in humans

While Drs. McCann and Ricaurte found lower serotonin metabolite levels in MDMA users compared to controls, they found no harmful functional or behavioral differences between the subjects in the MDMA and control groups. In fact, the MDMA users exhibited less hostile and impulsive personality traits, and greater constraint and control than the members of the control group. This finding is especially surprising since it runs counter to previous research that has associated low levels of serotonin with increased violent and impulsive behavior. Furthermore, a reduction in hostile and impulsive behaviors

In my view, the message from our most recent study is that if you severely injure serotonin neurons in non-human primates, normal axonal recovery does not take place.

As to possible implications for humans, we don't yet know.

First, we need to know if in fact MDMA injures serotonin neurons in humans.

If it does, then additional studies are needed to see if the abnormal axonal recovery of the type seen in monkeys also occurs in humans.

Finally, if abnormal reinnervation is noted in the human brain, possible functional consequences would still need to be investigated.

George Ricaurte MD, Ph.D.,
September 10, 1995

sounds more like a benefit than evidence of "brain damage." Perhaps this finding is due to MDMA's psychological effect rather than any long-term change in serotonin.

Sleep EEG data from this study indicated that the MDMA group averaged 19 minutes less total sleep per night than members of the control group.⁸ MDMA users had about 37 minutes less of Stage 2 non-REM sleep, generally considered to be of lesser importance than other stages of sleep in terms of restorative function. MDMA users actually spent about 18 minutes more than controls in the stages of sleep considered essential for physical and biological restoration, Stages 3 and 4 non-REM sleep, and REM sleep. The sleep patterns of the MDMA users could conceivably be considered

more efficient and more restorative than those of the control group because they went more quickly into deep sleep. This finding also sounds more like a benefit than evidence of "brain damage," especially since there was no evidence of increased sleep problems in the MDMA subjects as compared to the control group.

At present, there is no evidence for harmful neurotoxic effects in the current population of MDMA-experienced people. However, Fischer et al. speculate that there may be sufficient neural reserve to forestall problems under usual circumstances, but "if 5-HT [serotonin] function declines with age, MDMA-exposed individuals could be at increased risk for developing age-related cognitive impairment." Only time will determine if this delayed-damage theory is accurate. I have my doubts, in part because 5-HT may not decline with age. More salient to me is that there are numerous MDMA users in their 60's and 70's who have taken MDMA many times, seemingly without developing age-related cognitive impairment at a different rate than non-MDMA users. If there is such an age-related cognitive impairment, it is subtle and has yet to be reported.

Tentative conclusion

As with any substance, some people are likely to be particularly sensitive to relatively small amounts of MDMA. Other people take unusually large amounts, especially in recreational contexts. It would therefore not be surprising if some people took enough MDMA to cause long-term reductions in their levels of serotonin in some brain regions. What would be surprising is if these serotonin reductions are eventually shown to have significant harmful functional or behavioral effects.

Such changes, if they do occur, could as easily be beneficial as harmful, especially considering the fact that many people report long-term benefits resulting from their use of MDMA.

Over the last twenty years, millions of people have tried MDMA. This use of MDMA, though not conducted in the context of a scientifically controlled experiment, does provide an opportunity for a very large epidemiological study. Similarly, over fifty million people have tried a prescription drug called fenfluramine, a diet aid prescribed for daily use for months or years at a time that causes the same kind of neurotoxicity in animals as does MDMA.^{9,10} The absence of a single confirmed case of functional or behavioral consequences related to serotonin neurotoxicity as a result of the use of fenfluramine¹¹ or MDMA does not mean that these drugs are without neurotoxic consequences. Appropriate epidemiological studies have not yet been conducted. Nevertheless, the lack of evidence of neurotoxic damage after such an enormous population of people has been exposed to these drugs certainly suggests that if any neurotoxicity-related problems have resulted, they are subtle and rare.

It does seem possible that some physiological mechanism may partially explain the diminishing returns that many people report from continued use of MDMA. This is a negative consequence only to the extent that the MDMA experience is considered beneficial.

After reviewing the new data reported by Fisher et al., I remain of the opinion that the risk of MDMA neurotoxicity is of no practical significance when typical or even somewhat larger doses of MDMA are used on an infrequent basis in therapeutic,

I remain of the opinion that the risk of MDMA neurotoxicity is of no practical significance when typical or even somewhat larger doses of MDMA are used on an infrequent basis.

sacramental or recreational contexts by people with normal brain function. Of course, I don't know this for sure, and neither does anyone else. I do know or have heard about many people who have used MDMA hundreds of times and seem unharmed and even helped by their use. As a result, I think that Dr. Ricaurte is being conservative when he states that "people could probably take normal amounts of MDMA three or four times a year without noticing any neuropsychiatric problems." While there is evidence that the neurotoxicity of

MDMA can be blocked by the co-administration of Prozac or other selective-serotonin reuptake inhibitors (SSRIs)^{12,13} and that such drugs do not alter the MDMA experience in some people,¹⁴ such protective measures do not seem to me to be necessary in normal use. Such measures might possibly be worth the trouble when exposure approaches seven or eight doses a night, a level which Dr. Ricaurte stated "could be inviting problems."

Ironically, one could argue that MDMA neurotoxicity research in humans, with its spinal taps and injections of radioactive substances, is more dangerous than MDMA itself. Nevertheless, it is crucial that MDMA neurotoxicity research continue, and also research into the beneficial therapeutic uses of MDMA, so that the risks and benefits of MDMA can be accurately balanced. To that end, MAPS salutes the work of Dr. Ricaurte and associates and Dr. Grob and associates. MAPS remains committed to devoting the bulk of its financial resources to MDMA psychotherapy research. •

¹ Fischer C, Hatzidimitriou G, Wios J, Katz J, Ricaurte G. Reorganization of Ascending 5-HT Axon Projections in Animals Previously Exposed to the Recreational Drug (±) 3,4-Methylenedioxymethamphetamine (MDMA, "Ecstasy"). *J of Neuroscience* 15 (8):5476-5485, 1995.

²Ibid. Fischer, 1995.

³Karel, R. Fluoxetine May Protect Against MDMA Neurotoxicity. *American Psychiatric News*, p. 12. August 6, 1993.

⁴Ricaurte G, DeLanney L, Weiner S, Irwin L, Langston J. Toxic effects of 3,4-methylenedioxy-methamphetamine (MDMA) on central serotonergic neurons in the primate: Importance of route and frequency of drug administration. *Brain Res* 446:165-168, 1988.

⁵O'Callaghan, JP, and Miller, DB: Quantification of reactive gliosis as an approach to neurotoxicity assessment. In: *Assessing Neurotoxicity of Drugs of Abuse*, Erinoff, L., Ed., National Institute on Drug Abuse Monograph 136, pp.188-212, Washington, DC, US Government Printing Office, 1993.

⁶Op. cit. Ricaurte G, 1988.

⁷McCann U, Hatzidimitriou G, Shaham Y, and Ricaurte G. Serotonin neurotoxicity after 3,4-methylenedioxy-methamphetamine (MDMA, "Ecstasy"): a controlled study in humans. *Neuropsychopharmacology* 10:129-138, 1994.

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¹⁰McCann U, Hatzidimitriou G, Ridenour A, Fischer C, Yuan J, Katz J, Ricaurte G. Dextfenfluramine and serotonin neurotoxicity: further preclinical evidence that clinical caution is indicated. *J Pharmacol Exp Ther* 269:792-798, 1994.

¹¹Schechter M. Functional consequences of fenfluramine neurotoxicity. *Psychopharmacol Biochem Behav* 37:623-626, 1990.

¹²Schmidt CJ; Abbate GM; Black CK; Taylor VL. Selective 5-hydroxytryptamine receptor antagonists protect against the neurotoxicity of methylenedioxy-methamphetamine in rats. *J Pharmacol Exp Ther* 255 (2): 478-83, 1990

¹³Hekmatpanah CR, Peroutka SJ. 5-hydroxytryptamine uptake blockers attenuate the 5-hydroxytryptamine-releasing effect of 3,4-methylenedioxy-methamphetamine and related agents. *Eur J Pharmacol* 177:95, 1990.

¹⁴McCann UD, Ricaurte GA. Reinforcing subjective effects of ±3,4-methylenedioxy-methamphetamine ("Ecstasy") may be separable from its neurotoxic actions: Clinical Evidence. *J Clin Psychopharmacol* 13 (3): 214-217, 1993.

commentary on article by Ricaurte and colleagues

James P. O'Callaghan, Ph.D.

MDMA can decrease
the level of serotonin
without necessarily
destroying
serotonergic axons.

THE RECENTLY PUBLISHED ARTICLE by Ricaurte and colleagues (*J. Neurosci.* 15: 5476-5485, 1995) describes the effects of MDMA ("Ecstasy") on various indices thought to reflect the integrity of serotonergic innervation in the brain. Both the rat and squirrel monkey were examined in this study. The conclusions reached by the authors are that the long term effects of MDMA cause a reorganization of serotonin innervation of the brain, effects which are repeatedly referred to as evidence of "serotonin neurotoxicity." While the actions of MDMA in the rat and primate brain at the high dosages employed in the study (at least 25 times the human dosage) may in fact reflect a toxic effect of this drug on serotonin pathways, other interpretations of the data are possible. For example, what Ricaurte and others have shown is, at high dosages, MDMA causes prolonged decreases in brain serotonin. This effect, per se, cannot be equated to destruction of serotonergic axons (i.e. bona fide serotonin neurotoxicity) because assessments of serotonin are only indicative of the presence of this transmitter in neurons, not the actual neuronal structures themselves. In other words, MDMA can decrease the level of serotonin without necessarily destroying serotonergic axons. An analogy would be draining water from a pipe without destroying the plumbing. The prolonged decreases in serotonin seen after high dosages of MDMA have not been associated with the classic evidence of neuronal destruction such as astrogliosis (O'Callaghan and Miller, 1993) or silver degeneration staining (Commins et al., 1987; Jensen et al., 1993). Moreover, retrograde transport studies, which could be used to assess whether serotonergic axons are still functional even when depleted of serotonin, have yet to be performed following exposure of rats or primates to MDMA.

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Despite the interpretive drawbacks associated with the present and previous papers on MDMA "neurotoxicity," the Ricaurte paper makes an important addition to the literature. In contrast to many previous studies, Ricaurte and colleagues have combined a qualitative examination of serotonin innervation with a quantitative analysis of serotonin content in the brain regions affected by MDMA. This serves to distinguish subjective impressions of serotonin innervation from actual quantitative changes on serotonin concentration. For example, while the pictures (published in the article) of serotonin innervation of the rat brain cortex appear to show a less than normal amount of serotonin staining one year after dosing, analysis of the serotonin content of this brain region shows that serotonin levels have returned to control. This is not unexpected given the qualitative (i.e. subjective) nature of serotonin immunohistochemistry as compared to quantitative analysis of serotonin levels. Thus, in the rat, no data is shown that indicates that there is decreased serotonin innervation one year after exposure to MDMA. No quantitative studies were conducted with the primate.

Future studies of the potential neurotoxic effects of MDMA and other substituted amphetamines would benefit from an analysis of indices known to reflect damage to central nervous system neurons in combination with an examination of traditional markers of serotonergic neurons. Such data would be highly useful in setting margins of safety for the therapeutic usage of these compounds. •

Fisher, C., Hatzidimitriou, G., Wios, J., Katz, J., and Ricaurte, G.: Reorganization of Ascending 5-HT Axon Projections in Animals Previously Exposed to the Recreational Drug 3,4-Methylenedioxymethamphetamine (MDMA, "Ecstasy"). *J. Neurosci.* 15: 5476-5485, 1995.

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The opinions expressed in this commentary are solely those of the author and not of the U.S. Environmental Protection Agency.

mdma: a catalyst for healing my fears and depression

by Carolyn

My symptoms

have ranged

from clinical

depression

to high anxiety

to having

delusions.

I AM THIRTY THREE YEARS OLD. I have had serious problems with depression since I graduated from college in 1983. I have been hospitalized twice and have been on various psychoactive medications between the years 1986 and 1995. These include Elavil (or Amytriptaline), Parnate (an MAO inhibitor), and currently, Novane (an anti-psychotic) and Sinnequan (also a tricyclic, similar to Elavil). I have been through four psychiatrists and two psychologists in addition to several therapists and doctors in the hospitals.

My symptoms have ranged from clinical depression to high anxiety to having delusions. The delusions started two years ago and only lasted for two months at which point I was hospitalized and put on Novane, which was effective in getting rid of them. However, when I was released for the second time from the hospital a year and a half ago, I was in a terribly depressed and fearful state. It took many months, a new job, a great boyfriend and a good therapist to bring me up to a level where more than half of my waking hours were not hell.

I took MDMA for the first time (and only time so far) several months ago. I was fortunate to have a good friend from college and her husband with me. We were hoping to help me get over my fears and depression so that I could feel better during the day, at work mostly. I was very unhappy in my job as a computer programmer. I felt extremely insecure, and just plain hated being strapped to the desk doing this eight hours a day. I was hoping that MDMA might help me to resolve this unhappy situation.

The experience begins

The actual experience itself was not earth-shattering. I took one capsule total: half to start and then two hours later I took the other half. It started out, as my friends related to me later, in a classic fashion. It was light, about 7:30 PM in May. We were in the living room of my home in New York. All the lights were off, the many windows were open and the T.V. was on. We were kind of watching a re-run that we had all seen. I felt kind of funny watching it, and asked if I should turn it off. I felt like a

child who didn't know the "rules of the game." My friend's husband said it probably would be best to turn it off. I turned it off and in the silence felt self-conscious. For a brief moment I felt a little nauseated I think, or something weird, not very pleasant. And then it passed.

We kind of talked, I think. I don't really remember that part too much, just that the room gradually got dark and none of us thought to turn on the lights. There seemed to be a mutual mood of just letting things unfold. By the way, neither my college friend nor her husband took MDMA: my friend, because she was breastfeeding her daughter, and her husband, because he was very experienced with MDMA and was waiting to be my "mentor" or "therapist" in case he was needed.

The experience deepens

I felt myself becoming uninhibited. I began talking. I don't remember what I talked about in the beginning. I remember my friend's husband falling asleep. I talked to my friend and she talked back to me. She was an excellent listener. I began to relate to her my deepest fears and feelings. She had never heard this stuff before and I had the most wonderful feeling that she really wanted to hear about me. One of my biggest problems has been low self-esteem; thinking that nobody cared about me. It stemmed from growing up in a large family with only one parent, and that one parent being completely emotionally unavailable. In psychobabble terms, I was a victim of severe emotional neglect. The deep fears and insecurities that this created in me were hidden from the people around me until I broke down in 1984. My friend knew me in college, when all of this was held at bay. The loss of a built-in social network and daily routine (school), the lack of *real familial ties*, and the end of the one relationship in my life triggered the breakdown.

All of this stuff started to come out. I've talked at length about almost everything that I brought up with my friend with other people: mostly therapists and some close friends that I started making after 1984. Different people heard different portions. But the feeling that I had while on MDMA while talking to my friend was unique. I don't feel adequate in my

descriptive abilities and my memory is not all that great, but I'll try to explain it. I felt confident. I felt loved and accepted and more than that, I felt that she really wanted to know. She really cared. And it was so NATURAL, not like talking to a therapist. Not to say that I don't love talking to therapists. I do and I always will, because it is my nature, because of the way I grew up; I crave attention. But when I talk to a therapist or even a friend about myself I sometimes have these brief feelings run through me that I am being selfish or self-centered and it inhibits me from just letting it all come out. Also, with a therapist, you are paying them to listen to you. This experience was new. I felt so free and so safe and so accepting of myself, all of me, all of my feelings and thoughts. Nothing was shameful or ugly.

Life review

I talked for hours. We watched a video of my grandfather and my sister. I read letters my father had written to one of my sisters when she was little. He passed away when I was nine; all my feelings about him and the death and the impact it has had on my life were discussed. Paintings that I did when I was in analysis, bizarre things I had done and what was going on in my mind when I did them were talked about. I literally said everything that came to my mind immediately. There would be comfortable silences during which I would process things my friend brought up and things I had brought up. It was like I took everything that was available in my conscious mind and brought it out for reevaluation and reprocessing. This is probably something we all are constantly doing. But this was far more intense. I believe what happens is the MDMA lessens or eliminates your experience of fear, thus you are able to delve into areas that you might normally not go into. When you're in these areas, you can stay longer. You are not afraid of your own feelings and thoughts and you are not afraid to express them. You are not afraid of other people's ideas or suggestions. It's been said so many times in so many different ways but it is still profound: Fear is man's greatest foe (and perhaps his only real foe).

We talked late into the night. By 4 or 5 AM, my friend was beginning to fall asleep and I was feeling like I might be able to sleep. That was the end of the actual drug experience. The after-effects are still being experienced. A week and a half after the MDMA episode I saw my

therapist. I did not tell him that I had taken an illegal drug. I knew he would strongly disapprove. About 20 minutes into the session, he seemed a little disconcerted. He said something about how he had been gone for two weeks and instead of me getting worse while he was away, which would have been normal for me, I seemed better. He said that there was some new quality about me that he couldn't quite put his finger on, but I seemed stronger. It was hard for me not to share with him. I only commented that I had evolved.

Long-term effects

My job situation which has been the source of so much pain is finally changing. Because I had the courage to finally act, by threatening to quit, I have opened up many doors. Together, my managers and I are coming up with positive alternative ideas about which I am very hopeful. My therapist told me two weeks ago that I don't seem to be very open with him anymore and maybe that was a sign that I didn't need him and that I am strong enough to go "solo" (for the first time in 11 years). I am still open with my boyfriend and my close friends. I feel less alone than I've ever felt in my life. I'm still on low doses of Sinnequan and Novane, but they are the next to go.

I plan to take MDMA again, but only if I can talk my boyfriend or a close friend into taking it with me.

I thank my friends for changing my life. •

LSD research update

Our protocol, "The relationship between peak experience and outcome in (LSD) assisted psychotherapy with substance abusers, a double-blind controlled study" has received final approval from the FDA. Our facility has been approved for securely storing LSD, and we are negotiating with the National Institute on Drug Abuse (NIDA) for a supply of LSD. Progress on the study will be reported in an upcoming issue of MAPS. •

Richard Yensen, Ph.D., ryensen@orenda.org
 Donna Dryer, MD
 Orenda Institute

I felt so free

and so safe

and so accepting

of myself, all of me,

all of my feelings

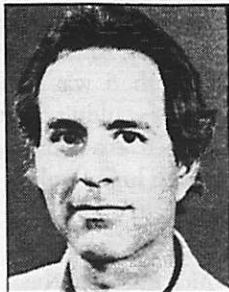
and thoughts.

Nothing was

shameful or ugly.

university of new mexico research

Rick **Strassman**, MD



THE END OF MY FIRST PHASE of contemporary psychedelic research in North America occurred when I finished at the Department of Psychiatry at the University of New Mexico the end of August 1995.

Several factors led to this. Primary among them is our recent move to Victoria, British Columbia. Running such intensive studies in New Mexico, while living three-fourths time in Canada, did not provide the kind of relationships and follow-up with volunteers as I believe is necessary. This would have become an even greater concern once the shift of studies was made from DMT to psilocybin. Psilocybin effects last for at least 8 hours, compared to 30 minutes for DMT. The demands on both the research team and the volunteers for psilocybin studies are much greater than those for DMT.

One hot July evening in Palo Alto in 1972, I decided to make my goal giving psychedelics legally in the United States, in a psychiatric research model, much as I understood research at Spring Grove, Maryland was taking place. Sixteen years later, in a position to do so, I was afraid I would fail because so much time had passed since new studies had begun. Seven years after that, it is time to move on.

Support and advice from all circles - government to academic, friends to family - and financial aid from several sources made it possible to work towards and get a human DMT, and then psilocybin, study off the ground. Special appreciation goes to David E. Nichols, Ph.D. Purdue University, for agreeing to make DMT for our first study. Without his help, none of the work could have started.

I believe our DMT research has set a professional standard which future human psychedelic research can follow. Also, publications coming out of this work, from a 1984 paper on adverse effects, to a recent review paper in 1995, provide historical, pharmacological and clinical contexts within which future research questions can be formulated.

MAPS and Rick Doblin have been extremely valuable in their commitment to our work in Albuquerque, and in giving a forum for presenting the on-going status of our studies. I have met many friends and colleagues through Rick's and MAPS' efforts, and support their efforts to enlarge the scope of discussion on psychoactive material use. •

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notes from a **psychedelic** research nurse: part two

Laura **Berg**



SARAH LIES BACK upon the hospital bed, and I help secure the black satin eye shades over her eyes. Around Room 531 of the Clinical

Research Center (CRC), she has positioned special stones and fetishes, and her resting form is draped with a colorful cotton blanket from home: her "trip blanket," which has provided safety and comfort in other journeys to altered states. Sarah also has recited a prayer for guidance and balance.

My stopwatch is set to zero, and the rack of blood sampling tubes, ice and syringes are ready near the bedside. A "Do Not Disturb" sign is placed prominently on the door. The tapestry of abstract blues and purples has been unrolled from the closet and hung, and Rick's stepdaughter's painting of butterflies and Amanita mushrooms, brightly colored, is also on the wall.

Rick Strassman, Sarah and I now take a few moments to sit in silence. This morning Sarah will receive 4 intravenous injections, one half hour apart, of a high dose of N,N-dimethyltryptamine (DMT), a potent hallucinogen she describes as "a warp speed conveyor belt into the psychedelic buzz saw." Sarah breathes deeply several times, "I'm ready," she whispers.

Perspectives

As the psychiatric nurse clinician working with the UNM psychedelic studies between March 1993 and May 1995, I've been closely involved with the contemporary renewal of psychedelic research. Our research design at UNM has been primarily psychopharmacological and quantitative, focusing on the measurable variables of neuroendocrine pathways and psychological parameters. However, the larger research environment contains the lived experiences of the research team and the research volunteers, and the phenomenon of our work encompasses many experiences that can only be known in relationship and context, through qualitative perspectives.

While quantitative methods emphasize such techniques as randomized design, endocrine measurements, paper and pencil objective tests and statistical analyses, qualitative methods include ethnography, case study, in-depth interviews, and participant observation (Reichardt & Cook 1979). Qualitative approaches focus on naturalistic presentation of phenomenon, contextual, subjective, and embodied meanings, and enlargement rather than reduction of the variables of experience (Munhall & Oiler 1986). In psychedelic work, this type of approach is a useful counterpart to formal, reductionistic methods.

Both perspectives are valid. Here in my second article for MAPS, I acknowledge both qualitative and quantitative data, and will combine narrative description from a selected

*[Laura Berg's article
"Notes from a Psychedelic
Research Nurse"
appeared in MAPS V.5
no.1, Summer 1994]*

study day and case study with background information on my day to day work activities as a nurse in psychedelic research, including my closing perspectives. In doing so, I seek to tell more of the "story behind the study" (Sandelowski, 1991).

Sarah checked in to the CRC yesterday. All women volunteers' studies take place only in the first 10 days of their menstrual cycles, when potentially confounding levels of progesterone and estrogen are at their lowest. Sarah's cycles are irregular, so she called me as soon as her menses began. Another CRC patient was discharged from our designated research room, so Sarah is able to come in. A pregnancy test and brief physical assessment measures were obtained by the unit nursing staff, and she then checked out on an overnight pass.

Two months ago, Sarah had her test dose administrations of DMT: 0.05 and 0.4 mg/kg level, allowing us to assess her cardiovascular and psychological response to DMT. Importantly, these also allowed her to measure her own response to the medicine within the research setting. She had very strong feelings of death and rebirth.

One month ago, she came in for the first day of her double-blind DMT tolerance study. At 7:30 AM that morning, I picked up 4 pre-filled syringes from the research pharmacist; neither Rick nor Sarah nor I knew whether these would be DMT or placebo. We prepare as for DMT, but within 30 seconds Sarah lets us know: it's saline placebo. Our protocol continues through 3 more precisely-timed injections of saline, as we chat informally through 2 hours of blood sampling, blood pressure readings, and rating scales. Sarah has now had a month to prepare for her second day, knowing that it will be DMT.

Sarah returns early this morning, and preparations for the tolerance study have taken around 2 hours. Today, again, she is fully poked, prodded, lines and probes inserted, subject to the full array of technical procedures as she undertakes the DMT journey. I've started 2 intravenous (IV) lines: one in her right hand, a heparin lock (a small capped plastic catheter placed in a vein) for DMT administration; and in her left arm, an antecubital (inner arm) line attached to a slowly-infusing saline solution. I'll be drawing blood samples at 2 to 15 minutes intervals for several hours. I've made and set-up a heating pad to cover her left arm IV site; this will be more comfortable for her, and, by reducing some of the widespread vein constrict-

My nursing work
with the UNM studies
began with pilot studies
in DMT tolerance,
continued throughout
2 subsequent studies
of DMT,
and into
initial pilot work
with psilocybin.

tions caused by DMT, ease the blood sampling process.

I've also gathered the syringes and laboratory tubes for this day's study, arranging technical apparatus as unobtrusively as possible, and setting up things to prevent untoward sounds and movements. I've also placed a flexible rectal thermometer, a thin rubber-coated sensing wire, humorously and infamously known to the volunteers as *The Probe*, and connected it to a small, transistor radio-sized recording device. The monitor will record Sarah's core temperature changes, for later downloading into our database. We have grimaced and we have laughed. Somewhere in all this, we've kept humor, sensitivity and the human touch, knowing that set and setting are key aspects of the experience. And amidst the apparatus, Sarah has composed herself, and recited her invocations. We honor the silence. This moment is precious. There is a timelessness in the silence before DMT administration. For me, the surreal and the real, the quantitative and the qualitative, mingle there in a unique way.

My nursing work with the UNM studies began with pilot studies in DMT tolerance, continued throughout 2 subsequent studies of DMT, and into initial pilot work with psilocybin. The psychedelic research nursing role has included many complex professional responsibilities.

The relatively more circumscribed aspects of my psychiatric nursing role have included recruitment and formal psychiatric screening with prospective volunteers; study scheduling; liaison and training with UNMH pharmacy, nursing, laboratory and CRC staff; study set-up and technics; and participation in protocol development and team meetings. These general duties are consistent with responsibilities commonly incurred in the management of many other research projects within the field of psychiatry.

However, recruitment and psychiatric screening took on many new attributes in the conduct of a psychedelic study, as did orientation and liaison with hospital staff. Recruitment of experienced hallucinogen users was accomplished exclusively through word of mouth and needed to be managed with special sensitivity. The population of experienced hallucinogen users had a wide range of characteristics and histories on psychiatric screening: predominantly, a history of experimentation with a wide range of psychoactive

substances, and in many cases, histories of experimentation with other altered states through non-drug means including non-Western or Eastern spiritual practices.

Research-based interviews

Our formal research-based psychiatric interview codified symptoms according to the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R). Although our volunteers may have had problems with Major Depression, Adjustment Disorder, or Psychoactive Substance or Alcohol Dependence in the past, persons with current or recent problems were not eligible to participate. Abuse of a substance, in general, is coded only if there is impairment in social, relational or physical spheres or hazardous use. As such, many volunteers with histories of extensive psychedelic experimentation did not meet DSM-III-R diagnoses.

OVER THE COURSE OF MY PROJECT involvement, I expanded my interview to include assessment of other significant areas not included on the formal interview, including birth experience (type of delivery and mother's labor, birth order), family, developmental and relationship history, and a more thorough discussion of difficult psychedelic experiences, with special focus on set and setting and how the prospective volunteer handled anxiety that may have arisen. Interviews also came to include further preparation and discussion of the protocols themselves and anticipated DMT or psilocybin sessions. Volunteers were also given forms to complete before the first session: an extensive drug history and a personality inventory.

Before my psychiatric interview, Rick already had met twice with prospective volunteers: once to meet and discuss the study work, and once for medical screening and physical examination. The screening interviews with Rick and myself gave us an opportunity to develop trust and rapport with volunteers. In the midst of our assessing them, they also had the opportunity to assess us. For each volunteer, the decision to participate was not taken lightly.

Of perhaps 70 persons screened, around 1 in 6 had medical, situational or psychological factors that excluded them from continuing into formal studies. One person has enrolled in all studies to date, and several more have participated in multiple studies. Approximately 1 in 3 or 4 participants has been a woman.

Sarah is in her early 40's, now in her second marriage, and has 3 children. She holds a BS and is a successful freelance writer. She initially heard about the psychedelic research project at a conference where we happened to meet. I described the studies, and she was very enthusiastic about the chance to take part. The studies had remained quite low-profile and had generated nearly no publicity; Sarah, as most local people, was astonished to hear that psychedelic research was happening at all, much less in her own city. Sarah and her husband, who was also interested in the research, then met with Rick to discuss their prior experiences with psychedelics, and to discuss the UNM studies in more detail. She then underwent and passed her screening medical history and physical examination.

We then met for her psychiatric assessment. Unlike most other volunteers who began their experimentation with psychedelics at an early age, she began her use in the late 1980's, when she was in her late 30s. Since then, she has taken psychedelic substances around twice a year, and describes her use as a "tool on my spiritual path." Her use has been in a "ritual" context with a small group from which she now is estranged. She has had experience with mescaline and peyote, but no other psychedelic substances.

Sarah is a practitioner of Wicca, which she describes as "the old religion of Celtic and neopagan roots." She describes "communication with spirit guides and nature spirits." As I more closely assess her thought processes, I find no evidence of a formal thought disorder or psychotic thinking that would warrant DSM-II-R diagnoses. She, as do many other volunteers, reports a range of non-drug induced alterations of consciousness. For the most part, these experiences are cultivated by the volunteers and occur in meditation, ceremony, or long walks in nature. For Sarah, these experiences are accepted and encouraged by her peers, her family and her spiritual circle. And most significantly, they have not interfered with her functioning in day-to-day activities and responsibilities: a critical element in differentiating the nature of "psychiatric symptoms."

The psychedelic sessions

The more complex responsibilities associated with the UNM project have revolved around the psychedelic sessions themselves: volunteer preparation for each session, support during sessions themselves ("sitting"), and follow-up over ensuing days to months. These were skills requiring on-the-job training. Preparation for sessions included

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provision of written background materials, discussion of the range of expected effects, hopes and fears, and the anticipated timeline of the studies. As my experience at the bedside grew, enhanced by ongoing follow-up interviews, I was able to provide better preparation and sitting for volunteers. With the shift from DMT to psilocybin sessions occurring last summer, a new constellation of skills and aptitude for empathic and effective sitting was required. Work with psilocybin entailed major changes, for both volunteers and the research team.

The psilocybin experience is markedly longer than that of DMT; our UNM psilocybin sessions ran from around 8 am to 4 pm. Because of its length, and the gradual rise and decline of peak effects, different psychological and physiological responses took place. While cardiovascular effects are much less robust than with DMT, the length of time spent in a hospital room and/or hospital bed evoked restlessness for some volunteers. As well, the team needed to remain quiet, relaxed and attentive for longer periods. Rick initially recommended a simple meditation practice for me; over time, I found it easier to sit comfortably and with less distraction.

Psychologically, the psilocybin effects at larger doses seem to release more personal and unconscious material, in contrast to the relatively more transpersonal or chaotic attributes of the DMT experience. The volunteers' experiences of psilocybin seems to have a undulating motion whereas DMT is more piercing and explosive. I await the results of Rick's rating scale data analyses to confirm or modify these subjective impressions. The images and emotions encountered with psilocybin seem to be more directly associated with personal issues or relationships for the volunteers. As well, attributes of transference are heightened, and elements of trust and rapport with the research team take on an even greater significance than with DMT.

The work evolves

The structure of psilocybin sessions was modified over time, as we became more familiar with the effects of the drug and received volunteer feedback. We continued to structure and support an inward journey. Volunteers were asked to bring in 3 selections of music, to be played during the onset, ascending period, and coming down period of psilocybin effects. For the time of peak effects, volunteers were asked to keep silence and lay prone for 90 minutes. There were several

breaks to complete rating scales and to check in with the team, and use the bathroom if necessary.

Initial attempts to have volunteers complete the HRS on medium or high doses during peak effects were found to be impractical; volunteers would either laugh (sometimes wildly) or become too distracted or frustrated in reading and thinking over the HRS descriptors. After several sessions, we also began to invite significant others to be present for all or part of the day. We also found it helpful to offer gentle massage during especially difficult parts of the session, and to rearrange furniture so to provide more floor space for volunteers to do stretching or seated meditation.

FOR THE PSILOCYBIN WORK, blood pressure readings were obtained on a half-hourly basis. For some studies, ear thermometer temperature checks were obtained at the same interval. However, no IVs or blood drawing were necessary. Blood sampling and endocrine assays were a component of the planned formal protocol, but the UNM work was stopped before any of these procedures took place. The double-blind, dose-response protocol was designed to incorporate 5 randomized study days after 2 non-blind test doses at the low and high levels. One of the 5 days would be placebo and 4 days would be psilocybin across a range of doses.

Several volunteers, all experienced in the DMT studies, joined us in the pilot psilocybin work. We thank them. Most of them, after pilot and test dose work, chose not to enter the formal protocol because of the rigor of the hospital setting.

Sarah, second DMT session of 4 for the tolerance study. The hum of the automatic blood pressure machine inflating. The slight clink of glass tubes. Steam arising from the UNM hospital smokestack in the distance. The garnet color of blood.

Sarah breathes deeply. At 2 minutes, she murmurs, "Tell me where you want me to go." Glancing eye contact between Rick and me; she's not speaking to us. At 6 minutes she sighs deeply. At 7 minutes she presses her hands over the eye shades, and resettles her body. She joins her fingertips and wets her lips with her tongue. Five more minutes pass, my stopwatch recording the seconds. She lifts and removes the eye shades, makes contact with Rick and me, raises and shakes her head, smiles, and says, "I'm back."

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DMT to psilocybin
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Rick quietly takes notes, as she describes her DMT experience:

I was in deep space this time. There were beings. It wasn't scary, they were expecting me. They were observing me. They told me: "We are in a different universe. We mean you no harm. We embrace peace."

At 15 minutes post-injection, I step quietly out of the room to deliver the iced blood samples to the research lab, and to check with the CRC nursing staff on our study progress. I am not able to hear the full story of her DMT experience, and try to return as quickly as I can. Rick will take full notes of her narrative, and will later provide copies to Sarah. My own notes will focus on the technics of the study and her overall response. As I return, Sarah is sitting up and completing the HRS, which will quantify the DMT effects. Today, she is completing a shorter version of the questionnaire, since she will be receiving her fourth dose of DMT 30 minutes after the last administration, which is only 10 minutes away.

Follow-up

Follow-up contact with volunteers is an essential component of psychedelic studies, and these responsibilities were another key aspect of my nursing role. In conjunction with Rick, I provided day-after phone contact to volunteers after DMT and psilocybin sessions, and arranged ongoing phone or 1-to-1 assessment of volunteer needs. I also conducted formal follow-up interviews after 1 year with all DMT study participants in the first 2 protocols. These semi-structured interviews reviewed insights and memories from DMT sessions, taking into account the full range of possible DMT responses, and assessed changes in lifestyle patterns and psychological variables, including the presence of flashbacks and effects on subsequent psychedelic experiences during volunteers' own self-experimentation. I hope to complete further interviews with participants in subsequent DMT and psilocybin studies and to provide an overview across studies.

According to one author: "Professional practice in Nursing seeks to promote symphonic interaction between man and environment, to strengthen the coherence and integrity of the human field, and to direct and redirect the patterning of the human and environmental fields for realization of maximum health potential." (Rogers, 1970, p 122). Through the nursing role, I became a voice for

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the volunteer group as a whole; adding elements of comfort to the study room, expanding the preparatory discussions to include previous volunteers' reports, communicating and integrating critique and suggestions into ongoing conduct of the study.

Reflecting back

Over time, I heard many volunteers speak of an isolation in their experiences. While they had peers or friends with psychedelic experiences, few of their friends had ever had any experiences with DMT. Fewer still had ever had psychedelic experiences in a hospital setting as a research volunteer. There appeared to be a strong need share their stories, to reflect on the meaning of their experiences with others who had been there. Responding to this need, Rick and I began offering quarterly technical review meetings, where volunteers were able to meet with the team and each other. These round-table meetings have been well-received and, I feel, provide an important element of continuity for both volunteers and the team.

FOLLOW-UP EVOLVES into a circle and becomes preparation, unfolding experience. For the UNM volunteers, the constraints of the hospital setting became more difficult under the full effects of psilocybin. Our setting had been effective for the DMT work, but the length and breadth of the psilocybin experiences taxed our resources further. Sensitivity to the physical and interpersonal environments is heightened, even when a focus on an inner-directed experience is encouraged. As comfortable as we could make the room and experience, there were significant limitations: a small room that was crowded when a spouse/partner or art therapist joined us; noises from the hallway; one sealed window overlooking the hospital dumpster and loading zone; and a door onto a hospital hallway which lead to rooms with people experiencing pain, loneliness or fear. A short walk in a natural setting or a breath of fresh air would have been very welcome at several points throughout the day during psilocybin sessions.

Sarah's fourth dose of DMT is completed. She describes an experience of "communication with beings from another solar system. I was pouring light, pink light, from my hands into them." She is blissful, excited, but exhausted. I disconnect all technical apparatus, and set up her lunch as we discuss her experience more fully.

Thank you Sarah,
and many thanks
to all UNM
volunteers...

We will be in touch over the next day and following weeks.

Sarah later returns for further studies, both DMT and psilocybin. We have a difficult time starting her IVs for several sessions. Her husband also enrolls in the DMT study, but has a very difficult DMT test dose: his blood pressures goes very high, and blood pressure machine alarms go off at 2 minutes, during the peak effects, creating a very chaotic environment for the DMT experience. He was dropped from further participation in the studies because of his blood pressure response. They had hoped to participate together, and the dichotomy creates some brief stress within the relationship, requiring some couples counseling from Rick.

Sarah, 1 year post-study, said during her follow-up interview: "It was a powerful tool for self-exploration and exploration of all the invisible dimensions. It's about being stripped to your soul essence - having everything of the material world peeled away." She also speaks of the terror of the 0.4 mg/kg dose and the IVs and about a fall during a rock climbing trip, (when I saw how I would die and it was so much like the DMT space.)

Her experiences with DMT, and her later experiences with psilocybin, were not unusual. "Seeing" and "interacting" with "entities," "beings," or "creatures" are reported by nearly one third of our DMT study participants. In another setting, her story would be labeled psychotic, her participation classified as reckless and deranged. Yet she returns home to maintain a responsible and productive lifestyle and persona, as writer, mother, wife, neighbor, friend and citizen.

Thank you Sarah, and many thanks to all UNM volunteers, for contributing both endocrine markers and human spirit toward the endeavors of the UNM psychedelic team. •

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big sur tapes

Big Sur Tapes is committed to preserving and publishing archival spoken audio tapes that promote the exploration of human potential through spiritual and psychological teachings and practice. They have under their care an archive of over 8,000 hours of audio recording, primarily recorded over 35 years at Esalen Institute on Big Sur. This includes the largest audio collection of the work of **Joseph Campbell** and **Aldous Huxley**.

They have available many tapes about psychedelics, including:

Stan Grof	Albert Hofmann	Gordon Wasson	Ralph Metzner	Alan Watts
John Lilly	Claudio Naranjo	Ram Dass	Humphry Osmond	
Timothy Leary	Joan Halifax	Andrew Weil	Prem Dass	

and others discussing ayahuasca, mushrooms, peyote, LSD, The Native American Church, The Huicholie and related subjects. The publishers of Big Sur Tapes believe that sound recordings are living links to individuals offering unique insights and perspectives and embodying an historical immediacy unparalleled by the written word.

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In the near future the catalog will be available on-line at: <http://www.bigsurtapes.com/>

CASE OVERVIEW

archetypal art therapy: hearing **psilocybin** in the art & metaphor work of volunteer no. 31

Tamara D. Allen



Abstract

Research in Archetypal Art Therapy (AAT) With Psilocybin is part of a pilot research project conducted by Dr. Rick J. Strassman at the University of New Mexico Clinical Research Center entitled, "Human Psychopharmacology and Neuroendocrinology of Psilocybin." The study, now in its second year, is close to completion. Following is a case presentation of the art works and metaphor writings of Volunteer no. 31, who reflects upon the four dosages of psilocybin administered to him in the study.

I will provide short commentaries of his work throughout the sessions and will conclude with my findings. This paper is intended to give a brief overview of the experience of the volunteer, and is not an in-depth archetypal case discussion.

Introduction

Image is the central focus in AAT and psychedelics are image-producing and image-altering drugs. The early works of Betty Eisner (1964), Di Leo, Grof, and Kellogg (1977), and Oscar Janiger (1989), are some of the first attempts to document image work produced in altered states with psychedelic drugs. AAT proposes that the archetype is phenomenal (Hillman, 1983) and is communicated through the language of metaphor. Archetypal Art Therapy With Psilocybin is a research project created to: document and test AAT methods; hear metaphorically what images produced in a psychedelic state have to say; and determine how this informs volunteers and researchers in the study.

As the study concludes, all 10 volunteers enrolled in the AAT part of the study were able to complete all assessments, all performed well using the metaphor writing technique, and out of 17 psychedelic sessions only one volunteer

was "too altered by the drug" to create art, but was able to complete the session on a subsequent day. The volunteers' response to the art has been positive and many have stated it was enjoyable. Often they asked for photographs of their work, demonstrating that their creative efforts are of value to them. Assistance and redirection have been minimal and all volunteers have been self-motivated and cooperative throughout the sessions. All volunteers have utilized three or more of the various art materials provided, indicating a need for a variety of materials to represent their imagery.

Therapeutic Intent

Although "therapy" is not being conducted in this pilot study, a therapeutic dynamic is in place for those participating in the study. Psilocybin can produce unusual visual images for volunteers. Art making affords the volunteer a way to contain and organize this information. Writing metaphorically about the art confirms the volunteer's ability to carry out usual tasks, encourages them to find relationships in their art, and focuses them on only the information contained by the art. The art provides a place to release what was experienced during the session and can potentially capture what was euphoric or what was terrifying. When this is released into the art, the volunteer no longer has to carry or hold this information. The art also affords a tangible view of what was experienced to both the research team and the volunteer, and confirms the reality of the volunteer's experience. New perspectives can be engaged through the art process and are evidenced in the metaphor statements of volunteers. Hence, if the experience was euphoric or terrifying, the art and metaphor can present new information and deepen the understanding of euphoria or terror.

History

Volunteer no. 31 is a 38 year old Caucasian male who is married and is employed as an engineer. He reports 16 years of education and 21 years of art experience. He had experi-

[Tamara D. Allen's article
"Research in archetypal art
therapy with psilocybin"
appeared in MAPS V.5 no.1,
Summer 1994]

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ence with hallucinogens prior to the study. He completed both assessments - the Ulman Personality Assessment Procedure (UPAP) (Ulman, 1975), and the pre-Multi Medium Art Studio Situation (pMMASS) - and four Multi Medium Art Studio Situation (MMASS) sessions where various dosages of psilocybin were administered four to five hours prior to the session. He has reported no ill effects from his participation in the study and has sampled all doses of psilocybin. He received no placebo.

Art Process

The volunteer demonstrated good performance on the UPAP which is a drawing assessment tool to determine four factors:

1. psychological environment;
2. kinesthetics and ability to follow directives;
3. ability to play with unconscious material; and
4. choice and decision making.

Figure 1 illustrates factor one, psychological environment. The volunteer referred to the central part of the image stating "the blue is like what DMT was... I've seen this on every trip."

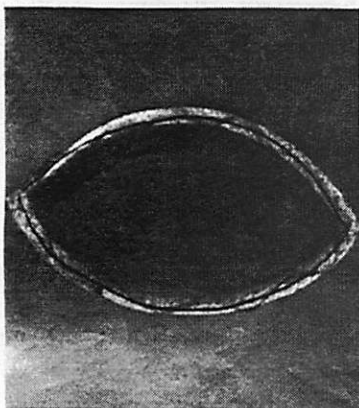


Figure 1
UPAP
Drawing 1,
18"x24"

The volunteer was involved in a prior research study where the drug DMT was administered. The shape, color, and form represented in this image are seen in other volunteers' work and 6 of 10 volunteers have referred to DMT spontaneously in their assessment sessions. On the consent form for the study, volunteers were asked to provide the code numbers which had been assigned to them for a previous DMT study. It is my belief that the research environment and the reminder of the code number contributed to the references to DMT. Possibly, volunteers felt some need to further process this experience.

The volunteer performed well when learning the Metaphor Technique which asks for a written statement describing only what is confirmed in an art image, using metaphors or analogies. The volunteer was then shown the art trunk which holds 14 different art mediums and completed the pMMASS assessment to create an art image and write metaphorically about this. Figure 2 shows his pMMASS image and metaphor statement.

With the pMMASS session completed, the volunteer then participated in the MMASS sessions where psilocybin was administered. Four to five hours after administration the volunteer was asked to create an image from his experience and write metaphorically about the image. This volunteer and others reported that the pMMASS session helped to establish rapport



Figure 2
"the embracing sun
warms the green
earth as the three
dancing flowers play
on a perfect day"
pMMASS image
watercolor, 8"x11"

and trust with me and the art materials and was a good introduction to the MMASS sessions.

MMASS Session 1

The volunteer received a 0.056 mg/kg, low dose of psilocybin and created four images with various materials. Figures 3 through 6 illustrate these four images with his metaphor statements.

Figure 3
"the Ear of the heart
encompasses the earth"
watercolor, 11"x14"



Figure 4
"the crystalline Diaspora
of a muted rainbow"
watercolor with salt, 11"x14"

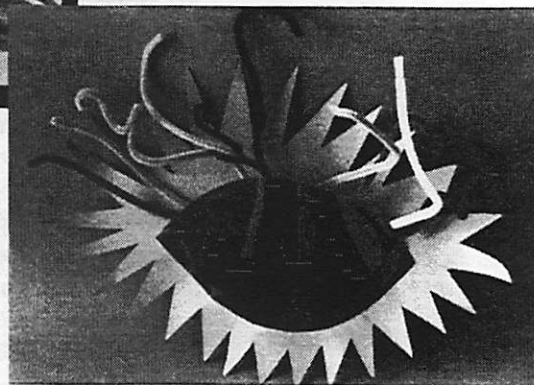
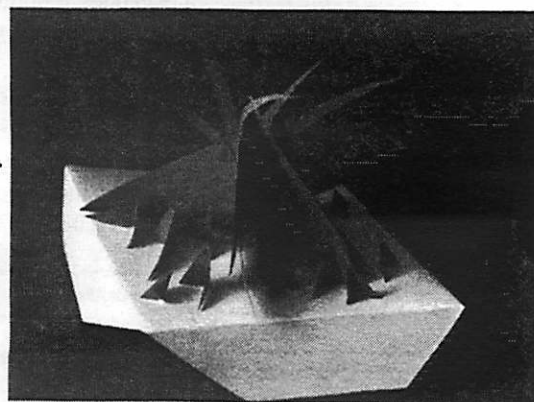


Figure 5
"the all-encompassing reflective blue eye sees-C-c see. Energy dangles swirls out & radiates"
cut reflective and construction papers and pipe cleaners, 11"x14"

Figure 6
"the mother volcano erupts energy & the children gather around & watch reverently"
cut and folded construction paper,
12"x15"x12"



Although this was a low dose, the volunteer demonstrated less inhibition with materials and an increase in art production. This was the group trend with the dose sessions.

MMASS Session 2

The volunteer received a 0.45 mg/kg, medium dose of psilocybin and completed one image and metaphor statement shown in Figure 7.

Figure 7
 "Toltec electric cat layers of electricity Who needs a body? with a cat like that!"
 felt, cardboard, and glue, 9"x14"



The volunteer was somewhat unfocused, but was able to create an image of a cat he experienced early in the session. He commented "the cat spirit just came over me." He called the image a "mask" and demonstrated that it could be held at the tail to cover his face.

MMASS Session 3

The volunteer described the previous sessions as "pedestrian" in nature. In Session 3, he received a 0.7 mg/kg, high dose of psilocybin and completed 4 images and metaphor statements shown in Figures 8 through 11.

Figure 8
 "2-6-95 the Buddha comes in primary colors heads attenuated to the divine"
 acrylic on plastic plate, 6"x6"

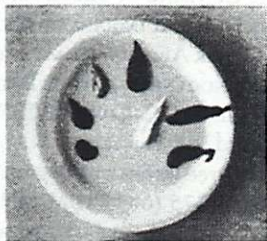


Figure 9
 "the return of the cat. 'Cool cat' its name (I asked). Ephemeral magick playing between the interstices of Euclidean logic"
 acrylic finger-painting on shiny paper, 6"x12"

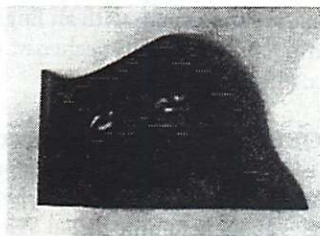


Figure 10
 "Land in your Hand" Where the artist ends & the art begins? green earth colors blue water spirals the fiery yellows & reds burn & swirl in a sky where wispy clouds blow their air"
 acrylic finger-painting on plastic plate, 6"x6"



Figure 11
 "the grinning, gold-tooth capped demons of fear guarding the gates of transformation into the eagle of freedom"
 terra-cotta and plasticine clay, 4"x5"



In this session the volunteer appeared very altered by the drug and laughed frequently. The themes introduced included spirituality, the cat, and transformative ideas regarding the earth, fear, and freedom. I will point out that the volunteer sculpted an eagle between the eyes of Image 11...this is difficult to see in the illustration.

MMASS Session 4

The volunteer received a 1.1 mg/kg dose of psilocybin, the largest experimental dose of the study. He completed 3 images and metaphor statements shown in Figures 12-14.

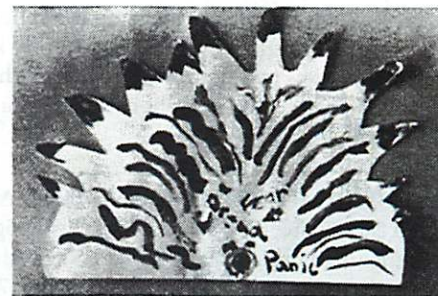
Figure 12
 "the elves of hyperspace: the owl of the full moon hides the little elves, whose changing form is hard to perceive directly."
 acrylic on shiny paper, 17"x9"



Figure 13
 "Ganeesh—the eye of the elephant is woven across hyperspace. The trunk becomes a swan. The eye of Osiris is invoked."
 cut shiny paper, acrylic and pipe cleaners, 20"x11"



Figure 14
 "the mask of dread - dark, scary, stuff but...(there's always a but!) the dove of freedom awaits reemergence"
 cut white paper and acrylic, 12"x16"



The volunteer seemed much more focused than in previous sessions and spontaneously recalled several of his previous art works. He appeared quite altered by the drug but was able to describe his experience at length and confronted the "dark" parts of the experience in his art and metaphor work and again finds freedom with the reemergence of the dove. ➡

Final Remarks

Volunteer #31, with his eloquent metaphors and intriguing imagery, has composed for himself and the research team a glimpse into the personal essence of his psilocybin experience. His art process is interesting; he begins in the pre-psilocybin assessment working from an earthly grounded place and expands to a hyperspace where personal and collective entities are encountered, masked, transformed, and allowed to reemerge. His responses to the various doses administered show little exploration and some inhibition with materials in the assessment, enhanced creativity and increased exploration of materials with the low and medium doses, and a stretch towards abstraction and increased exploration of materials with the higher doses.

I would like to conclude by stating that my involvement with Dr. Strassman's study has been a fascinating project to work on, and my thanks go out to him, the volunteers, my

supervisors, and to MAPS which gave a \$600 grant to fund this study. Two papers are currently in preparation to include the topics of dose/response statistics and archetypal themes found in the image work of volunteers. •

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NEW PUBLICATIONS

ELEUSIS, a quarterly Bulletin of the Italian Society for the Study of the States of Consciousness (ISSSC), includes scientific articles (English/Italian) and up-to-date information concerning the multidisciplinary research field of the modified states of consciousness, with particular emphasis on those induced by psychoactive plants and compounds. Each issue also offers news and information from all over the world, reviews, bibliographies, announcements, etc.

Issue No. 1 (April 1995, 44 pp. includes: **REFLECTIONS ON THE NEW BULLETIN OF THE SISSC** by Albert Hofmann; **AYAHUASCA, NOW AND THEN** by James Callaway; **EMILIO SERVADIO AND THE STATES OF CONSCIOUSNESS** by Pierangelo Garzia; **TRADITIONAL USE OF PSYCHOACTIVE MUSHROOMS ON THE IVORY COAST?** by Neshor L'ortensia & Giorgio Samorini; and other articles in Italian.

A subscription in the USA is \$32.00 with international money order to: SISSC, c/o Museo Civico di Rovereto, Largo S. Caterina 43, 38068 Rovereto (TN), Italia.

The Bulletin's logo is an amazing bas-relief from Pharsala, dated to the early fifth century B.C., presently kept in the Louvre Museum. It depicts two figures representing the Eleusinian goddesses Demeter and Persephone, who seem to be feeding each other mushrooms!

SACRED MUSHROOMS AND THE LAW, 36 pp., by Richard Glen Boire, Esq., editor of *The Entheogen Law Reporter* and author of *Marijuana Law: \$5.00 + \$1.50 shipping & handling (+ 0.50 tax in CA)*, Spectral Mind Industries, Box 73401, Davis, CA 95617. • This is a useful booklet for anyone with an interest in mushrooms containing psilocybin/psilocin. After an introduction to the mushrooms and compounds, the main body of the booklet describes the federal and (all) state laws regarding them. The California law against spores is covered, as well as a number of state cases regarding the legal difference between the mushrooms themselves (not often mentioned in the statutes) and the active compounds. Finally, it mentions the possible use of the Religious Freedom Restoration Act as a defense against prosecution for the religious use of the mushrooms or compounds

The newest issue of **INTEGRATION: JOURNAL FOR MIND MOVING PLANTS AND CULTURE** features selected papers from the First International Conference on Plants, Shamanism, and States of Consciousness which took place in San Luis Potosí, Mexico in November 1992. The third Conference of this type is scheduled for October 1996 in San Francisco, CA under the direction of Jonathan Ott.

Articles appearing in this issue (no. 5, 1995, 128 pp.) include: **ANTIQUITY OF THE USE OF NEW WORLD HALLUCINOGENS** by Richard Evans Schultes; **THE CROSSING OF SOULS: PEYOTE, PERCEPTION AND MEANING AMONG THE HUICHOL INDIANS OF MEXICO** by Stacy Schaefer; **BITTER BREWS AND OTHER ABOMINATIONS: THE USE & ABUSES OF SOME LITTLE-KNOWN HALLUCINOGENIC PLANTS** by Dennis McKenna; and articles by A.T. Shulgin, J.C. Callaway, P.T. Furst, N.K. Heyder, J. Ott, G. Samorini, and J.M. Fericgla.

Subscription to three issues of *Integration* (which appears once or twice a year) is \$75 (or 122DM, or 110DM for German subscription). Each issue is about 80 pages and generously illustrated. Contributions appear primarily in English with a German summary, some are in German with an English summary.

INTEGRATION, Bilwis-Verlag, Eschenau #29, 97478 Knetzgau, Germany, fax: (49) 9527-7742.

PAN-FORUM, a Dutch-language quarterly publication, is dedicated to the exploration of altered states of consciousness as brought on by psychedelic compounds. The *May 1995 issue* includes articles about ketamine by Jan Wiese and Hans Plomp, a report on the Second International Conference on Plants, Shamanism, and States of Consciousness (Lleida, Spain; October 1994) by Hans Bogers, and an article about 1960's LSD films by Jos ten Berge. The next issue will include articles about medical marijuana, the Santo Daime, and traditional uses of Iboga

underlying psychological mechanisms of **ketamine** psychedelic therapy (KPT) in the treatment of **alcohol** dependency

Evgeny **Krupitsky**, MD, Ph.D.

These tests demonstrate positive changes in the patients' life values and internalization of the locus of control, meaning that patients are getting more independent and assuming responsibility about themselves and their futures.

THE MAIN PURPOSE OF OUR next study of the underlying mechanisms of ketamine psychedelic therapy (KPT) is to discern the subtle changes in our patients' systems of values, life purposes and meaning of life as caused by their KPT sessions. The results of our previous studies have been described in previous MAPS Newsletters.¹

To assess quantitatively such a subtle matter we decided to use three questionnaires which were translated into Russian several years ago: the Questionnaire of Significant Life Values and Purposes (QSLVP) based on the M. Rokeach Test of Human Values; the Personal Orientation Inventory (POI) developed in the United States by Shostrom to measure patients' self-actualization; and the Locus of Control Questionnaire (LCQ) based on the Internal- External Scale developed by J.B. Rotter to estimate the attitude of the patient towards life events (whether the patient feels responsible for his life events or whether he feels that just external circumstances determine his life). We decided to treat 30 patients with KPT and investigate them with these tests. We also decided to investigate at least 7-10 out of the 30 patients with verbal and nonverbal (color) repertory grids (Kelly matrices) to assess changes in the attitudes of our alcoholic patients towards themselves from the stand-point of values and life purpose. We administered this battery of psychological tests twice: before KPT and several days after the psychedelic session.

Progress report

We began this work at the end of April and have already treated and investigated 22 patients. We expect to have this study completed in October 1995. According to our preliminary impression, the QSLVP and LCQ tests are working out well, and preliminary results are promising. These tests demonstrate positive changes in the patients' life values and internalization of the locus of control, meaning that patients are getting more independent and assuming responsibility about themselves and their futures. At the same time, POI is not working very well: we haven't noted significant changes, perhaps because our patients do not know anything about Shostrom's theory of self-actualization. Therefore we've decided to explain Shostrom's paradigm to our patients before testing with POI to make POI statements more understandable to them. We hope it will work better after that. We also hope this study will enable us to come to a better understanding of how KPT works for the treatment of alcohol dependency and why KPT is effective.

Acknowledgements

At the end this short report I'd like to express a deep thankfulness and gratitude to MAPS and Rick Doblin, MAPS President, for the funding of this study. We appreciate it very much. •

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1. MAPS Newsletters. 1992, V.3, No. 4, pp.24-28 and 1995, V.5, No. 4, pp.6-8.

ketamine-assisted therapy (KAT) research in tampa, florida

Eli Kolp, MD

I HAVE COMPLETED MY initial presentations of the Ketamine Research Protocol to the Research Committee at the Tampa Veteran's Administration (VA).

The protocol for the use of Ketamine-Assisted Therapy (KAT) in the treatment of alcoholism received quite a few critiques. I am now changing the protocol to accommodate all requests (most related to improving safety precautions). I will soon present the improved protocol to the Research Committee for final recommendations. Following this, I will submit the protocol to the Institutional Review Boards (IRB) of both the VA Hospital and the University of South Florida (USF) College of Medicine for final approval. I hope to be on the agenda of the October or November meetings of the IRBs.

Seeking approval

Recently, I requested assistance from Parke-Davis, the manufacturer of ketamine. I asked to obtain permission from Parke-Davis to research ketamine under the auspices of its existing Food and Drug Administration (FDA) Investigational New Drug (IND) permit. I was promised that the company would try to work with me after I submitted to them my protocol along with a letter of approval from an IRB. I will also try to obtain my own IND from the FDA, but that may take from several months to a year. As soon as I am able to secure both IRB approval and FDA approval, I will immediately begin using ketamine to treat my patients. I am hopeful that I will complete the approval process within the next several months and will pilot KAT before the New Year. Ketamine-Assisted Therapy is referred to as Ketamine Psychedelic Therapy (KPT) by the Russian researchers. [For an update on the Russian research and citation of previous articles in the MAPS newsletter, see p. 27.]

Replicating results

The protocol is designed to replicate the data from previous studies that show significant clinical improvement of alcoholic patients after treatment with KAT. This pioneering research was done by Evgeny Krupitsky, MD in Russia and was published in the journal "Alcoholism Treatment Quarterly" in 1992 (9:99-105). His controlled study has demonstrated a marked clinical effect of KAT on alcoholism: 69.8% of patients treated with ketamine stayed sober during the year following treatment, while in the control group only 24% remained abstinent. The first number shows a remarkable clinical success. The control group percentage is congruent with the results of treatment of Alcoholism in the United States, where only 20% to 30% of

patients remain sober during the first year after completion of anti-alcohol treatment of ANY modality (pharmacotherapy, psychodynamic psychotherapy, 12-step recovery programs, behavioral psychotherapy, in-patient rehabilitation programs, cognitive psychotherapy, etc.). Therefore, it is very important to replicate the results of Dr. Krupitsky's study in the US.

Study design

My study design is a prospective, single-dose, parallel group clinical trial. All patients will be randomly assigned to one of two treatment groups. Both groups will follow a standard 12-step model treatment program. The only difference between the groups is that subjects in one group will receive a single administration of a 2 mg/kg, IM dose of ketamine. The ketamine treatment will be administered between the 12th and 16th days of therapy in addition to all other components of the routine three week substance abuse treatment program at the Tampa, FL VA Hospital. There will be 90 patients (45 per treatment group), both males and females, 18-60 years old, who identify alcohol as their drug of choice and satisfy the DSM-IV criteria for Alcohol Dependence. The treatment will be done at the VA Hospital, on the in-patient chemical dependence unit. The study will be completed in 12 to 18 months.

As the first study is gathering data and increasing my experience with ketamine treatment, I will initiate a second project to be conducted on an out-patient basis. The second study will be more comprehensive and is designed as a double-blind, controlled, dose-related, multi-group prospective clinical trial. There will be five groups:

1. control (standard four week 12-step model treatment program);
2. placebo (standard anti-alcohol treatment plus single administration of neutral placebo);
3. single administration of ketamine, 0.5 mg/kg, IM (standard treatment in combination with subtherapeutic dose of ketamine);
4. single administration of ketamine, 2 mg/kg, IM (standard treatment in combination with KAT);
5. single administration of Lorazepam, 0.05 mg/kg, IM (standard treatment plus single administration of pharmacologically active placebo).

In this multi-group study there will be 250 patients (50 per treatment group) treated on an outpatient basis in a residential chemical dependence program. Although the second study will require a larger number of patients, it might be completed within 1.5-2 years, as space will not be limited by the size of the in-patient unit.

I will continue to *update you* about both studies and will share the acquired knowledge with MAPS' subscribers. I also plan to report on changes of consciousness during ketamine sessions. Thank you for your help and support. •

development of **ibogaine** as an anti-addictive drug: a progress report from the university of miami school of medicine

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THE University of Miami Ibogaine Research Team has been working with ibogaine for the past three years in both preclinical and clinical studies. Ibogaine is a psychoactive indole alkaloid derived from the rain forest shrub *Tabernanthe iboga*. Ibogaine is one of a dozen or more alkaloids found in the iboga shrub that grows in West Africa. The use of ibogaine for the treatment of drug dependence has been based on anecdotal reports from the International Coalition of Addict Self-Help (ICASH) and DASH (Dutch Addict Self-Help Group) that it may decrease the signs of opiate withdrawal and reduce drug craving for cocaine and heroin. Preclinical studies in animals have given additional support to the claim that ibogaine is an addiction interrupter. Studies by American and European scientists have shown that ibogaine reduces morphine and cocaine self-administration and blocks, albeit not completely, the signs of opiate withdrawal.

Clinical research with Ibogaine: Questions and concerns affecting the pace of development

While these initial reports were promising, clinical research and development of ibogaine as an anti-addiction drug has been very difficult for a number of reasons. First, all of the anecdotal reports of ibogaine's successes have come from individuals working outside the conventional medical establishment. Robert Sisko and his group from ICASH have provided the best information and follow-up on addicts who had used ibogaine to end their addictions to drugs and alcohol. Unfortunately, it has been very hard to obtain accurate post-treatment follow-up data to independently establish estimates of the percentages of successful ibogaine treatments. In addition, Howard Lotsof and his staff at NDA International had to stop treatments in the Netherlands following the death of one young woman who died after taking an ibogaine treatment for heroin addiction. This unfortunate loss of life has raised important questions about what is a safe dose range for ibogaine and opened up the possibility that there may be gender differences in the way the drug is metabolized.

The development of ibogaine has been hindered also by uncertainties raised by Mark

Molliver, M.D. and his collaborators at Johns Hopkins University over the issue of drug neurotoxicity. Ibogaine is a centrally acting drug which at high doses produce tremors, loss of motor coordination and balance, and hallucinations. Using novel tools from the Neurosciences, Drs. Molliver and O'Hearn have shown that high doses of ibogaine can result in toxicity to cells located in the cerebellum, a part of the brain which controls balance and coordinated movements. This information raised considerable concern that taking ibogaine in a cocaine or heroin detoxification protocol might prove to be toxic to *brain cells*. In cooperation with Howard Lotsof and NDA International, Inc., we have conducted neurological and psychiatric evaluations on drug-dependent volunteers who had received ibogaine treatments offshore in either the Netherlands or more recently in Panama. These preliminary studies have shown that the neurobehavioral effects of high-dose ibogaine treatments are fully reversible. Although ibogaine's effects are transient and reversible, the chief concern of cytopathology (cell death) still remains unresolved. Our own studies in primates receiving multiple doses of ibogaine have failed to demonstrate any signs of cell death or other markers of neuronal toxicity. In

addition, neuropathological evaluation was done on a female subject who came to autopsy for apparent natural causes. Although she had received four documented ibogaine treatments in 15 months, microscopic study of her brain showed no significant signs of pathology to the cerebellum or any other brain region. While these observations are encouraging, further studies are needed to rule out toxicity and to help guide our understanding of the long-term effects of ibogaine treatments on brain function.

If ibogaine is an addiction interrupter, how does it work ?

While ibogaine has diverse effects on the brain and behavior, the pharmacological targets underlying the physiological and psychological actions of ibogaine are not completely understood. Ibogaine reportedly promotes long-term drug abstinence after only a single dose administration. As part of the original Phase I safety and pharmacokinetic clinical trial in ibogaine veterans, we have been searching for possible long-acting metabolites of ibogaine that might explain the persisting after-effects. We have recently demonstrated that ibogaine is O-demethylated to an active metabolite called noribogaine or 12-hydroxyibogamine^{1,2}. Preliminary observations suggest that there may be considerable variability in the way that the drug is metabolized and that, in some individuals, the metabolite may persist in blood for a long time. In collaboration with investigators at the Addiction Research Center, we have demonstrated that the metabolite - noribogaine - targets the serotonin transporter and elevates serotonin in brain¹. Our interpretation of these findings is that the putative anti-addictive effects of ibogaine may be due in part to a potent action of noribogaine on serotonergic systems which modulate mood, motivation and behavioral control. A persistent and targeted action of noribogaine on serotonin systems may help to explain how ibogaine treatments promote rapid behavioral changes which moderate long-term drug abuse and dependence.

What are the future directions for ibogaine research at the University of Miami?

The Drug Abuse Advisory Committee (DAAC) of the FDA recently reviewed the progress made by the Miami group. Per the recommendation of the DAAC and the reviewing staff of the FDA, permission has been granted to proceed with a dose escalation study of ibogaine in ibogaine-naive volunteers. The Miami group plans to proceed with caution and to involve a number of expert investigators in the development of a comprehensive protocol to fully assess the safety and metabolism of ibogaine. We will submit a grant to the National Institutes of Health to fund the Phase I study of ibogaine in cocaine-dependent male volunteers. The grant evaluation will take at least 9 months after the protocol is submitted in October 1995. In the interim, additional funds are now needed to keep the project alive and the clinical trial on track, while we await review of the grant proposal.

The Miami group is very grateful to MAPS for providing initial support for the Ibogaine Research Project when other sources of funds were not available. The research funds provided



Deborah C. Mash Ph.D., holding a bottle of ibogaine.

by MAPS went directly to support the clinical studies of ibogaine's metabolism in human patient volunteers and for preliminary studies which helped us to provide additional clinical and preclinical information to the FDA for their evaluation of the Phase I protocol. Our efforts to secure approval by the FDA were very labor intensive and costly. Our success is shared by those of you who support the efforts of MAPS to provide critical seed funding for research studies. This funding allows investigators to obtain important preliminary data to support grant applications for future funding by the Public Health Service.

Many more studies are needed to determine if ibogaine will be therapeutically useful for treating drug dependence. This work is in a very early stage of development. The clinical development of ibogaine will likely depend on the risk/benefit ratio and on the creative use of both pharmacokinetic and pharmacodynamic methods. We are very eager to continue with this important work. We hope that our efforts, together with the efforts of other scientific investigators throughout the United States and Europe, will lead to a better *understanding* of ibogaine's pharmacology and metabolism. We are optimistic that clinical and basic research studies with ibogaine will contribute to the development of novel, safe and successful treatments for drug addiction. •

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summary of the status of clinical research with **lsd** and **mdma** in switzerland

Dr. Samuel **Widmer**



The authorities
require us to design
controlled scientific
studies before they
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the permits.

tHE PERMITS which enabled five Swiss psychiatrists to use LSD and MDMA in psychotherapy ran out in 1995 and until now have not been renewed. Negotiations are still on between the Swiss Society of Physicians for Psycholytic Psychotherapy (Schweizerische Ärztegesellschaft für Psycholytische Psychotherapie: SÄPT) and the Ministry of Health (Bundesamt für Gesundheitswesen: BAG). The authorities require us to design controlled scientific studies before they will reestablish the permits. It's too early to tell whether we will be able to continue with our research.

In the meantime, Peter Gasser conducted a retrospective evaluation of the cases of patients treated from 1988 to 1993. This study was presented in MAPS V.5, No. 3. Also, I legally trained approximately 25 psycholytic psychotherapists as SÄPT professionals during this time. Psychologist Roland Abegglen is currently conducting a scientific evaluation of the value and quality of these training sessions. We hope that this analysis as well as Dr. Gasser's retrospective will have a positive influence on the decisions of the BAG.

Because the scientific and therapeutic work has been stalled, the SÄPT is at present seeking to draw attention to its activities through public relations efforts. I have written several books on this topic. The first one, *Listening Into the Heart of Things*, was recently translated into English and will be reviewed in an upcoming issue of MAPS. Unfortunately my other books are not yet available in English. Recently a user's manual for MDMA consumers was published in the German-speaking countries. It addresses itself to young MDMA users and compares the use of MDMA in the techno/rave-scene with therapeutic applications.

In 1995 SÄPT will be ten years old. This birthday will be celebrated in 1996 with a small international congress. (Information about this conference will be presented in an upcoming MAPS newsletter.) In this way, the SÄPT members hope to draw attention to themselves and to their concerns, and with that to stimulate a new breakthrough in negotiations with the BAG.

In recent years successful experiments have been conducted in Switzerland in which drug-addicts have been administered heroin by doctors. General discussion about the lifting of Prohibition has also increased. Hopefully a new era of liberalization could emerge from this direction. Basic Phase I scientific experiments with psychedelic substances are still more readily permitted than therapeutic treatment in Switzerland as well as in the United States. •

The report by Dr. Vollenweider that follows in this issue describes current Phase I research in Switzerland.

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swiss research with psilocybin, ketamine, mdma and other psychedelics

AT THIS TIME, OUR SWISS RESEARCH GROUP includes the author as coordinator and project leader/head, a post-doctoral candidate in neurobiology and seven doctoral candidates in medicine. Since January 1995 we have focused on the psychological and biochemical/physiological effects of psychedelics in healthy volunteers.

The positron emission tomography (PET) scan program of study encompasses three major avenues:

1. to investigate the locus of action of psychedelics in the human brain neuroreceptors through radioactive labeling,
2. to investigate neuroreceptor occupancy during hallucinatory states,
3. to search for putative alterations in these receptors/binding sites in schizophrenics.

In collaboration with the new PET department at the University Hospital Zürich (USZ, Dr. A. Buck) and the University of Bern (Prof. R. Brenneisen), we have already labeled 4-Iodo-2,5-dimethoxy-A (DOI) and psilocin. S-ketamine has also been labeled, in collaboration with the PET center at the Paul Scherrer Institute (PSI, Prof. K. Leenders) in Villigen. At this time, we have already done some initial monkey studies. The tracers must be proven to be suitable ligands before we can do human studies. The two psychedelics 4-Bromo-2,5-dimethoxy-A (DOB) and 4-(2-Fluoroethyl)-2,5-dimethoxy-A (DOEF) will be further candidates for labeling.

As previously shown, ketamine (racemic mixture) and psilocybin resulted in a hyperfrontal metabolic pattern in the human brain associated with hallucinations and ego-dissolution (Vollenweider et. al. 1994). Furthermore, we are investigating whether we can block these psychological and metabolic effects using different pharmacological blockers (serotonergic, dopaminergic and gabaergic drugs).

Pharmacological blockers

We have already shown that ketanserin (a 5-HT₂ blocker) and risperidon (a 5-HT₂ and D₂ blocker) can completely block the psychological effects of psilocybin. We are also studying the effects of haloperidol (D₂ blocker) on psilocybin-induced mental states. Concurrently, Dr. T. Baer, A. Baebler and S. Fretz of our department are studying the effects of such blockers (haloperidol, risperidon, ketanserin, midazolam) on ketamine-induced altered mental states. Classical rating scales (inventories) and computer-assisted neuropsychological tests are being used to investigate psychological alterations in cognition such as the "working memory," etc.

In collaboration with the PET center PSI-Villigen, we have started to investigate the effect of these blockers on the ketamine and psilocybin-induced metabolic changes using Fluorodeoxyglucose-PET (FDG-PET). Also with the PET center PSI-Villigen, we have started to investigate dopamine receptor occupancy in psilocybin and ketamine subjects using PET scans. It is too early to discuss the results of either of these investigations.



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In collaboration with UC San Diego (UCSD), we will investigate the effect of these drug combinations on prepulse inhibition of the startle reflex. This method has been established with Mark Geyer, UCSD.

MDMA

In an upcoming series of investigations to be carried out with Alex Gamma, our neurobiologist, we will focus on the effect of MDMA on psychological and neurophysiological parameters in healthy controls using EEG/ERP, FDG-PET and prepulse inhibition. Putative alterations of these parameters will be compared with data obtained using the same methods in chronic MDMA users. These investigations will involve collaboration with the PET center, USZ and M. Geyer, UCSD.

S- and R-ketamine study completed

We have finished the S- and R-ketamine study using FDG-PET. The major findings are that S-ketamine resulted in a hyperfrontal pattern similar to that seen with the ketamine racemic mixture. Equimolar doses of R-ketamine resulted in a state of relaxation and in a hypofrontal metabolic pattern or in only slight changes. This study was completed in collaboration with the University of Oslo (Prof. I. Oye) and PSI-Villigen (Prof. K. Leenders).

We have finished a study on the oral (15-20 mg p.o.) and i.v. (1-5 mg) pharmacokinetics of psilocybin in healthy volunteers. The preliminary data show that psilocybin reactions after oral administration arise with psilocin plasma levels of 4-6 ng/ml, peak effects arise 80-90 minutes after oral administration and are associated with psilocin plasma levels ranging from 6-14 ng/ml (depending on the dose administered). No psilocybin was found after oral administration, supporting the observations in animal studies that psilocybin gets immediately dephosphorylated and that psilocin may be the principle compound entering the brain. The analysis of the i.v. data are underway.

The study will go on investigating the pharmacokinetics of psilocin, since psilocin has been labeled for PET (in collaboration with the Pharmaceutical Institute University, Bern; Dres. F. Hasler and D. Bourquin). •

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spiritual uses of mdma in traditional religion

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MOST SPIRITUAL TEACHERS are strongly against the use of any drug. Some warn that drugs will undo years of hard-earned progress towards enlightenment, while others say that the drug-induced state may appear the same but is on a lower level, and that this can mislead people. A few believe that a true mystical state can be induced by drugs, but that its value is lessened.

However, there are a number of teachers who do believe in the value of MDMA, both for their own personal enlightenment and for teaching others. I interviewed four: a Benedictine monk, a rabbi, a Rinzai Zen monk and a Soto Zen monk. I also obtained comments from another Benedictine monk. These are active religious leaders who write spiritual books, teach spiritual practices and give public lectures on spiritual matters, but, except for the last, have never publicly admitted their views about the spiritual value of MDMA. The Soto Zen monk, Pari, agrees that "Drugs do not go with meditation." However, he says, "Meditation goes wonderfully with drugs." There is no contradiction: Drugs disturb acquired patterns of meditation, but while taking MDMA it is easy to meditate. "Being still when taking MDMA helps you to know how to sit, it provides you with experiential knowledge." But is it a good way to learn? "It is like a medicine. If we look at the state of our own mind and the planet, we should be grateful for any means that can help. However, like any good medicine, it can also be misused." All of them believe that they have benefited from the use of MDMA, that it can help produce a valid mystical experience, that it does no harm to the psyche and is a useful tool in teaching students. The reason they do not promote its use is that they have to follow the policies of their religious orders, and these naturally uphold the law. I found it fascinating to hear how similar their experiences were to one another, yet how different to most other people's. When I asked them what they thought of MDMA use by ravers, their opinions differed. The Benedictine felt it was profane for people to take the drug unless they were spiritually oriented, while the rabbi thought the feeling of oneness and seeing life from a new aspect was an equally valuable experience for ravers.

I took Bertrand, the Rinzai Zen monk, to a rave party where he took some MDMA - previously he had only taken it while meditating. When it took effect, he glowed and announced "This is meditation!" Far from being alien to his experience, he saw that everyone was totally absorbed in their dance without self-consciousness or internal dialogue, and that this was the very essence of meditation.

The rabbi was not only aware that dancing on MDMA could be a spiritual experience, but that mysticism was now more readily available on the dance floor than in churches, mosques or synagogues. He suggested that if priests tried the drug themselves, they would not only appreciate its spiritual value, but would be able to understand young people better. Pari made this analogy: "It is like a climber walking in the mountains who is lost in the fog and unable to see the peak he has set out to climb. All of a sudden the fog clears and he experiences the reality of the peak, and gains a sense of direction. Even though the fog moves in again, and it's still a long, hard climb, this glimpse is usually an enormous help and encouragement."

Interview with a Benedictine monk

Brother Bartholemew is a monk who has used MDMA about 25 times over the past ten years as an aid to religious experience. Normally, he has taken it alone, but has also taken it among a small group of like-minded people. He describes the effect as opening a direct link with God. While using MDMA, he has experienced a very deep comprehension of divine compassion. He has never lost the clarity of this insight, and it remains as a reservoir upon which he can call. Another benefit of his use of MDMA has been that the experience of the divine presence comes to him effortlessly. The effect manifests in its elemental form in the *breath, the breath of divine God*. After the awakening, he began to discover the validity of all other major religious experiences.

He believes the 'tool' of MDMA can be used on different levels - as a research tool or as a spiritual tool. When used appropriately, it is almost sacramental. It has the capacity to put one on the right path to divine union with the emphasis on love, vertical love in the sense of ascending. However, this gain only happens when one is looking in the right direction. It should not be used unless one is really searching for God, and is not suitable for hedonists such as teenage ravers. The place where it is taken should be quiet and serene. There should be a close emotional bond among those sharing the experience. The experience has to be pursued under a certain amount of supervision, because the influence of MDMA produces a tendency for

While using MDMA, he has
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hension of divine compassion.

attention to drift off. There is also a danger of squandering the experience by being trapped in euphoric feelings, rather than reaching into a spiritual realm. However, although it can be invaluable, its use should not be necessary, as the need for a drug negates freedom.

[I sent Br. Bartholemew a copy of the above notes for approval, and he added the following:]

"One element you might want to add is that of intimacy of voice in conversation. MDMA always propels me into an intimate space in conversation. There is a special quality to this conversation. One feels a heaviness, a sense of the weight of the moment, of something profound, of the seriousness of life itself. It is a space that is inner, without masks, without pretense, utterly open and honest. It is not an erotic intimacy, but a philosophical and mystical intimacy. Does this make any sense? One has the consciousness that this is an inner communication rarely achieved in ordinary discourse. There really are no adequate words to express this state of awareness, only to say, that it is essential in my experience."

Interview with a rabbi at the West London Synagogue

After a talk which touched on the need to prepare for death, I asked the rabbi a question about the value of MDMA in terminal patients (referring to Dr. Charles Grob's study in Los Angeles). He replied that MDMA was valuable for the dying as much as at raves, in that it allowed the feeling of oneness and seeing life from a new aspect. Prohibition is not the best way to deal with substances that can be used in ways that are as sacramental as communion wine. These substances may arouse feelings of awkwardness which may be uncomfortable but are essential for deeper understanding of our selves. However, there are other methods of achieving these feelings, such as are described in a book called *Mind Acrobatics*.

At the end, the rabbi beckoned me to come up onto the stage. He took me into a fire exit staircase, out of earshot of his entourage, and told me that he could not afford to undermine his project by publicly supporting the use of illegal drugs, but that he had my book (which he praised.) *He believed that* MDMA and other psychedelics could be used to immense benefit, not only for personal awareness, but also for the sake of Gaia or the cosmic wellbeing of the planet. He implied that the MDMA experience was of the same quality and potential value as other mystical experiences, and suggested that priests should take the drug themselves, both in order to understand young people, and to see the validity of spiritual experiences produced by drugs. He referred to Abraham Maslow's conclusion concerning 'peak experiences': that taking

drugs is like reaching the top of a mountain by cable car instead of the toil of climbing – it can be seen as cheating, but it gets you to the same place. He ended by giving me a big hug and encouraging me in my work.

Visit from a Rinzai Zen monk and teacher

Bertrand is a Zen Buddhist monk and teacher of meditation in his early seventies. Following a conventional career, he had an awakening experience on mescaline when he was 47 which made him re-evaluate life and seek a spiritual path. This led to his taking up Rinzai Zen with a strict Japanese master. Though he found the training extremely hard, he eventually became the abbot of a Zen monastery.

Bertrand has taken MDMA about 25 times over ten years. He has generally used it on the second day of a seven day meditation, and finds that the drug allows him to give his wholehearted attention without distraction. As a student, he also once used the drug when undertaking a Zen exercise called Koans. During Koans, the master names the task which the student must contemplate, such as the classic: “to understand the sound of one hand clapping.” The student has to demonstrate comprehension, normally after a considerable time, and very often after being told to try again.

On MDMA, Bertrand zipped through the Koans with impressive ease. He has also felt enlightened on two occasions, although he is wary of accepting this as the highest level. He also knows a Swiss Zen Buddhist who uses MDMA, but never told his own master. He feels that the experience would be of great value to some of his devout but stiff fellow Zen monks, although he knows only one other Zen monk who uses MDMA.

Asked whether the MDMA experience was of equal value to “getting there the hard way,” he replied that MDMA simply allows one to focus wholeheartedly at the task in hand, and that the result is in every way as real because it is the same. In fact, MDMA allowed him to go further than he was able to without it.

I pressed him to find negative aspects, and he told me that he once made the mistake of taking MDMA just before leading a meditation. This opened his eyes to how strained and needy his students were. He expressed *what he felt* too freely: that they looked like corpses, all lined up in their black shawls! This was inappropriate, and he did not use MDMA while teaching again. He felt his mistake lay in not respecting that his students were in a different space.

However, Bertrand believes that MDMA would be an extremely *useful* tool for teaching if the students were on it too. In fact, he wondered if he would live long enough to be able to use it legally. Pressed for

possible problems, he said that there were always people who came wanting to be given enlightenment on a plate, and that news of a new technique using a drug would attract those who expected it “to be done for them.” The rave party was the first time Bertrand had taken MDMA except while meditating, and he was surprised by how different the experience was. Beforehand, he said he could hardly stand the noise and volume. After the MDMA took effect, he could see the value of the volume in drowning out distractions. The monotonous beat was akin to some American Indian ceremonies which also provide the feeling of tribal bonding by the use of a drug – although he felt the rave missed the Indians’ cultural framework and focus. (Bertrand had been a guest in an American Indian ritual, though without taking any drug.) He could see the value of his new experience to Buddhism as expansive – meditation was contractive, but both were essential.

His first reaction, after the MDMA began to take effect, was sadness in his position as part of the establishment of a restrictive religion, and a realisation that the Zen training was not suitable for Westerners in its present form. Later, he got into the dancing. As his face changed from severe to happy he exclaimed: “This is meditation – to be truly in the moment and not in your head.” The next day, he said that he felt the experience had made an impression on his life, and he was not sure where it would take him. It had

emphasised what he already knew: that his students were too contracted, and that the expansive experience of the rave was what they needed, and it was a pity that he could not advocate it in his position.

The next day, he said this may be an important turning point in his life. He had to take time to digest what he had learned, but his immediate response was that he could not continue to be part of

the establishment of his school in its present form. He could see that the contractive aspect of the training had been overemphasized in his school, in the belief that Westerners were too expansive anyway. In fact, those who sought Zen masters in the West really needed the ability to be expansive - and the rave provided it. A month later, Bertrand rang me to say that he had just given a week’s retreat, and that it was lighter and more positive with almost a sense of gaiety. He attributed this to the rave experience affecting him, which in turn affected the participants. Also, he still feels much younger and more flexible. In fact, a back problem that had caused him pain for several years appeared to be completely cured, which made him suspect that back problems in particular are caused by the mind. I had sent Bertrand the draft interviews with the

The rave party was the first time

Bertrand had taken MDMA

except while meditating...

Benedictine monk and the rabbi. He commented that his experience agrees with that of the rabbi about being in an open state of mind. It conflicts with the Benedictine, in that he finds MDMA enables him to focus totally without distraction, and with prolonged attention. He feels that the underlying state of mind is emphasized. I asked how he would suggest making use of MDMA. He would recommend meditation after opening up as a way to channel released energy. Bertrand described MDMA as "a nourishing experience."

Visit to a Soto Zen monk and teacher

Pari took LSD at university. In fact, he moved into a commune that took LSD at regular weekly rituals, but later this quest for knowledge led him away from drugs and to Yoga, which he practiced intensely for several years. He then travelled and got involved with Zen, living in a Soto Zen community for 10 years until he was ordained as a monk. He has since been made an Abbot by his master; i.e. given the power to ordain new Zen monks. He now lives in a beautiful quiet Victorian house in the city with his wife and son, where he has a small zendo. He also has a mountain retreat centre. He divides his time between Buddhism and social/ecological activism. Over the past five years, Pari has taken MDMA about 15 times, usually alone or with his wife or intimate friends. It provides him with great clarity and calmness, very much like after a week-long sitting (seshin), when everything becomes more clear, more awake.

Traditionally, eastern teachings are strongly anti-drug. But his particular tradition was an exception to the rule, and his teacher in Japan had used peyote, LSD and MDMA. Once Pari angered the famous Vietnamese Buddhist teacher Thich Nhat Hanh by pointing out that the majority of his western students had come to seek him through drug experiences, so it was not quite right for him to take such a strong stand against the use of drugs, especially since he had not tried them himself.

He has used MDMA for teaching with a few students, including one who has since been ordained a monk. This was a man who was extremely keen, and put tremendous effort into trying his best to succeed in meditation. MDMA helped him to see that trying itself was his main obstacle. Another student was a very successful and hard-driving businessman. MDMA simply stopped him - he made a dramatic change into a warm, contented person who just wanted to sit quietly in the zendo.

When I asked if success through the use of MDMA was as valid as without, he replied: "It is the experience that matters, not how you get there. Look back at the history of the major religions. Many of their founders and saints had their mystical unions during wound-

fever, during which, as we know today, the body produces psychedelic substances. A good example would be Ignatius de Loyola, the founder of the Jesuit order."

I asked if Pari thought there may be types of people who would not benefit from, or who would be misled by MDMA. "It could be a problem for those who are not sufficiently well grounded, those who have a tendency to float into other worlds rather easily anyway. However, most of us are too earth-bound, too stuck in this particular reality, and a little help from a friend can be of great value."

Unlike LSD and other drugs, MDMA works in terms of relationships - with oneself, God, nature. It even opens up a common ground with other people whom one does not yet know.

I asked whether there was any point in using MDMA once enlightenment had been achieved. "Achieving enlightenment for most of us is transitory and seldom. After a while, the direct experience becomes replaced by a memory of it, and direct experience from time to time helps

and refreshes." But, I asked, is the drug-induced experience really the same? After some hesitation Pari replied, "Yes, the state of mind is identical, yet there is a subtle difference, perhaps due to the drug's physical effects on the body. Without the drug, there is one less factor. This is simpler, and perhaps this implies it is better. The value of the state is the same: to be able to look back and to see one's 'normal' state of mind with a clear but different perspective."

What is the ideal situation? "For a beginner, a trusted, more experienced friend is highly recommended. You must create an environment that you find conducive. Do whatever spiritual practice you have. For some this may be singing, praying, painting, meditating or sitting in a cathedral; for others walking alone in the mountains." However, he warned that not every attempt is positive. He felt sick and shaky during his last MDMA experience, though after an hour he vomited and then felt better.

Comments by Brother Steindl-Rast

Brother Steindl-Rast is the Benedictine monk quoted praising the use of MDMA in *Ecstasy: The MDMA Story*. He rarely replies to letters or gives interviews, but a mutual friend put some questions to him for me. He has tried MDMA about 4 times, but does not use it any more.

He thinks people tend to expect too much of MDMA, although he knows of many people who were helped considerably in overcoming their interpersonal barriers. He is in favour of legalizing its use with terminally ill patients and other conscientious use by physicians. •

MDMA helped him to see that trying
itself was his main obstacle.

an invitation to **entheological dialogue**

Reverend Mike **Young**

If the **research** MAPS supports is permitted to go forward; and
 If the results turn out to be as many of us **hope**; and
 If these once taboo drugs come to be **used** with pain patients, the terminally ill and addicts; and
 If the families, friends and others who see and hear the results **demand** the experience, **too**;
 Then we religious leaders are going to **experience** crises
 for which we are almost **wholly** unprepared.

Paradox

The first crisis derives from the fact that institutionalized religion has been all but completely co-opted in the "War on Drugs." We have labeled all drug use outside the strict medical model as naughty. It is curious logic: If you want to use drugs and you're not sick, you are naughty. If you persist, you are sick and we'll give you some other drugs. Many physicians won't prescribe addictive drugs even for terminal patients in acute pain for fear they'll become addicted. The fear here is that the doctor will be perceived as naughty. And prescribing a naughty drug that obviates the need for addictive drugs is naughty for the same reason; namely, our moralistic response to the problems created by a drug-saturated and obsessed culture.

The religious establishment has overwhelmingly bought all of this and painted itself into an especially awkward corner. It used to be that you were naughty if you did something that harmed another. Now is has come to be that you are naughty if you appear not to disapprove sufficiently strongly of naughtiness. That appearance of approval has us tied up in knots. Now we are faced with the possibility of some drugs that do very positive things to otherwise normal – not sick – people. This is not a context that is promising for

useful public policy decision-making. Here are some drugs that reshape and reframe our meaning-making in ways that we religious leaders have always said were good. How could that be naughty?

Whose theology?

The second crisis has to do with the apparent fact that the self-transcending and self-transforming experiences with these drugs do not occur in a particular theological language. Here is an experience that has all of the outcomes we have said we sought, but consistently confirms none of our particularistic theological languages. We know that the experience occurs in symbols, images and language partly determined by set and setting. But similar and similarly self-transcending and self-transforming experiences occur for Catholics and Baptists, Jews and Buddhists, Unitarians and Two-Seed-in-the-Spirit Evangelical and Reformed Expiationists. Some will occur in language more or less familiar to the experience, some will not. But it will pretty clearly be the same experience back of the diversity of theological language. Ecumenically-oriented clergy are prepared to be tolerant of one another. But for the total relativizing of our historical universes of discourse, we are not prepared; to say nothing of having prepared our parishioners.

The diversity of theological language is going to challenge the particularities of our religious heritages in unprecedented ways. Religious people, lay and clergy *alike, generally*

Editor's Note:

Reverend Young was one of the ten divinity students who received psilocybin in Walter Pahnke's 1962 Good Friday Experiment. Pahnke's experiment was designed to investigate the potential of psychedelic drugs to facilitate mystical experience.

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tend to regard religious language as competing truth claims. That the experience back of our language is the same human experience is going to produce some serious cognitive dissonance. So far this cognitive dissonance has been confined to small pockets within faith traditions. For example, Benedictine contemplatives have more in common with Buddhist monks than they do with the Pope. I experienced this first-hand at the Buddhist/Christian Dialogues in Berkeley in 1987. Even the most "liberal" of our constituencies have got to suspect apostasy.

New responses needed

And, crisis number three: How will we respond to our own followers telling us that the drug experience is religious experience, that our faith boundaries are fluid, if not passé? We're already worried about church shoppers seeking out the best music, the best preaching, the most feel-good worship, etc., quite irrespective of any brand loyalty. Imagine our panic at a Jerry Falwell promising the Holy Spirit in a pill. Get your rhetoric polished, fellow pastors. It's going to get weird.

Assuming we can get around or through these crises without awakening religious wars, how do we create the appropriate set and setting for the drug experience? This crisis is already happening as the research begins to be shaped. The researchers are not liturgists and religious poets, and the research settings are not religious settings. Yet the experience is inherently religious. It is, after all, about self-transcendence, about meaning-creating and meaning-transforming. And these, not creeds, are what religion is finally about.

How do we learn to most usefully and effectively evoke the set and create the setting for non-particularistic religious experience? Traditional liturgy isn't it, if for no other reason than that it is too talky and casts the participant as spectator. "Generic" religious language is not promising. All I've seen so far has the power to evoke nothing but boredom. If we can't even agree on how to do public prayer in the civic religion together, how can we hope to shape the drug experience set and setting for people of hopelessly diverse interior mythic dialogue?

Preparing for the experience

My current working hypothesis is that we must start the experience with some understandings of the diversity of theological language before the *experiencers* embark on the drug experience. I would prepare them with a conceptual model that affirms the experience as primary and the language they find themselves using to apprehend and integrate it as decidedly secondary. I would illustrate it with the best of the art, poetry and

imagery from all our heritages, from secular humanist to contemplative mystical. Somewhere in all that metaphor they may be given permission to find their own hooks on which to hang their experience.

Back in the 60's I had occasion to trip sit some bad LSD trips. Several of us noted at the time that a common feature of the bad trip was that the tripper had no language for what was happening. On the other hand, virtually identical imagery in the minds of those with some familiarity with mystical traditions was integrated much less threateningly. Those who expected oneness with the universe with no dark night of the soul were terrified and fled ego-loss into the demonic ether. When a westerner says, "I am God," we lock him up in the funny farm. When a Hindu says it, his fellow Hindus say, "Ah, you finally got it!"

But we also found that all too often the experience tended to give cosmic validity to whatever language mediated it. We often had to keep reminding our trippers that the experience was happening inside their own heads, that the images were the furniture of their own minds. Some came back "believing in" spirits and demons with a literalness that might embarrass even the most fundamentalist.

How do we prepare people for the fact that the experience is REAL, and, at the same time, is linguistically mediated; that the language in which the experience is re-presented is metaphorical?

Religiously multi-lingual

The drug experience can evoke a reordering, a reframing, of the experiencer's meanings and meaning-making. The ego-loss of LSD, the re-connectedness to empathy of MDMA, the standing naked before the infinite to the point of being out of the body of ketamine: these provide the occasion for the reframing of the existential "Who am I?" and the "What is, therefore, important?" that the experiencer realizes they have gotten so wrong. This reframing and re-connecting, this remembering of ourselves, is what pushes and pulls us to be more than we are. This self-transcendence and self-transformation, *spoken of in differing* ways and sought by differing means, is at the heart of our various spiritual disciplines. But when short-circuited into obsessive ideology, it merely multiplies dogmatism.

How can we teach ourselves and our fledgling mystics to be religiously multi-lingual in preparation for an experience that promises to totally reshape that most basic human tool, the language of meaning? If the "Ifs" with which I started out happen, we may have to learn in a hurry or miss an incredible opportunity. •

How will we
respond to our
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youths and **entheogen** use – a modern rite of passage?Andrei **Foldes**, with Amba **Morton**, Eric **Johnson**, et al.

Andrei Foldes

I have invited a
number of young
people to express
their views on
psychedelics and the
effects these
substances have had
upon their lives
and minds.

IT SHOULD COME AS NO SURPRISE to readers of this Bulletin that psychedelic plants are used as a sacrament by many native cultures all over the world. It may not be so obvious that these same plants are often incorporated into the coming-of-age ceremonies of these various societies. Their cultural perspective is that the taking of the entheogen is at once a heroic act and a necessary step in the transition from childhood to adulthood. They consider the visions and revelations experienced by the initiate to be quintessential to his or her functioning as a member of the community.

The question that we need to address is: What relevance do these ancient traditions have to the experience of a modern adolescent growing up in the western world? Rather than indulge in idle speculation I have invited a number of young people to express their views on psychedelics and the effects these substances have had upon their lives and minds.

Students of the psychedelic realms know that one's expectations are a powerful determinant of the direction, content and outcome of an experience. So, we should say at the outset that the experiences recounted here were preceded by careful preparation, where the trip was presented as a learning experience and a process of self-discovery. They all took place in safe, supportive environments. They generally do not fit the stereotypical model of teenagers dropping acid at a rock concert, looking for awesome visuals and good vibes.

Some of the young women and men who share their visions requested anonymity. They did so reluctantly, to shield themselves from the penalties imposed these days for the expression of unconventional points of view.

"Ricardo":

"I went into my first trip with typical fifteen year old questions: Sex, my body, how I was supposed to feel about my new feelings and experiences. I had a lot of fears which crippled and frustrated me. When I went into the trip it opened up a lot of these fears so that instead of being suppressed I was able to work with them. I was able to confront my feelings and was able to make a decision about how I was going to be from that day forward. But the first trip in essence was not very ripe. The fruit was not ready to pick. Still, it was a learning experience and some good came out of it. It may have set the stage for the second experience. I learned to have respect for mushrooms and their power, that they were something to be taken for serious purposes. It also settled my nerves, raw from adolescence. The settling came from putting aside my self doubts and not worrying about them so much. They were

still there, but no longer such a high priority in life, or as intense or all consuming as before. It set me on a different path, my priorities became balanced. They went from just getting laid to a more balanced attitude.

The second trip, a year later, was very powerful and stayed with me, even though I did not take very much, just a couple of grams. It was a hard trip, two and a half hours convulsing and one hour pure paranoia. Before I went into it I was crippled by fear of social situations, afraid of annoying or hurting others. After it I felt liberated to be myself with other people. Instead of worrying about second guessing others' desires and trying to fulfill them I became more aware of my own desires. Who knows what others want?! I only know what I want. In worrying about what other people think, you forget what you think. A switch in my behavior took place. There are still elements of the old, but afterwards I found I was a much happier person, which has made other people happier. Shortly thereafter I met my fiancée. [Ricardo is now twenty four.]

Andrei Foldes can be contacted through the Internet at olddog@ix.netcom.com.

...we take mushrooms
to find ourselves,
to find our roots,
to discover ourselves
spiritually and
to experience
the wonders
of the mind.
We take them
to rediscover
what we lost
as children...

Since then I have a profound respect for mushrooms and I have no desire to go back to them. I have a sense of profound completion. I like my mind where it is right now. I have no desire to change it."

Amba Morton:

"The magic of mushrooms has been known to me since I was eighteen (I'm now twenty one), five years after my first introduction to marijuana. I felt that a button had been turned on with marijuana and I instinctively knew that there had to be more - I wanted to experience all the possibilities that marijuana awakened me to and explore all the pathways of consciousness that I could find. Natural drugs appealed to me as opposed to the synthetic variety - thanks to the on-going education and encouragement from a friend's 60's guru drug-friendly parents. During my first trial with the drug I felt the most euphoric that I had ever felt and have not felt anything similar to this day. [My friend and I] were able to telepathize with each other and within several hours had explained the beauty and fault of nature and society in every possible way without a single word. I promptly changed my life. Ending the negative cycle of abuse which my family had refused to recognize, I left the country and started a new way of being. I gave up marijuana except in social occasions and restored my diet, insistent that my life path would be to research and write about the possibilities and dimensions of the mind, to learn about the budding spirituality that had emerged from a temple of atheism. Foreign as it is, none of this has changed.

I noticed that at the same time we were experimenting, the younger generation that surrounded us as brothers and sisters was trying out the same drugs, with the same effects. The son of my significant adult teachers was eleven when he tried marijuana and fifteen when he tried mushrooms. He is now seventeen and you could swear that he was in his mid-twenties. The age gap disappeared on the first occasion we all tripped together and it has never returned. It's like the doors to the future were flung wide open, our brains were on show to all and each other for minute examination and realignment, restoration, and no matter what stage one was at, we all ended up in the same place. Our vision quest was unintended and unexpected, well, except in its barest form. Through it we could clarify our "purpose" or "pathway" with the same energy expenditure as going for a walk -

the mushroom took over and we followed along, lambs willing to slaughter the misguided and chaotic patterns we had somehow slipped into.

Mushrooms changed my life. They changed the way I think and I know they will continue to change it. I have ended up with the utmost respect for the drug. I treat it as a tool for mental and spiritual exploration and will only take it with people who are interested in it for the same reasons.

You know, we take mushrooms to find ourselves, to find our roots, to discover ourselves spiritually and to experience the wonders of the mind. We take them to rediscover what we lost as children, the potential that floundered in the playground and classroom, slowly dying as we repeated our sums and painstakingly learned how the 'system' worked. Why weren't we gardening and meditating and singing and learning about energy vortexes and colours and the power of consciousness and SUBconscious and how to see with our eyes closed? Because it wasn't our time. My kids will hopefully never experience anything new on mushrooms, that is, if we get ourselves into gear soon enough and DO something about our so-called systems. And the people who should do it are people like us, people who KNOW the possibilities, even if it is by way of psilocybin and mescaline. It's propelling us into realizations of what the world is really made of isn't it? This is my Utopia."

Eric Johnson:

"The first time I remember being in a "tripping" state was at the age of six or seven. My parents took me to see a Moroccan belly dancer who was a friend of ours. The dance, glitter and rhythmic sounds changed my state of consciousness. The walls began to breathe and the floor bubbled. The people around me seemed to be no more than two dimensional silhouettes, shadows of themselves. I told no one. The experience made me uneasy with reality, but not overwhelmingly so. Events like that occurred many *times afterwards*. To a certain extent I could induce the state by spinning or in sex play or by just staring at patterns in mosaics, curtains, quilts or rugs.

When I was sixteen I was offered the opportunity to try mushrooms. The offer was from my stepfather, who presented it to me in the context of a spiritual journey, something more than a cool thing to do at concert with two thousand other people. I took a large dose of five or six grams, after fasting the day before.

It was not a pleasurable experience, nor was it the "Bad Trip" people described to me. It was surely very powerful and re-awakened in me the sense of unease I had felt as a child.

That instability was like a Djinn let out of a bottle; once out it was difficult to put back in. As a child, the world being a little confusing and difficult to comprehend was the natural state. As an adolescent, trying to get a handle on the world while being confused further by a constant sense of un-reality was very disturbing.

The experience did spark an interest in exploring my mind, very much out of a desire to expel doubt from my mind. I looked into the practices of Buddhism and meditation. I also began seeing a psychologist. Both were useful in helping me see myself and bringing myself into a state of ease.

In my present occupation I deal with people, helping them get an education so they can upgrade their job and lead (materially) better lives. I have a fairly good understanding of reality as far as day to day functioning is concerned. I doubt I would be functioning with such confidence in myself if I hadn't questioned the "obvious" stability. Taking mushrooms was a pivotal experience for me. By destabilizing my world-view they forced me to examine it and rebuild it on strong foundations, to develop a clear understanding of what my consciousness is, what 'meaning' is, in an objective way."

Interview with "Christina":

How old were you when you first took mushrooms?

It was about seven years ago. I was fifteen at the time.

Why did you do it?

Curiosity.

What did you think would happen?

I wanted to be happy and enjoy myself.

Did you prepare in any way?

I fasted. Also I knew I had to be in a good mood.

Were you in a good mood?

Yes, but I was always upset about something.

What happened when you took them?

I remember hazy clouds, like a thick yellowish liquid in the air. Like in the womb, could not feel it but I saw it fill the room.

What happened after that?

I blacked out. I was really upset, terrified.

People were grabbing at me because I was puking on myself, and I wanted to get away.

I remember a lot of fear. I felt like jumping out, so I wanted to get away from the window.

Then I realized they were trying to help me and not attack me.

What did you get out of the trip, was it useful?

No, it was too intense. I could not see anything nor remember anything.

What would you have done differently?

I would not have taken so much, or perhaps I would not have taken mushrooms at all.

Why is that?

I was not very happy at the time. Being unhappy is bad preparation for a good trip. Mushrooms draw your unhappiness out.

Did you feel damaged by this experience?

No. Maybe more knowledgeable about how suggestible I was.

I would like to note that "Christina" appeared to have understood and absorbed the preparatory information about mushroom trips. In retrospect though it seems that she manipulated the adults around her into believing that she was ready when in actuality that was not the case. Social pressures and curiosity on her part, and a naive trust on the part of the adults that all would be for the best combined to yield a very disturbing experience for a young girl.

Reclaiming spiritual heritage

We in the west live today in a society cut off from its shamanic roots. This is the outcome of a process of eradication that started in the old world with the burning of witches, and continued with the persecution of native healers in the lands that were invaded and colonized by the Europeans. In the economy of spirituality it was the monopolization of access to the sacred. In this process the cottage industry was annihilated by the forces of mass production, namely the church. Since the product sold by organized religion was demonstrably not of the same quality as the one offered by the shamans, and came at a higher cost, the competition could not be open and free but came down to a process of elimination, carried out by means of a systematic campaign of murder, torture and deception. The result of this work, begun centuries ago and continuing to the present day in the guise of the 'drug' prohibition, has been the effective denial of unmediated access to the spiritual aspect of our existence.

If we recognize the power of entheogenic substances to open us to the universal truth and full dimension of human experience, and if we accept the role of the shaman as hierophant and psychopomp into this realm, as enacted for example by the Huichol *mar'a'akame*, we have

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to conclude that today in western society we are deprived of two key resources for complete human growth. Young people, in their hunger for meaning, will still gravitate towards entheogens. The more experienced among us may try to ease their journey, but in the absence of qualified guides not all will benefit from their experience. Some may even be hurt. Good intentions, erudition, experience, even love, are not sufficient preparation for one who would presume to introduce adolescents to the intricacies of their minds, nor do they guarantee happy endings. We need to re-create the ancient networks of individuals who are equally at home in this reality and the one revealed by the sacred plants. Those confident navigators of both realms can guide initiates through the rough, rich, and often dangerous territory that opens up as the outer eye closes.

Appropriate contexts

I also envision a society in which the term "drug education" is no longer newspeak for the noisy proselytization of ignorance and fear. Instead, under that rubric young people would truly study psychotropics. They would one time drink beer, another time chew coca leaves, or sip strong espresso, or smoke fine Pakistani hashish, or opium, or even strong, aromatic tobacco. Each experiment would be preceded by study and discussion of the history, uses and dangers of the particular substance, and followed by analysis of the subjective effects and comparisons with other drugs studied. It follows that such a course of education would culminate in a field trip to a meeting of the Native American Church, or União do Vegetal or another group of that type. What better way to prepare youths for their contact with psychoactive substances than to trust them with the intellectual and experiential tools they need to make informed decisions? And who knows, maybe in the process of learning about drugs they will discover much about themselves.

Clearly these herbs and brews need first to be recognized for the beneficial, healthful products they are when used appropriately and in moderation. Contrast, for example, the reverential puffing of the peace pipe by Native Americans with the compulsive chain smoking of a tobacco addict. Or the festive roasting and chewing of coca leaves in the Andes with the destructive craving of a crackhead in New York. All of these substances are revered as divine gifts by the native cultures that discovered them, but become scourges in the hands of

the modern materialistic world we live in. Rather than proscribing their use perhaps we should instead address the rampant materialism that plagues us. For that purpose few means are as powerful or as effective as psychedelics, respectfully approached.

Psychedelics are not a substitute for faith. They are a door to authentic faith, born of encountering directly the sacred dimension of everyday experience. This is not the only gate to that discovery, but it is the most ancient and universal, and potentially the most accessible to the majority of the human race. This portal has been crossed and celebrated by countless cultures including the Greeks and the Romans, our direct ancestors, and remains open today for us despite society's repudiation.

We cannot however afford to let our children be held hostage to the intolerance of the moment. Their spiritual life is too important, both to themselves and to the greater world. We need to establish micro-environments of freedom and respect, within which to work with entheogenic plants in a sacred way, and in which context our young could choose to be initiated when they reached the right age. Such zones may have the effect of "seeding" the larger community and contribute to a consciousness shift that will embrace work of this nature. On the other hand, this shift may not come within our lifetimes, if ever. The historical lack of accommodation between organized religions and shamanism does not bode well.

The psychedelic journey is one of the very few ways we can enact in our lives the mythic hero's journey. It is a voyage of discovery, fraught with surprises, adventure, awe and danger. It is a trip to a real treasure island, from which one can return with permanent wealth. It is blinding joy and bitter grief rolled into one, the finger pointing at the moon of true experience after the suspended animation of television, nine-to-five, and shopping centers. Many young people today dimly suspect as much, and will reach for this experience in many ways. They will do it at raves, at rock concerts, and in living rooms when the parents are away. If we happen to be both lucky and wise, our children will come to us and bravely ask for permission and for help in their quest for a vision. And at that moment we would do well to have the courage to not retreat into: "No, it is forbidden." •

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medical marijuana— aids wasting syndrome research: the latest obstacle

Rick Doblin

SINCE THE SUMMER OF 1992, MAPS has been working with Dr. Donald Abrams, Professor of Medicine, University of California, San Francisco and Assistant Director, AIDS program, San Francisco General Hospital. We have been trying to secure permission to conduct a study to compare the effectiveness of smoked marijuana and the oral THC capsule in promoting weight gain in patients suffering from the AIDS wasting syndrome. The oral THC capsule is already available by prescription for the treatment of the wasting syndrome, but thousands of anecdotal reports suggest that smoked marijuana is more effective in some patients.

Background

In the summer of 1994, after two years of intensive review and redesign, the FDA approved the protocol (IND#43,542). Dr. Abrams' study was the first in over a decade that the FDA had approved to investigate the therapeutic potential of marijuana. Since FDA approval, however, research has been prevented for lack of a legal supply of marijuana. Attempts made early in the summer of 1994 to import high-potency marijuana from the only licensed marijuana grower in the Netherlands were blocked by the Drug Enforcement Administration. On April 19, 1995, the National Institute on Drug Abuse (NIDA), which has a monopoly on the domestic supply of marijuana for research purposes, rejected Dr. Abrams' August 1994 request for marijuana, despite the fact that NIDA has previously supplied every FDA-approved marijuana research protocol.

The Crucial Meeting

At a July 19, 1995 meeting near Washington, D.C. which the Marijuana Policy Project and MAPS helped arrange, Dr. Alan Leshner, Director of NIDA, met with a group of medical marijuana patients, medical marijuana activists, and drug policy analysts. The meeting focused on objections to Dr. Leshner's decision not to provide NIDA marijuana to Dr. Abrams' study. Dr. Leshner scheduled the meeting, held in the midst of NIDA's National Conference on Marijuana Use, at the request of a coalition of protesters who organized a silent demonstration at the conference and handed out a booklet of information to all the attendees entitled

"What NIDA Won't Tell You About Marijuana." Not surprisingly, Dr. Leshner defended his decision to block medical marijuana research.

The Current Strategy

According to Dr. Leshner, the only way Dr. Abrams' study can obtain marijuana from NIDA is if the protocol is reviewed and approved by the National Institutes of Health (NIH). Unfortunately, the NIH only reviews protocols in the context of grant applications. Though private funding for the study has been obtained, Dr. Leshner is now requiring a request of government funding for this project. Despite the low probability of success, Dr. Abrams is proceeding to submit a revised protocol to NIH. MAPS has donated \$4,000 and the Drug Policy Foundation has donated an additional \$1,000 to Dr. Abrams and associates to help cover costs associated with the preparation of the NIH grant application. The NIH application deadline is January 1, 1996. The NIH review process itself takes about six months.

MAPS is also working to build support for the creation of a non-profit medical marijuana pharmaceutical company that would apply for legal permission to grow marijuana for research purposes. Such a project is estimated to cost \$250,000 to establish. Once these funds are pledged, the application process will be initiated.

As long as patients report that the medical use of marijuana eases their suffering more effectively than legally obtainable medications, MAPS will continue to work towards medical marijuana research. •

cannabis patient registry update

Sylvia **Thyssen**

THE CANNABIS PATIENT REGISTRY (CPR) is trying to assist cannabis patients by collecting information about the statistics of the medical use of cannabis – who uses it, how, and for what purpose. An in-depth introduction to the CPR appeared in MAPS V.5 No. 4. The CPR has been funded by a grant from the Drug Policy Foundation and is being established under my direction. The primary instrument of the CPR is the Personal Use and Medical History Questionnaire. It has been written and is now being reviewed and critiqued by others. The questionnaire is thirty questions long and takes 15 minutes to complete. Approximately a dozen patients have filled it out and given feedback on it.

I am working
towards
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portions of
the CPR
questionnaire...

I am communicating with a university-based researcher who has also developed several anonymous questionnaires intended for gathering data on general cannabis therapeutics and cannabis use and multiple sclerosis (MS), spasms or paralysis. Assisted by the Alliance for Cannabis Therapeutics and researchers in Scotland, he was able to pilot the survey with 120 MS patients who use cannabis medicinally. I am working towards standardizing portions of the CPR questionnaire and the researcher's general cannabis therapeutics questionnaire.

Many of the patients with whom I have spoken in recent months do not have supportive physicians. The physicians are often completely ignorant about the range of uses and the safety of cannabis. We are in the early stages of developing an information package for patients who request help in broaching the subject of cannabis therapeutics with their doctors.

I intend to proceed with the CPR in such a way as to protect the confidentiality of participants as much as possible. I am discussing with an attorney what constitutes a "privileged communication" to explore whether the CPR can be made immune from subpoena. If this is not possible, a special coding system will be developed.

The CPR's gathering of case histories is not the solution that will resolve the medical

cannabis controversy. However, faced as we are with setbacks in the effort to begin Dr. Abrams' clinical trial comparing smoked cannabis and the oral-THC capsule in patients with AIDS wasting syndrome (see p. 43), it is one project on which we can make progress right now.

Seeking Endorsement for Medical Cannabis

The American Public Health Association will be voting November 1 on a medical cannabis resolution submitted by Mary Lynn Mathre, RN, MSN. Mary Lynn Mathre works with the International Cannabis Alliance of Researchers and Educators (I-CARE) and with Patients out of Time (POT), which lobbies and educates all disciplines of health care professionals, their specialty and professional organizations, and the public at large about medical cannabis. If you or anyone you know might be willing to present a *similar resolution* to the American Medical Association, you may contact Patients out of Time, Fishpond Plantation, Howardsville VA, 24562 or email: mary_lynn@patient.win.net. Patients Out of Time also has an electronic bulletin board system that contains research data, historical records, legal cases, legislation and position papers by organizations supporting legal access to medical cannabis. It can be reached by modem at (804) 263-8237. •

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THE HOFMANN REPORT

This newsletter is the first Report of The Albert Hofmann Foundation (referred to as AHF or, simply, the Foundation), which is contained in alternate issues of the MAPS quarterly Bulletin. Through this report, we will keep you abreast of the activities of The Foundation, and report on developments of interest to all of those concerned with the field of psychedelics.

Throughout history people have used mind expanding substances to explore consciousness and enhance their lives. Our purpose at the Albert Hofmann Foundation is to gather the records of these endeavors and to further the understanding and responsible application of psychedelic substances in the investigation of both individual and collective consciousness.

WHO WE ARE

The Albert Hofmann Foundation was founded in 1988, named after the famous Swiss chemist, author, and philosopher. In addition to discovering d-lysergic acid diethylamide (LSD), Dr. Hofmann isolated the psychoactive ingredients of psilocybin mushrooms and ololiuqui seeds, and crafted many other mind-manifesting chemical substances and medicinal compounds. Several of these, including hydergine, are still widely in use. Dr. Hofmann has authored more than 100 articles in the field, and several books including *LSD - My Problem Child* and, with others, *Plants of the Gods* and *The Road to Eleusis*.

The remarkable psychic properties of LSD, which induces dramatic changes in consciousness at microscopic doses, have inspired millions of people through life-changing transcendent experiences. The intense interest in psychedelic drug research following the discovery of LSD revolutionized the scientific study of the human mind and produced a wealth of new data. The resulting exploration of possibilities within the human mind/body helped fuel the human potential movement in the Sixties, a movement reflected worldwide in new perspectives in business, medicine, ecology, the arts, and politics.

The Foundation is a nonprofit, educational and research organization, originally chartered to preserve the earliest records of psychedelic activity. Since early work suggests that these consciousness-revealing substances, both natural and synthetic, can be judiciously used for the betterment of humankind, our mission includes encouraging research and increasing public awareness and understanding of the potential such substances may offer.

The Foundation does not support irresponsible use of psychedelics for casual purposes, and we do not encourage public use of illicit substances. We aim to provide accurate and unbiased information not only about the psychedelic substances and the experiences that attend their use, but also about the hazards inherent in the irresponsible use of these drugs.

The Foundation is administered by a board of directors and supported by an advisory board (see listing here on our Masthead) drawn from scientific, scholarly and cultural communities around the world, including almost all of the pioneering psychedelic researchers and explorers. We look forward to introducing you to this accomplished group of advisors in future issues of the Hofmann Report.

The AHF maintains an office on the West side of Los Angeles, which houses a portion of our archives and provides computer facilities and a meeting place for the group of volunteer staff and directors who oversee and administer the Foundation. We are funded entirely by donations from private sources, including grants, wills and trust funds, as well as through non-cash contributions, such as volunteer work and equipment donations.

O U R C U R R E N T S T A T U S

A Note from Michael Gilbert, president of The Albert Hofmann Foundation

As provided in our mission statement above, gathering in, classifying and facilitating the public availability of psychedelic archives is our first and preeminent mandate. We have recently centralized these holdings, have obtained the relevant hardware and are developing programs to convert our archives to an electronic database (in conjunction with computer consultants assisting the Foundation). Accordingly we are on our way to developing a comprehensive, unique and accessible database. In cooperation with MAPS and the Heffter Institute, we are supporting a project conducted by Eric Katt to provide a complete on-line psychedelic bibliography.

Also over the past eighteen months, we have strengthened our board of directors, enlarged the Foundation advisory board of distinguished researchers and authors, and reorganized editorial review procedures. We have exciting plans for the future.

However, in assessing the educational effort necessary to bring public understanding to the field of psychedelics, and the importance of accomplishing this, we feel it is essential to achieve some vital, fundamental objectives which will not be possible without a substantial financial base.

A successful fund-raising drive will provide, among other things, the resources to acquire additional collections for our archives, host relevant gatherings designed to enhance understanding in the field, and support and encourage research in order to gain a better knowledge of these remarkable substances and encourage their accurate portrayal in the media. In particular, our fund raising campaign will pursue the following goals:

1. Reviving the Drug Master File for LSD and psilocybin with the FDA in order to facilitate future research.
2. Publishing a scholarly and contributory Journal.
3. Organizing a public, broad-based scientific forum to take a new look at psychedelics (including a related conference qualifying for Continuing Medical Education credit.)
4. Establishing a Media Relations facility to support the unbiased dissemination of accurate information on psychedelics to the media.
5. Sponsoring the Hofmann Prizes for outstanding achievements in the field.
6. Obtaining additional materials and collections for the AHF Library and converting our archives to computer database format.
7. Encouraging the publication of a book of testimonials from a wide array of accomplished people describing the results of their exposure to psychedelics.
8. Establishing a research fund in order to help initiate and encourage rigorous scientific studies.

As regular readers of MAPS periodicals know, limited psychedelic research has now resumed. Cracks increasingly appear in a "Drug War" that has not only failed, but has swept aside most rational thinking regarding these complex and important issues. Accordingly, this is a very crucial time for the Foundation. The pursuit of research and education in this vital area becomes increasingly important as the fallout of rampant technology and unrestrained avarice drive us ever closer to a disastrous precipice. All of us at the Albert Hofmann Foundation are pleased to have this opportunity to communicate with you. We invite your continuing moral, financial and volunteer support.

T H E I M P O R T A N C E O F O U R W O R K

An editorial by Myron Stolaroff

As we look at our world today, fraught as it is with myriad difficulties, it is hard for most people to realize that a radically different way of existence is possible. The world that we accept as the real world, and the way things really are, is embedded within a vast range of possibilities to which we all have access, whether we know it or not.

The wise men and women of all times have discovered that innately, within all of us, is unlimited potential for increased wisdom, compassion, and creativity, thus the potential for turning our lives into fulfilling, joyous adventures.

Most persons, particularly in the West, are unfamiliar with such possibilities. Our scientists have largely neglected this area, but the Perennial Philosophers, including the Buddhists, have long known that experience of such remarkable possibilities can be obtained through skillful means.

Many thousands of individuals in modern times have discovered that psychedelic drugs used with serious intent, integrity and knowledge can yield many of these same understandings. Those who have worked with them sufficiently to become adept in their use, often find them a source of mental and physical rejuvenation, a path to increased clarity, freedom from afflictions and a means to reach their full potential.

A common shared realization growing out of these experiences is that life can be joyful and exciting as one becomes contented and appreciative of oneself and others. The current dilemma in our nation and many parts of the world with regard to this matter is that most of the substances that can aid in such discoveries are illegal to possess. Yet those aware of the potential of psychedelic substances suggest that few if any other means can demonstrate as rapidly for the serious seeker the paths to resolving many of the problems we face.

Experienced researchers have reported that an informed program of properly conducted psychedelic experiences can help reveal our own personal psycho-dynamics, provide greater understanding and improve relationships as they reveal the harmony of all creation. Accordingly, they are able to explore other dimensions of existence and realize that dedication to positive work can bring self-fulfillment even as it raises the welfare of others. To many, it is apparent that the proper knowledge and application of psychedelic substances can help accelerate the evolution of humankind towards a higher degree of wisdom, compassion and productivity.

At the present time only those with direct experience seem to be aware of this important potential. Many elements of our government, our society and much of the psychiatric community view these substances as toxic and harmful. We believe these misconceptions arise primarily from ignorance of drug effects, from uninformed use and from the pervasive fear aroused by encountering unfamiliar behavior. Consequently a vigorous program of education is required to bring about general understanding, and open the door to more widespread, carefully conducted research and exploration.

We can do no less.

"You, my dear friends,
 and millions all over the world
 who now commemorate the 50th birthday of ergot's child,
 we all testify gratefully that we got valuable help on the way to
 what Aldous Huxley said is the end and ultimate purpose of human life —
 enlightenment, beatific vision, love.
 I think all these joyful testimonies of invaluable help by LSD
 should be enough to convince the health authorities, finally,
 of the nonsense of the prohibition of LSD
 and similar psychedelics."

Albert Hofmann

April, 1993

Inquiries and communications regarding our organization and activities may be sent to:

The Albert Hofmann Foundation

P.O. Box 341589

Los Angeles, CA 90034

Information on items of interest for future issues of the Hofmann Report
 will be much appreciated. Send to the same address, attention of:

Myron Stolaroff

Editor, The Hofmann Report

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If you wish to be placed on our mailing list, please copy or fill out this form and return to the above address.

 Name

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 City, State, Zip Code

If you are interested in assisting the Foundation with volunteer work, please indicate by checking here and providing your telephone number: () _____.

Please note that all information provided is confidential. The Albert Hofmann Foundation does not sell, rent or share its mailing list.

heffter research institute update

Dr. David Nichols



**Heffter
Research
Institute**

Research
at the Frontiers
of the Mind

...the Heffter

Research Institute

already has plans

in place to fund

a variety of

research studies.

THE HEFFTER RESEARCH INSTITUTE continues to develop a presence among the community of those interested in seeing research with psychedelic substances brought into the era of modern biomedical technology. Informal discussions with a number of people have reinforced our belief that a group of mainstream scientists who backed such an enterprise would be taken seriously, and would instill confidence that we could accomplish our stated goals. This is the guiding principle of the Heffter Institute.

Following our incorporation in 1993 and granting of 501(c)(3) tax-exempt status by the IRS, the board members have primarily underwritten the tangible start up costs, while numerous volunteers have provided hard work to help us get to our present position. One volunteer (and donor to the Institute) is providing continuous free access to his personal workstation and high speed communications line as a site for our home page on the World Wide Web: <http://www.heffter.org/>. The home page was designed by yet another volunteer. Several volunteers have worked on developing a database and mailing list for grassroots fundraising, others have provided professional services in graphics design and writing, and still others have hosted our board meetings. We were also given several hours of free consultation by a professional fund-raiser. The list goes on...

I would be remiss if I did not also acknowledge the tremendous assistance provided by Rick Doblin and MAPS, not only for providing access to the newsletter, and for "stuffing" the brochure announcing our "birth" in an earlier MAPS mailing, but also for continuous encouragement. In addition, the Albert Hofmann Foundation has been most supportive of Heffter's efforts, and their

president, Michael Gilbert, has been congenial and open with his good advice for us. It is clear that these volunteer efforts only scratch the surface of a huge reservoir of talent that strongly believes in our mission to study the nature of the mind, and that this study is essential for the future well-being of our society and our species.

Worthy Projects

In the immediate future, the Heffter Research Institute already has plans in place to fund a variety of research studies. We have helped to underwrite a project, along with MAPS and the Hofmann Foundation, that would begin to develop an on-line database of all the literature ever published on psychedelic drug research (see pp. 52-53). We have plans to study the role of peyote in the Native American Church (NAC), by invitation of a branch of the NAC. We strongly support Dr. Charles Grob's study of the use of MDMA in terminal patients, as well as Dr. Rick Strassman's proposed study of psilocybin in terminal patients. We are studying the feasibility of sponsoring an international conference on psychoactive drugs to be held in 1996 and will also help to underwrite a scientific conference to be sponsored by the União do Vegetal (UDV), in Brazil. We would also provide support for studies in Europe that will utilize positron imaging techniques ("PET scans") to study metabolic changes in the brain during the action of psychedelics and other psychoactive drugs. Additional projects would seek to better characterize and measure the neuropsychological, psychophysiological, and cognitive alterations produced by psychedelic drugs and compare and contrast these effects with those associated with other drugs or altered states of consciousness. On a very basic level, we also have a proposal to examine novel molecular structures related to LSD, and to characterize their interactions with brain receptors, with the ultimate goal of elucidating neurotransmitter pathways that are involved in the actions of all psychedelics.

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We also plan to establish fellowship training programs to encourage and support the development of the next generation of researchers interested in psychedelics. These and a variety of other scientific projects are all targets for funding in the immediate future. We have also invited a number of researchers to submit proposals to us.

Quest for an endowment

One feature of our mission that makes us a bit different is the fact that we have a long-term goal of raising an endowment sufficient to provide funds for research in perpetuity. What this means is that in the year 2020, 2045, or whenever (Terence McKenna's dire predictions notwithstanding), there will be a Heffter Research Institute, carrying out research on the mind/brain interface (something not likely to be well defined for at least a few millennia.) The realization of this goal will require that we eventually raise several tens of millions of dollars. This is a *huge* sum, and it will be a daunting task to raise this much money.

Some people have questioned the wisdom of this approach, asking, "Why should the Heffter Institute do this?" I would like to take this opportunity to explain why we think this an absolutely critical goal. First of all, to provide a background, MAPS members cannot doubt the hard work and heroic effort required of Rick Doblin to raise funds for the various projects that MAPS supports. Indeed, MAPS is a great tribute to the personal dedication of Rick Doblin. But MAPS is also structured to spend all the donations it receives. This has been necessary in order quickly to develop a constituency and base of support for critical and immediate needs. MAPS has served as a focal point for a great many issues and has helped to raise awareness on the kinds of things that presently can and cannot be done with respect to drug policy and medical research in this country and the world.

On the other hand, one cannot have a *long term* presence in research of any kind without a plan to develop a funding base that allows more time to be spent on research, and less time on fundraising. While even large institutes still have fund-raising operations, a sizable and stable endowment allows the institute scientists freedom to pursue inquiry in times of general economic hardship, and to address areas of inquiry that may be controversial, and not fundable from mainstream sources. Endowments rarely provide sufficient funds to fully underwrite an institute's

research; in-house scientists still must obtain additional funding; but the endowment gives an economic foundation upon which those other efforts can be based.

Cuts in government funding

That research funding is becoming an issue of great concern should be evident from the current political climate. Several of the founders, as well as many of the members of the scientific advisory board of the Heffter Institute currently have academic research programs that are supported by government agencies such as the National Institute on Drug Abuse (NIDA) and the National Institute of Mental Health (NIMH). As you are all aware, there is a proposal in congress to freeze the funding level for the National Institutes of Health (NIH) for the next five years. The present annual NIH appropriation of about \$11 billion essentially supports all government-sponsored biomedical research on cancer, AIDS, mental health, schizophrenia, heart disease, diabetes, you name it. (As a point of reference, some sources have estimated that the total costs of the "war on drugs" are at least \$30 billion per year.)

NIH is the umbrella agency over NIDA, NIMH, and *all* other government-funded biomedical research programs. It is quite difficult to obtain funds for research from any of these agencies, and a process of natural selection has already eliminated most scientists from the applicant pool who have not had past success in getting grants funded. The competition to get research funded is extremely tough right now. At NIMH, only about seven out of every 100 new proposals submitted to that agency were funded last year. Those "100" proposals were written mostly by seasoned investigators, who have finely honed their grant writing skills, and who have "track records" of creativity and high productivity.

A freeze on the level of funding for NIH would mean that as inflation (which is higher for biomedical research than for the cost of living) increases research costs, there will be an actual *decrease* in available funds. In fact, many grants that have *already* been funded are now being cut dramatically, in some cases by 30-40%. How many research scientists will even submit grants to agencies like NIMH when the success rate drops even further, to two or three grants funded per 100 submitted? It becomes a whole lot like playing a lottery!

For research topics related to how psychedelics affect the brain, or what brain mecha-

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nisms psychedelics catalyze to reveal unique aspects of the mind, how much "mainstream" funding can we expect in the future? To use a well-worn cliché, it doesn't take a rocket scientist to know that this kind of research will not be a high priority for funding. One could safely predict that funds for this type of work will dry up even more than in the past. There is absolutely no prospect in sight that this trend will be reversed any time in the near future.

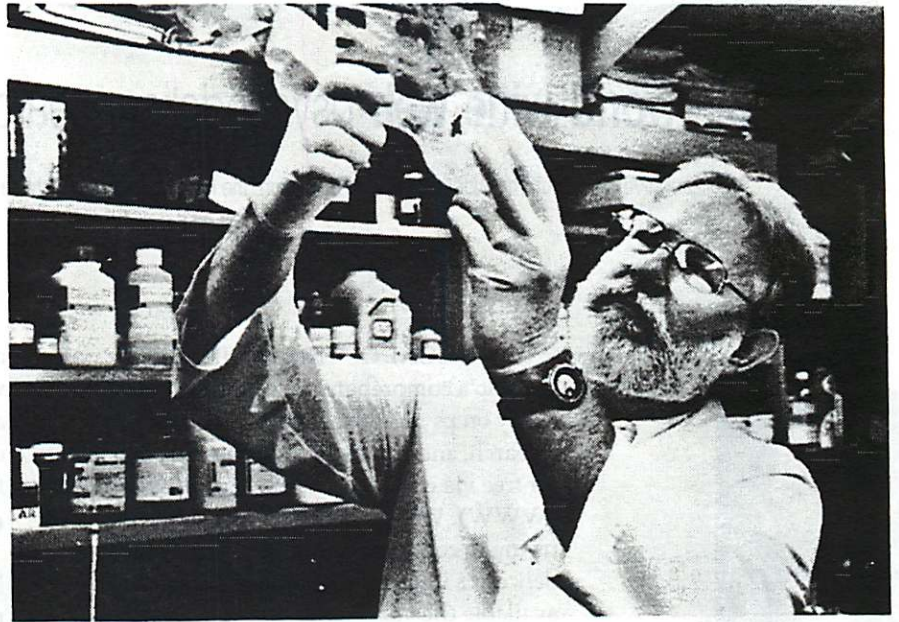
Creating a legacy

We believe that the imperative for the Heffter Research Institute, to develop a substantial endowment, is the *only way* that those of us who are interested in this research can ensure that it continues now, and in the future. This would be a legacy that we could leave behind, knowing that we put into place a mechanism for the study of the human mind that would continue for as long as this society exists.

At present, the Heffter Institute is poised to begin our first major fund-raising campaign. We hope to convince donors that we represent a worthy cause, and that we must take action *now* to develop a research presence. We believe that as time goes on it will become more and more difficult to initiate an enterprise such as the Heffter Institute. Many individuals who grew up in the sixties now have successful careers and are beginning to look at ways to give something back to society. A great many of these folks know that research on psychedelic drugs and the mind is a worthwhile endeavor, and support us. Their knowledge is power, and they represent a resource that cannot be recovered if we let this opportunity to build a research institute pass us by.

Younger generations have grown up in a different era. They are being taught that psychedelic drugs are part of the drug "problem," and are no different than narcotic opiates, or cocaine...they are just "dangerous drugs." Even now, medical and pharmacy schools generally fail to provide accurate information about psychedelics to their students. Few professors today teach about, or even know the long and rich history of psychedelic substances, the roles they played in healing, or their use in the religious and cultural practices of a great many societies.

Just as we are witnessing the loss of shamanic knowledge, and the loss of uncountable plant and animal species from wilderness areas *devastated* by the encroachment of civilization, our knowledge of psychedelic substances is being lost *yet again*. The pioneers



Dr. David Nichols

came, did their early work, and now have retired. Yet vital tasks of understanding who we are, how the mind works, and finding our place in the universe remain, important questions that research with psychedelics may help to answer. Who shall fill this void? Should we just forget it altogether? We think not. And we believe that the Heffter Institute is the answer to this need.

Now is the time

We know that the financial resources exist to accomplish our mission. There are many extremely successful individuals that privately will tell you they believe in the importance of psychedelic drug research. We must convince these people that the Heffter Institute is finally the means to accomplish this important work. In our first brochure, we paraphrased something first said by Victor Hugo, "There is no force in the universe more powerful than an idea whose time has come." We must follow this with, "Let us believe together that now is the time."

If you believe that the Heffter Institute is the means to create your own legacy, and wish to contribute to what we plan as a gift to all humankind, send your own tax-deductible donation to: The Heffter Research Institute, 330 Garfield Street, Suite 301, Santa Fe, NM 87501-2676, USA. While you're at it, renew your membership in MAPS! •

the world wide web psychedelic research bibliography

A collaborative project of The Albert Hofmann Foundation, the Heffter Research Institute & the Multidisciplinary Association for Psychedelic Studies

Eric Katt



With so much effort
going into trying to
conduct clinical trials
with psychedelics, it's
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and make available
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the psychedelic
pioneers.

THE GOAL OF THIS PROJECT is to develop a comprehensive, interactive bibliography on psychedelics and psychedelic research, and make that information available for free via computer on the World Wide Web (WWW). With so much effort going into trying to conduct clinical trials with psychedelics, it's important to protect and make available the valuable papers of the psychedelic pioneers.

The interactive bibliography project emerged from a study which I conducted into the feasibility of producing a CD-ROM on Psychedelic Research. The difficulties encountered revolved around the prohibitive cost of reprinting copyrighted material and acquisition of all the actual articles. In concluding the feasibility study, the logical next step seemed to be to develop a Web site containing bibliographic data on psychedelic research. After a year or more of developing the less costly Web site a CD-ROM on Psychedelic Research may still evolve. CD-ROM is considered a more useful format by many because it avoids having to connect to the Internet. Such a project could benefit from the accrued feedback of users of the pilot Web site.

The budget for the interactive bibliography project is \$2,650. The basic bibliographic database will be put online before the New Year. It will be usable by any of the graphical WWW browsers including Mosaic and Netscape and the browsers of America Online (AOL) and Netcom.

Current limitations

While most researchers already have access to the National Library of Medicine's Medline database, that database only covers articles from 1966 to the present. Many domestic and foreign publications before 1966 have unfortunately never been referenced in electronic form. This bibliography will contain upwards of 6,000 references to both books and journal articles, and be incrementally developed as resources such as abstracts, graphics,

and full texts of articles become available. It would be of greatest use to researchers, although students, libraries, government officials and the psychedelically curious will find the information useful.

Great Features

An online bibliography has virtually limitless possibilities for expansion. The full-texts and abstracts of any articles no longer copyrighted or articles that we obtain permission to reprint can be featured. The bibliographic listings can be amended by reviewing bibliographies privately compiled by individual researchers. The complete texts of all MAPS and Albert Hofmann Foundation newsletters may be included, as can images of paintings from Dr. Oscar Janiger's private collection, produced during a 1950s study where subjects painted a Kachina doll before, during, and after ingestion of LSD. Other sections that could be included are molecular diagrams, biographies of individual researchers, general texts on the history and methods of psychedelic and psycholytic therapy and psychedelic conference literature and descriptions.

Searchable format

The online bibliography will be usable via a form-type interface. With this format, the user types in search criteria, sets parameters, and starts the search function to yield the results. For example, if a user wanted to search for work done with LSD from 1954-1960, the date range could be set, the search keyword set to LSD, and the query activated. This would result in a list of the corresponding data being returned, including the author, title, journal name, date of publication, language of article, etc. A similar database called Psychedelic Abstracts Online can currently be found at: <http://cyberverse.com/cgi-bin/L4?searchable/>.

The drugs to be included on the archive will be: LSD, DMT, DPT, psilocybin, psilocin, ibogaine, harmaline, MDMA, MDEA, MDA, mescaline, 4-methylaminorex, 2C-B, ketamine. Information on other psychedelic drugs may be included.

Permission has already been granted to use the following bibliographies:

Medline

Medline is a database maintained by the National Library of Medicine, containing title, author(s), date, publisher, language, and abstracts of any works published in medical journals from 1966 to 1995. Full permission has been granted to use all bibliographic data on the above listed drugs with the exception of the abstracts.

Dr. Torsten Passie

Dr. Passie is a German researcher who has been compiling a 75-90 page annotated bibliography on psychedelic and psycholytic research that includes both US and foreign monographs and articles from 1931 to the present. Dr. Passie has given tentative permission to use his listings in electronic form after the bibliography is published in hard copy form. This bibliography is especially valuable, because much of the foreign research has never been indexed electronically. Data for this portion of the bibliography will hopefully be made available on-line during the first part of 1996. The availability of this bibliography will be reported in an upcoming issue of the MAPS newsletter.

Oscar Janiger

Drs. Janiger and Paltin have compiled bibliographies of work with LSD, psilocybin, and mescaline. This work covers research papers from approximately 1943 through 1959, none of which are included in the Medline database.

Negotiations are in progress to use sections of the following databases:

Sandoz

Sandoz Pharmaceuticals, the birthplace of LSD, compiled a bibliography of all articles concerning LSD and psilocybin. The bibliography was re-published in the 1970s by the National Institutes of Health, and has since gone out of print.

Books in Print

Books in Print, published by Reed Reference Publishing, is a database used by bookstores to locate in-print and out-of-print books.

Napralert

Napralert is a database compiled by the University of Illinois at Chicago School of Pharmacy. It contains information on taxonomy, chemistry, activities of extracts and active chemical constituents of natural products including plants, fungi, marine organisms, and animal products.

A common goal

Development of an interactive WWW bibliography is both an integral step and a useful tool toward furthering psychedelic research. It begins a process of digitizing and protecting the body of valuable psychedelic research papers for posterity, a project that is important to all three organizational sponsors. In the spirit of collaborative effort, interested readers are invited to submit any suggestions or individual bibliographies to me at: eric@maps.org.

The MAPS World Wide Web site is now located at <http://www.maps.org/>. Links are in to the Web pages of: Heffter Research Institute, Council on Spiritual Practices, Americans for Compassionate Use, Calyx Activists Page, Terence McKenna, PIKHAL, E for Ecstasy, LSD: My Problem Child, and Island Group. Check out announcements in the Late Breaking News section.

N O W A V A I L A B L E

Religion and Psychoactive Sacraments: A Bibliographic Guide; spiral-bound, 329 pp., Eds. Thomas B. Roberts, Ph.D. and Paula Jo Hruby, M.S.Ed.: \$28.00 plus shipping & handling (\$3.00 US/Canada, \$5.00 foreign surface, or \$15.00 foreign air mail). Illinois residents add \$1.68 tax. Psychedelia Books, P.O. Box 354, DeKalb, IL 60115.

This impressive resource contains excerpts from 223 books and dissertations which address the topic of entheogens - psychoactive plants and chemicals used within a religious context. In the view of editor Thomas Roberts, the Guide firmly establishes that theologians, clergy, scholars and laypersons see the topic of *psychoactive sacraments* as important and worthy of discussion and that debate exists over the questions: Is there legitimate religious use for psychoactive sacraments? If so, what is appropriate? Notes and Excerpts for each book range from half a page to three pages. The index in the back greatly enhances the usefulness of this publication. The books described are almost exclusively in the English language and the emphasis is on North America. The editors note that the vast research in world-wide anthropology is under-represented and deserves a guide of its own. Future editions are planned. For information about access to the electronic version of this document, check the Web page of the Council on Spiritual Practices at <http://csp.org/csp/> or check <ftp://csp.org/csp/RPSGuide.txt> (for ASCII) or <ftp://csp.org/csp/RPSGuide.ps> (for PostScript).

BOOK REVIEW

Neal M. Goldsmith, Ph.D.

THIS IS A REMARKABLE book. Epidemiologist Leigh A. Henderson, as a consultant to the National Institute on Drug Abuse (NIDA) and NIDA Project Officer William J. Glass started with the government's own survey data, worked with the authors of a new individual- and community-level ethnographic study, analyzed and interpreted these half-dozen data sets very conservatively, and ended up concluding that LSD is relatively safe and the laws far too severe. Some would say that these conclusions are still too conservative. Perhaps that's the point: Even a conservative reading of government data will not support today's absolutist attitudes and draconian laws.

Lsd: still with us after all these years

Leigh A. Henderson and William J. Glass, Editors [NY: Lexington Books, 1994, 163 pp.]

The authors

Henderson and Glass seem somewhat embarrassed by their conclusions. After all, the government looks at the same National Institute of Mental Health (NIMH) and NIDA data and concludes that LSD is very dangerous and severe laws are justified. Henderson and Glass, employed by or closely associated with NIDA and near the peaks of their careers, have nonetheless directly contradicted NIDA policy. In choosing to publish anyway (even without any direct references to the authors' NIDA employment on the dust jacket or promotional literature – only in later conversations with this reviewer was the NIDA connection mentioned) the authors have chosen bravery over fear, and facts over shouts in a courageous contribution to rational, data-based policy making.

The book is really Henderson's baby; she is the author of four of its seven chapters and co-author of the Introduction and the "Summary

Neal M. Goldsmith, Ph.D. is a social psychologist and expert on policy research utilization. Trained as a research methodologist, he conducted early studies on ways to increase the use of research findings in mental health policy making. Goldsmith now heads Tribeca Research, a New York-based policy research and consulting firm. He may be reached by email at ngoldsmith@aol.com.

and Implications" chapter. "I started out not knowing anything about LSD, except its public reputation," she said in our recent telephone conversation. "As my research proceeded, I became fascinated by the facts. It's clear that policy on LSD is out of line with the data."

Henderson shares authorship with Glass and law enforcement and health researchers, yet the book retains a strong unity of theme: triangulating in on the truth about LSD use. The result is a methodologically innovative integration of quantitative and qualitative data – of emergency room admission statistics and a profile of a twenty-something LSD ring leader; of "national lifetime usage" data and quotes from interviews with experienced adolescents and hand-wringing parents.

The case studies

In Chapter 1, "What is a Trip – and Why Take One?" anthropologists James MacDonald and Michael Agar describe data they gathered through in-depth, ethnographic interviews with six adolescent LSD users and their parents in a community that had recently uncovered a major LSD distribution ring. (It's a shame that MacDonald and Agar's excellent chapter does not include the authors' biographies or institutional affiliations.) Parental attitudes of concern contrast strikingly with the teens'



Neal M. Goldsmith, Ph.D.

knowing discussions of their good and bad experiences with LSD. Even though these interviews ring true, they are still a biased sample – all of the kids interviewed were enrolled in a drug rehabilitation program; all claimed that frequent ingestion can lead to social and personal disintegration.

The history of LSD

In Chapter 2, "About LSD," Henderson provides an excellent, data-based, and quite favorable review of the history, pharmacology, and clinical and therapeutic research, concluding with a factual review of the manufacturing and marketing of LSD. It is refreshing that Henderson allocates only three sentences to "the '60s;" rather, her focus is on safety, efficacy, and policy.

Henderson continues her review in Chapter 3, at this point focusing on the literature on "Adverse Reactions to LSD." She finds them real, but rare and spends 20 pages adroitly separating myth from fact.

Analyzing the government's data

In Chapter 4, "LSD Use and LSD Users: Questions and Answers About LSD," Henderson analyzes the wide panoply of government survey data. Unfortunately, these data are generally derived from the tragic negative consequences of drug *abuse* – emergency room admissions or arrest statistics and the like – or are biased by the requirement to self-report illegal behavior, which is much more likely among those in treatment than "successful" users. Even by these biased standards, LSD emerges here as a remarkably safe "drug of abuse" that in no way can be called "epidemic."

A middle class drug ring

In a fascinating inside account of a middle-class drug distribution ring, clinical psychologist and forensic examiner Cynthia Favret's "An LSD Distribution Network" (Chapter 5) takes us back to the community discussed in Chapter 1, this time, through interviews with an undercover narcotics investigator familiar with the exposed network and its 22-year old head. In addition to a very close rendering of the mind set of its protagonist, this chapter provides poignant quotes from friends and family that drive home the brutal reality of the government's legal position on LSD. Favret's treatment is especially effective coming after the relatively benign picture that emerges from Henderson's chapters on the research and usage data.

Detection and the law

Chapter 6, "Legal Issues," discusses detection, possession, and distribution issues in light of the debate over mandatory sentencing for drug offenders. Henderson discusses developments in detection technology since the 1970s, when inaccurate and expensive fluorescent spectroscopy and high-performance liquid chromatography

(HPLC) detection tests were developed, and describes inexpensive and effective radioimmunoassay (RIA) tests that have recently become commercially available. Henderson also lists and discusses the wide range of federal and state (all 50 are listed) penalties for possession and sale of LSD, and in a devastatingly matter-of-fact way, compares these penalties with those governing similar doses of cocaine or heroin.

The key findings

Chapter 7, "Summary and Implications," attempts to bring together all of the data sets described in the previous chapters and draw conclusions for policy on LSD for the 1990s. There is also a spectacular 258-item reference list containing within it the classic evidence – the bulwark of the logical argument – for the safety of LSD and, perhaps, for its efficacy as a psychiatric tool. Is the use of LSD increasing? What are the major issues with which a logical, fact-based LSD policy should be concerned?

LSD: The data are in

- LSD use is relatively uncommon in comparison with use of alcohol, marijuana, or cocaine and misuse of prescription drugs. Long-term trends in LSD use show stability over the last fifteen years in both proportion (roughly 5% annually) and age (generally, 16-23) of users.
- LSD is primarily used by suburban white males in their late teens and early 20s. A shift in use from the upper level of this band to the lower level could contribute to the perception that use has increased among young adolescents.
- LSD is characterized by infrequent episodic use culminating in "maturing out" after two to four years.
- Adverse health consequences of LSD are comparatively rare, with "bad trips" being the most common adverse reaction. Nonetheless, severe bad trips are one of the primary reasons youths discontinue LSD use.
- Although some health consequences may be related to length of use, size of dose, and the interaction of other drugs, there is considerable uncertainty over why LSD adversely affects some individuals more severely than others.
- Despite dire warnings, LSD use doesn't result in mental illness and does not damage genes or chromosomes.
- Black market LSD remains generally unadulterated, although manufacturing by-products do appear. In the 1960s, doses were reported to have ranged from 200 to 1000 micrograms; in the 1970's, street samples ranged

the authors

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making.

from 30 to 300 mcg; in the mid-1980s, the average was about 100 to 125 mcg; in the 1990s it is 20 to 80 mcg. Lower doses generally mean fewer bad trips.

Why LSD?

Henderson, Glass and Favret point out the reasons why people like LSD: the perceptual intensity without a clouding of consciousness; the "compelling immediacy;" the "intensification of mood and emotions." Others enjoy the group aspect of the drug; still others view LSD as an "emotional fitness test." These motivations haven't changed since the 1960s, according to studies cited by Henderson in Chapter 2. Adolescents are also attracted to LSD because it is physically easy to deal with – colorless, odorless, small and easy to conceal, inexpensive, until recently, hard to detect in blood or urine. LSD is also viewed as semi-natural and users tend to look down on users of "dangerous" drugs, such as cocaine and heroin.

Who takes LSD?

The LSD user differs from the typical opiate user "in that LSD appeals to individuals who are often socio-economically advantaged, who have the opportunity for higher education and successful careers, yet who choose – at least for a time – not to follow societal norms." The authors associate a number of traits – low self-esteem, rebelliousness, depression, aggressiveness, for example – with the use of LSD, but stress that they precede, rather than result from the use of drugs.

Adolescent users indicated that they used LSD because it was fun and because they were bored. "As a drug that tends to promote introspection and to heighten the senses, it has more to offer those in the relatively safe and pleasant surroundings [of the middle-class] than those in the more dangerous and unpleasant inner-city environment. In fact, the suburban youths interviewed seemed to take LSD as a controlled means of losing control. Riding a roller coaster may be an appropriate analogy; the ride is safe, but contains enough sense of danger to be thrilling."

According to the authors, LSD "seems to appeal to a limited group of adolescents and an even smaller group of older persons who may still seek to identify with a particular subculture." One major problem with the data used to support Henderson and Glass' conclusions is their representativeness – did the sample that responded to the various surveys actually reflect the entire population? It is important to note that the divinity graduate student using a low dose to meditate or the quiet, 45-year old systems analyst using LSD "to think" are likely to be significantly underrepresented subsets of the data. In fact, the authors' observation of a "maturing out" of LSD use might just as easily been interpreted as a

"shrinking away" from the rigors of aggressive introspection.

The negatives

According to Henderson, the literature shows that the factors contributing to higher risk of a bad reaction to LSD are "a preexisting psychiatric disorder, and the use [of LSD] in conjunction with other drugs." Under these circumstances "LSD may precipitate a more prolonged or severe psychotic reaction."

While the authors aptly point out that we do not know the precise mechanism of LSD's action, they also state outright that the research thus far clearly shows that LSD does not cause "organic damage, chromosomal damage, cancer, or birth defects. It is not particularly toxic..." The authors conclude that, "viewed strictly in the context of traditional drug-induced health consequences (measured in injury and death), LSD is less dangerous than most other illegal drugs." Use by adolescents, they point out, "carries additional risks to psychologic maturation and academic performance much the same as do marijuana and other drugs typically used at this stage of life." (The authors do note that "among younger students, inhalation of potentially lethal substances such as solvents and butane exceeds LSD use.")

That the authors do not build on the data and their own analysis and conclude here that teen use of psychoactive drugs may reflect a non-pathological desire for rites of passage, should not detract from the value of their work in the current cultural context. One day, such a conclusion may guide government policy, but given the fragility of the support for today's renewed research with psychedelics, the authors may have put together just the right book for the times. "We wanted to write a boring book about LSD, if that's possible," said Henderson, "we wanted to review the evidence, but not necessarily come down on any side of the issue. The facts speak loudly for themselves."

The data sets

Even so, the fact base must be valid to be useful. Particularly in Chapter 4, Henderson and colleagues rely on a set of much-debated, yet much-cited government surveys of drug abuse. While it is beyond the scope of this review to analyze in detail the validity of each data source used by the authors, we can review the major sources of bias (most of which are identified by the authors themselves) in the government data sets that were analyzed.

The *National Household Survey of Drug Abuse (NHSDA)* is a series of surveys designed to measure the use of alcohol, tobacco, and other drugs in the U.S. over time. Periodically conducted by NIDA since 1974, the survey was recently turned over to

...the authors' observation of a "maturing out" of LSD use might just as easily been interpreted as a "shrinking away" from the rigors of aggressive introspection.

the newly-created Substance Abuse and Mental Health Services Administration (SAMHSA). Lead author Leigh Henderson, provided secondary analysis of these and other data sets under contract to NIDA and, after 1992, to SAMHSA.

In the *NHSDA*, information on illicit drug use is collected in the user's home and so, despite an elaborate anonymity procedure, respondents may not tell the whole truth. At home data collection also under-represents the homeless, prison populations, people in nursing homes and treatment facilities, and the military, groups that might raise the statistics on use. As the book points out, with drugs that are less frequently used, such as LSD, this systematic under counting is even more likely.

The *Monitoring the Future (High School Senior Survey)* is designed to characterize use, trends, attitudes and beliefs among high school seniors. Since 1975, it has been conducted annually by the University of Michigan for NIDA. The survey does not include school dropouts (or truants on the day of the survey) and so likely underestimates school-age drug use.

The *Drug Abuse Warning Network (DAWN)* is sponsored by SAMHSA (previously by NIDA) and collects data from coroners, medical examiners and emergency room admissions, primarily to identify drug dangers and emerging trends. The *DAWN* statistics are controversial and Henderson systematically lays out the major threats to the validity of the data. For example, suicide attempts are included in *DAWN* statistics, but alcohol (without the presence of other drugs) is not. Mention of a particular drug does not mean the episode was caused by that drug. In fact, since half of the drug-related emergency room visits entail more than one drug, cause and effect generally cannot be established by *DAWN* data.

The *Drug Use Forecasting (DUF)* project, sponsored by the National Institute of Justice, tracks drug use among arrestees in 21 (non-representative) U.S. cities. *DUF* data are not meant to be normative. For example, male arrestees for drug offenses are under-counted in order to provide a broader sample of (drug use during the commission of) a wider range of offenses. Females are included regardless of the crime. Henderson points out that these data are nonetheless "frequently reported in the substance abuse literature, although [the full] reports are not published."

The *Community Epidemiology Work Group (CEWG)* was established by NIDA in 1976 to track rapidly changing patterns of drug use. The *CEWG* meets twice a year and publishes the proceedings. The *CEWG* uses a wide range of data sources and focuses "primarily on the harmful effects of drug use."

...we need more

government

researchers like

Henderson

and her

"let-the-chips-

fall-where-they-

may"

colleagues.

Overall, the data sets upon which the government's "war on drugs" is built come off here as woefully inadequate – subject to political agendas and thus misconstrued and misdirected from the start. The sense here is of researchers groping in a vast blackness by the light of a flickering match – not much is illuminated, but there is still enough heat to burn the fingertips of the unwary.

Conclusion

Other than the quality of the government's data, there is little to detract from this dogged book. (Only Chapter 4 relies heavily on government statistics and Henderson spends much of this chapter teasing the truest interpretations out of the data.) Some may wish the authors had gone further in detailing the positive implications of the data. Yet, the book is likely to have even more impact precisely because it was authored "from within the belly of the beast" and, even without going that last 10% of the way, still draws sharply different conclusions from those of NIDA.

It was irksome that, beside Henderson and Glass, there were no biographies for the excellent co-contributors, James MacDonald, Michael Agar and Cynthia Favret. Were they separately hired by Henderson and Glass to gather qualitative data? Were they NIDA employees who couldn't list their employer? – we are not told. (But they turn out to be academic colleagues working under sub-contract to Henderson and Glass and the omission a simple oversight.)

However, these complaints are minor. Henderson's accomplishment with, *LSD: Still With Us After All These Years*, is, as a *de facto* representative of NIDA, to give us back the facts, the truth. She shines the light of 45 years of laboratory and clinical research onto a half-dozen venerable government surveys of dubious validity and finds the outlines of reality. Henderson then triangulates on this devil's hybrid of lab research and survey data, by breathing life into it through real-world, contemporaneous interviews with those most affected by LSD use: the users, the dealers, and their families.

We need more such analyses of government data, not mere condemnation of their flaws, and we need more government researchers like Leigh Henderson and her "let-the-chips-fall-where-they-may" colleagues. •

MAOI CONTRAINDICATIONS

Alfred Savinelli
& John H. Halpern, MD

We aim
to reduce harm
and promote safety
by expounding
on potential
contraindications...

aYAHUASCA and its analogs are aqueous solutions traditionally made in the Amazon from the vine of

Banisteriopsis and the leaves of *Psychotria viridis*. The orally inactive tryptamines are orally activated in the presence of monoamine oxidase inhibitors (MAOI) extracted from the *Banisteriopsis* vine. The mechanism of MAOI can be used to potentiate most classes of tryptamines as well as many other classes of drugs.

There is current worldwide interest in Ayahuasca for entheogenic exploration. Moreover, its analysis as a natural MAOI has caused attention to be directed towards the more potent, synthetic MAOIs.¹ We aim to reduce harm and promote safety by expounding on potential contraindications of MAOIs with foods and pharmaceuticals.

The prescription of MAOI antidepressants in the medical profession has led to a detailed review of common medications, drugs of abuse, and foods to avoid.^{2,3}

Entheogenic tryptamines are orally activated by MAOI's inhibition of the enzyme monoamine oxidase in the gut. However, there are adverse drug interactions secondary to MAOI intake (Table 1). Of particular note, using MAOI's within five weeks of discontinuing the serotonin selective reuptake inhibitor (SSRI) fluoxetine (Prozac) could lead to coma and death.⁴ Discontinuation of the other SSRI antidepressants also require a two to three week washout prior to MAOI intake.

The goal of a dietary regimen compatible with the use of MAOI's is to avoid tyramine-containing foods which in general are fermented, desiccated, aged, or overripe (Table 2). Foods not listed in Table 2 could be of danger as well: when not fresh, tyrosine and other aromatic amino acids naturally present are degraded by bacteria with tyramine as a resultant byproduct. Tyramine stimulates the release of norepinephrine in the bloodstream and its absorption is blocked by MAOI. Sufficient exposure can therefore cause a norepinephrine surge resulting in hypertension. Symptoms include nausea, occipital headache, and even intracranial hemorrhage.

Increased norepinephrine release is also compounded by stimulants, including amphetamines and other amines. Due to the amphetamine properties of the phenethylamine

entheogens, mescaline and MDMA ("Ecstasy"), a hypertensive crisis could ensue as a result of their combination with an MAOI. Such an interaction has been reported in the literature.⁵

Contraindications to the use of MAOI's include severe liver and kidney impairment, severe or frequent headache, uncontrolled hypertension, cardiovascular diseases, and cerebrovascular diseases.⁶ Of course, those with psychiatric preconditions, especially prior psychotic breaks, should avoid entheogens, except when mediated by a professional.

Those considering self-induced exploration should be aware of its complications and make an informed decision. The restrictions here delineated are not meant to be all-encompassing but, rather, are meant to provide general guidelines. Further questions should be directed to your physician.

Table 1. Contraindicated Drugs

(Partial list): amphetamines, cocaine, MDMA, opiates, barbiturates, decongestants & allergy medications, cold medications, diet pills, methylphenidate, asthma inhalers, meperidine, levodopa, dopamine, carbamazepine, certain antihypertensive medications, sympathomimetic amines (direct & indirect acting) including pseudoephedrine & ephedrine.

Table 2. Contraindicated Foods

cheese	L-tyrosine	liver
broad beans	dry sausage	beer & ale
chocolate	sauerkraut	ripe avocado
yeast extracts	caffeine	raspberry jam
certain nuts	dried fruit	banana peel
soy bean products		vermouth
cognac	sherry	chianti
smoked meat, poultry & fish		
protein dietary supplements		
meat extracts & tenderizers		

¹ Ott J (1993). Pharmacothcon: Entheogenic drugs, their plant sources and history. Kennewick, WA: Natural Products Co. 253-254.

² McCabe BJ (1986). Dietary tyramine and other pressor amines in MAOI regimes: A review. *Journal of The American Dietetic Association*. 86:8:1059-64.

³ Hales RE, Yudofsky SC, Talbott JA (Editors) (1994). *American Psychiatric Press Textbook of Psychiatry*. Washington, D.C.: American Psychiatric Press, Inc. 940-3.

⁴ Sternbach H (1991). The Serotonin Syndrome. *American Journal of Psychiatry*. 148:705-13.

⁵ Kaskey GB (1992). Possible Interaction Between an MAOI and "Ecstasy" (Letter to the Editor). *American Journal of Psychiatry*. 149:3:411-2.

⁶ *Physicians' Desk Reference* (48th edition, 1994). Montvale, NJ: Medical Economics Data.

M A P S F O R U M

Dear MAPS,

... As I have been reiterating these many years, what is most important about psychedelic work is the way things are experienced by real people, one by one. And my only criticism of your well-made magazine is that it seems too arid and impersonal to me.

In fact, this question raises another more important one, namely how do we win acceptance for this type of personal exploration in the present climate of American public and government opinion? The MAPS approach may easily be defended by those with more titles than I possess, but still it remains open to challenge. Until something fundamental changes, is moved, alters in shape, in the paranoia with which most Americans view not only psychedelics but the world in which they find themselves, I seriously doubt if any progress can be made. Let me be even more provocative and say that the attempts to obtain respectability by donning the white gowns of the "scientists" is about as convincing to the public as the Madame of a brothel attempting to pass herself off at a middle-class ladies' luncheon as the headmistress of a school for girls.

Those of us who have been trying to move the consciousness forward, an inch at a time, are well aware that those in opposition may lack knowledge but they don't lack intuition. Some day I will tell you about my brief meetings with Anslinger back in the days when I was at the United Nations doing research on drug use. The point is that my fundamental disagreement with his approach, that was based on his own inglorious career as a prohibition commissioner, came through no matter how hard I tried to keep it hidden... and believe me I did try.

Outside my window my neighbor, who is a farmer and a good man, is turning over the drying hay with what the French call a pirouette, a device that is pulled by the tractor and spins the cut hay so that it presents a new surface to the sun. I am trying the same thing with you and with MAPS.

For example, enclosed I find an ad about LSD Blotter Art. It is not my cup of tea, but art is. Why not consider a small booklet featuring psychedelic art, or even devoting a page to such a subject in each issue of MAPS? I recently came across a book of posters for Rock Concerts done in England some time in the early Seventies (Get on Down, 1977, edited by Mick Farren). Most of the best work was clearly inspired by psychedelics and it puts much of what came after to shame.

Well it is even hot here in the Alps after a cool spring so it must be considerably more so in the Carolinas. This means I will end the letter now without making any further recommendation...but don't forget the Huichols!

Enclosed is my check for continued full membership in MAPS. I know it will be used wisely and well.

... It seems to me we are all in some sort of disorganized school for learning, psychedelics are there among the pencils, papers, computers, books... and we are still not quite sure of how best to use them. But a lot of us are still trying.

best regards,
Nedd Willard
Thorens/Glières
74570 France

Dear MAPS,

... Your ongoing dedication is inspiring and much appreciated.

I'm wondering if anyone has investigated MDMA and other similar drug research/therapy in places such as I see advertised in Mexico - so called "Life Extension" clinics - or even Indian reservations? My husband has cancer and I wish he were able to experience some states I read others describing. Having taken LSD during the sixties, it still remains the peak experience of my life. I feel sad that responsible, serious people who see these substances as sacred are unable to have access to them - but this is what makes your work so important!

best wishes,
Virginia Gordon

(Editors note: We know of no MDMA therapy in clinics in Mexico or on Indian reservations. Sadly, few clinics offer therapeutic psychedelic drug experiences. Those that do are mainly for the treatment of substance abuse. A clinic in Panama (contact: Howard Lotsof, NDA International, P.O. Box 100506, Staten Island NY 10310-0506) offers ibogaine sessions, particularly for heroin and cocaine dependence. Takiwasi, a clinic in Peru, offers ayahuasca sessions in the context of an inpatient treatment program for patients suffering crack cocaine dependence and other addictions. It also offers "Seminars in Personal Growth" centered on the ritualized ingestion of sacred plants. Takiwasi is a non-profit pilot center for the rehabilitation of drug addicts and for research of traditional medicines. Contact: Takiwasi, Prolongación Jirón Alerta #466, Tarapoto - Peru, phone: 094.52.5479, fax: 094.52.5479).

maps' financial report: fiscal year june 1, 1994 to may 31, 1995

Rick **Doblin**,
MAPS President

mAPS HAS TWO primary responsibilities to its members. First, it must use members' contributions for the intended purposes in a strategic manner so as to maximize the impact of the funds. Second, MAPS must make its financial status transparent. This detailed disclosure of the income and expenses for MAPS' FY 95 (June 1, 1994 - May 31, 1995) should give current MAPS members, potential MAPS members, and others the information needed to evaluate how MAPS operates.

MAPS is eager to receive feedback from members about how well your priorities are being served. Please review this report. Your comments, critique and questions are most welcome.

This last year
was one
of solid progress
for MAPS.

Organizational Overview - Income

This last year was one of solid progress for MAPS. Membership climbed to about 1,000 members from about 800 a year ago. Donations increased slightly from last year's income of \$106,650 to \$107,184. In addition to cash contributions, MAPS received significant in-kind contributions. These included a computer and monitor worth \$3,000 from Dan King, technical assistance to establish a MAPS home page on the World Wide Web from William King and Eric Katt (p. 52), graphic design work on the MAPS newsletter worth untold sums, and envelope stuffing and assorted office tasks from Bob Donnell and several other friends of MAPS in Charlotte.

Almost half of MAPS' income came from two individuals, each of whom donated \$25,000. One of the donors, who has chosen to remain anonymous, won an academic prize in 1994 considered to be the equivalent of the Nobel in his field. He chose to distribute his award to a variety of causes, allocating \$25,000 to MAPS and \$25,000 directly to the University of Miami for ibogaine research (p. 29). MAPS' other \$25,000 donation was an initial payment from a bequest by the late Mr. Eric Bass, artist, meditator and philanthropist.

Additional sums from Mr. Bass's bequest will be received sometime during FY 96 and will primarily be directed towards funding MDMA research.

Virtually all the funds MAPS received in FY 95 were unrestricted, though several individual donors did specify which projects they wanted their donation to support.

Organizational Overview - Expenditures

The total expenditures for FY 95 were \$133,153, as compared to \$83,052 in FY 94, an increase of \$50,101. To help clarify these expenditures, I have divided the expenses into four broad categories: research, education/information, office, and staff. Most of the growth in expenditures was due to a \$37,749 increase in funds devoted to research. There were slight decreases in the expenditures on education/information and the office, and an increase in \$14,826 in staff costs, due to Sylvia Thyssen working full-time for all of FY 95.

Expenditures - Research

I am proud to report that more money was devoted to research in FY 95 than in any previous year. MAPS allocated \$48,680 to research in FY 95, as compared to \$10,930 in FY 94, an increase of \$37,749. This increase

took place primarily because several of the projects for which MAPS has been holding restricted funds finally came to fruition.

MAPS distributed \$15,606 to the MDMA research of Dr. Charles Grob (p. 2), MAPS' top priority. The largest single research contribution was \$17,827 to a study of the effectiveness of water pipes and vaporizers in filtering marijuana smoke. Results of this study will be discussed in the next MAPS newsletter. MAPS spent \$900 seeking permission to investigate the risks and the benefits of the medical use of marijuana to treat the AIDS wasting syndrome (p. 33). MAPS contributed \$5,000 to Dr. Mash, University of Miami, for her study of the pharmacokinetics of ayahuasca, a psychoactive Amazonian tea whose use is legal in Brazil in the context of religious rituals. An additional \$900 was devoted to protocol development for the LSD research of Dr. Richard Yensen and Donna Dryer (p. 15). Finally, \$600 was given to Tamara Allen for a study of archetypal art therapy in subjects receiving psilocybin (p. 21). This study was part of Dr. Rick Strassman's psilocybin research (pp. 16 and 17).

On the international scene, MAPS devoted \$5,452 to Dr. Evgeny Krupitsky's research in St. Petersburg, Russia into the use of ketamine to treat alcoholics (p. 27). The MDMA research project in Nicaragua consumed an exploratory \$2,394. Permission has yet to be obtained there for the study of the use of MDMA to treat soldiers and civilians suffering from post-traumatic stress disorder (PTSD).

Expenditures - Education/Information

Expenses for the educational portion of MAPS' activities dipped slightly from \$37,260 in FY 94 to \$35,212 in FY 95. Expenditures on copies, phones, postage, printing of the newsletter and books were similar to expenditures from FY 94.

The MAPS newsletter costs about \$17,500 annually in printing costs, envelopes, and postage and absorbs a substantial amount of staff time. All the authors donate their time, as does the graphic designer. The reason we expend *so much energy* on the MAPS newsletter is that all the research in the world will go for naught unless a climate of support and acceptance is created for exploring the benefits of psychedelics and marijuana. To facilitate that process, the MAPS newsletter is sent not only to members but to government regulators and policy makers, academic drug policy experts, scientists and even opponents of the

medical use of psychedelics and marijuana. I hope that the broad spectrum of material in the newsletter will enable people of all backgrounds to see that the psychedelic research community is striving to make positive contributions to understanding the basic functioning of the mind, alleviating pain and suffering, and bringing the spiritual dimension into the experiential realm. The open presentation of ideas in the newsletter makes it clear, I hope, that dialogue, discussion and critique are welcomed, and that the suppression of research hurts us all. I'd particularly appreciate feedback concerning whether the MAPS newsletter is achieving its goals.

Expenditures - Office

Office expenses, which include rent, supplies, fees and licenses and computer purchases and repairs, decreased slightly in FY 95. Expenses fell to \$7,060 from \$7,487 in FY 94, primarily due to reductions in expenditures on computer equipment.

Expenditures - Staff

MAPS spent \$42,199 in FY 95 on staff expenditures, including salaries, staff travel, conference fees and professional services. This represents an increase of \$14,826 from FY 94 primarily due to the fact that Sylvia Thyssen worked full time for all of FY 95. As the president of MAPS, I received a stipend of \$1,000 a month during FY 95 for full-time work. Sylvia Thyssen, MAPS' networks coordinator, received a raise in January 95 from her previous monthly salary of \$1,440 to a new salary of \$1,600. Fortunately for my ego (though not my bank account), at least my desk faces the window of our shared office while hers faces the wall.

The sum of \$6,519 was spent to support staff travel to conferences on psychedelic research, the religious use of psychedelics, drug policy, the MAPS Board of Directors meeting, NIDA meetings on ibogaine and meetings with the researchers conducting the MDMA and marijuana research. Conference fees totaled \$1,650. Professional expenses for lawyers and accountants totaled \$2,748.

Balance Statement

MAPS has no debt and ended FY 95 with a balance of \$29,981. Of that sum, only \$12,171 were unrestricted funds, up somewhat from an unrestricted balance of \$7,126 at the end of FY 94. Restricted funds totaled \$17,808, including \$12,126 for MDMA research in Nicaragua, \$3,499 for LSD research, \$682 for the water pipe/vaporizer study, and \$1,500 for cannab-

MAPS allocated

\$48,680 to

research in

Fiscal Year 1995...

MAPS Annual Report: Fiscal Year 1995 (June 1, 1994 — May 1, 1995)

The balance carried forward from 1994 was \$55,950.69 (\$48,820 was restricted to research). Income for 1995 was \$107,184.05.

This amount does not include in-kind donations: graphic design, internet technical assistance, \$3,000 of computer equipment.

1995 Income + 1994 Balance =	Total \$163,134.74
Total 1995 Expenses	133,153.19
1995 Balance	29,981.55

Restricted Funds May 1995

MDMA - Nicaragua	12,126.47			
LSD Substance Abuse	3,499.00			
Marijuana-Water Pipe/Vaporizer	682.89			
Cannabinoid Analysis	1,500.00			
Total Restricted	17,808.36			
Unrestricted Funds	12,173.19			
	Research	Education/ Information	Staff	Office
MDMA Studies - US Phase	15,606.00			
MDMA - Nicaragua	2,394.53			
Ketamine - Alcoholics	5,452.50			
Ayahuasca - Pharmacokinetics	5000.00			
LSD Protocol Development	900.00			
Psilocybin - Art Therapy	600.00			
Marijuana - Abrams/AIDS	900.00			
Marijuana - Water Pipe/Vaporizer	17,827.10			
Copies, Envelopes		2,527.74		
Phones/Internet		9,076.01		
Postage		6,052.07		
Newsletter		11,502.07		
Video/Books/T-shirts		3,364.88		
Membership drives		2,082.01		
Subscriptions		607.21		
Staff & Directors' Travel			6,519.42	
Conference Fees			1,650.00	
Professional Expenditures			2,748.15	
Salary & Taxes			31,282.30	
Office Rent				3,600.00
Computer Equipment				1,226.90
Office Supplies/Repairs				1,886.76
Fees-Bank, etc.				346.30
TOTAL EXPENDITURES	48,680.13	35,212.68	42,199.87	7,060.51
GRAND TOTAL = \$133,153.19				

inoid analysis. The \$17,808 balance in restricted funds in FY 95 declined \$31,011 from the amount of \$48,820 in restricted funds at the end of FY 94. This decline reflects the expenditure of \$17,208 of the \$17,900 in restricted funds for the water pipe/vaporizer, all \$2,000 of the funds restricted to ketamine research (p. 27), and \$900 of the \$4,399 in restricted funds for LSD research (p. 15). In addition, \$12,394 from the \$24,521 that was restricted to the MDMA Nicaragua project was spent. However, only \$2,394 went to the Nicaragua project. The Nicaragua project has been slow-moving due to lack of progress in obtaining official permission. Therefore, I requested and received permission from the donor to reallocate \$10,000 to Dr. Grob's MDMA research, which was in critical need of funds (p. 2). If no progress in Nicaragua is made in the next several months, additional sums may be reallocated to other MDMA research projects.

Summary

MAPS is in solid shape. However, if the two unexpected \$25,000 gifts were subtracted from MAPS' FY 95 income, non-research expenditures would have exceeded income by about \$30,000. In order for MAPS to sustain itself for the long run without having to depend on serendipity, I'd feel much more comfortable if normal membership contributions at least covered non-research expenditures. That way, special gifts could go entirely to fund research and MAPS could sustain itself without relying on pennies from heaven. In order to reach that point, MAPS would need to grow from 1,000 to about 1,500 members. Therefore, I encourage each of you to renew your membership to MAPS and recommend to at least one friend that he or she becomes a member of MAPS. With wise collective action, we should eventually be able to create legal contexts for the beneficial uses of psychedelics and marijuana. •

U P C O M I N G C O N F E R E N C E S

THE SECOND INTERNATIONAL CONFERENCE OF THE EUROPEAN COLLEGE FOR THE STUDY OF CONSCIOUSNESS (ECSC)

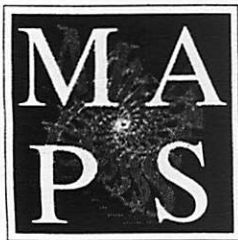
will take place February 22nd to 25th, 1996 in Heidelberg, Germany. The public evening event, "Pioneers of Consciousness Research" will feature Betty Eisner, Roland Fisher, Felicitas Goodman, Albert Hofmann, Hanscarl Leuner, Ralph Metzner and Alexander Shulgin. Simultaneous translation (German/English) will be provided in plenary sessions and some symposia. For a registration form, contact: Eurokongress, GmbH, Rosental 3, D-80331 München, Germany; tel: (40) 89/2 60 90 13, fax: (40) 89/26 73 41.

A SCIENTIFIC CONFERENCE ON AYAHUASCA will be held in Rio de Janeiro, Brazil, November 2 - 4, 1995. Featured speakers include Jace Callaway, Charles Grob, Dennis McKenna, Kat Harrison, Ralph Metzner, Jonathan Ott, Juan Sanchez-Ramos. The conference is sponsored by the Centro de Estudos Medicos U.D.V. Additional information Carmen Tucker at (970) 327-4948.

THE FOURTEENTH INTERNATIONAL TRANSPERSONAL CONFERENCE OF THE INTERNATIONAL TRANSPERSONAL ASSOCIATION (ITA): TECHNOLOGIES OF THE SACRED

will be held on May 17-22, 1996 in the heart of the Amazon, in the Tropical Hotel in Manaus, Brazil. This conference will explore a broad spectrum of ancient, aboriginal and modern techniques that can mediate access to the sacred dimensions of existence. There will be a panel discussion on psychedelics. For more information contact Laura at (800) 533-3641 or (415) 383-8819, or write ITA, 20 Sunnyside Ave., Suite A257, Mill Valley, CA 94941.

membership • renewal • change of address



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10. THANATOS TO EROS, Myron Stolaroff - 191 pages.....\$25.95 for U.S. orders / \$28.95 Non-U.S. (price for THANATOS TO EROS already includes shipping)
11. MARIJUANA - THE FORBIDDEN MEDICINE, Grinspoon & Bakalar - 175 pages.....\$26

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m a p s m e m b e r s h i p i n f o

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 1,000 members.

MAPS' founder and current president, Rick Doblin, is currently in 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.

Sylvia Thyssen is responsible for member services and coordinates MAPS' outreach efforts. She is a Phi Beta Kappa graduate of the University of North Carolina at Chapel Hill, where she majored in Art History and French.

MAPS has previously funded basic scientific research in both humans and animals into the safety of MDMA (3,4-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: "**Imagination is more important than knowledge.**" If you can even faintly imagine a cultural reintegration 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 Publications:

Each publication will report on MAPS research in progress. In addition to reporting on MAPS studies, the publications may focus on psychedelic research both in the U.S. and abroad and on conferences, books and articles of interest. Issues raised in letters and calls from members may be addressed, as may political developments that affect psychedelic research and usage.

General Members: \$35.

(If outside U.S. add \$15 postage.)

General members will receive MAPS publications, which appear on a quarterly basis, plus a copy of the article entitled, "Careful Research of Psychedelics Resumes" from the May 1995 *Journal of Alternative Therapies*.

Supporting Members: \$100.

(If outside U.S. add \$15 postage.)

Supporting members will receive MAPS publications, plus the audio tape from the public session of the *January 1995 Esalen Pacific Symposium on Psychedelics*.

Patron: \$250 or more.

Patrons members will receive MAPS publications, plus a complete set of MAPS back issues or the available MAPS-offered book of their choice. Patrons may also request research updates on matters of personal interest.



Rick Doblin,
MAPS President



Sylvia Thyssen,
Networks Coordinator

*"Now that the singer is gone,
where shall I go for the song?"*

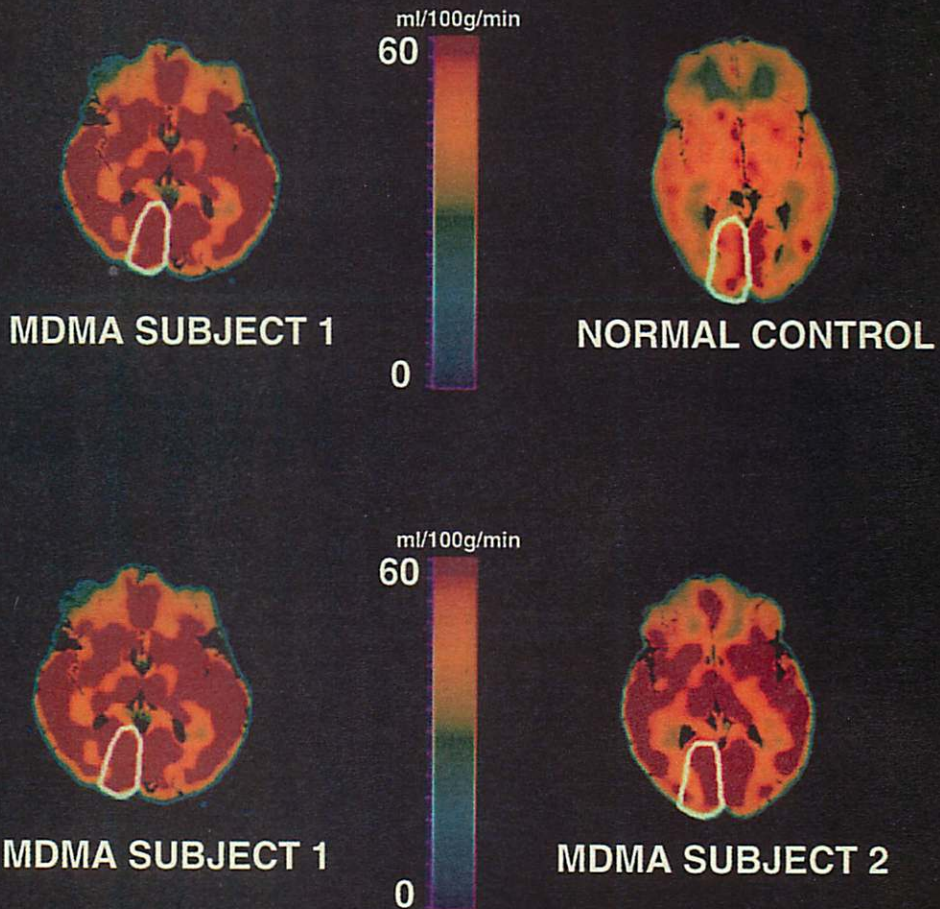
Robert Hunter,
from *Elegy for Jerry (Garcia)*,
August 11th, 1995

this

is your brain...

is your brain...

Single-photon-emission computer tomography (SPECT) images of an MDMA ("Ecstasy") user compared to an age-matched normal subject. SPECT scans measure regional blood flow throughout the brain. The visual cortex is outlined in white. Pathology is associated with decreased cerebral blood flow. The implications of increased blood flow are as yet unclear.



Photos from the
Harbor-UCLA Medical Center
MDMA study conducted
by Drs. Grob, Poland, Chang and Ernst.

SPECT images of two MDMA users. Subject 1 reported a life history of MDMA use on the order of several hundred self-administrations greater than Subject 2. Rick Doblin is Subject 2. He, along with all the other subjects, was injected with a substance that made him temporarily radioactive for this brain scan. Subjects were not under the influence of MDMA at the time of the scans in order to ascertain possible long-term effects.