Limited edition prints signed by Dean Chamberlain and Albert Hofmann

We are pleased to present a special signed, numbered limited edition of prints of Dean Chamberlain's light painting portrait of Albert Hofmann. This portrait was made in 1997 at Albert's home in Switzerland and is signed by Albert and Dean.

This edition of prints was created to help fund MAPS-sponsored LSD and psilocybin research (http://www.maps.org/research/cluster/psilo-lsd/) as well as to commemorate Albert's 100th birthday next year. 50% of the profits from the sale of these prints will go towards this research, with a minimum of $25,000.

There are only 50 of these beautiful archival pigment prints. Once they are sold out, there will be no more prints of this portrait signed by Albert. The image is 11"x14" and is printed on fine-art matte paper.

The price of the prints starts at $1000 and will increase as the edition sells out.

Prints #1–20 are $1000, Prints #21–40 are $1500, and Prints #41–50 are $2,000

Recently Albert's signature on a single sheet of blotter acid art sold at auction for $3000.

Dean Chamberlain developed his light painting technique, which involves working with his camera and subject in completely dark spaces, in 1977. These images are created entirely in the camera, with no computer manipulation. Using extremely long exposures in sessions that often extend to four or five hours, he moves through the composition space with a flashlight and colored gels, illuminating each individual element, not so much photographing a moment but painting with light through time and space. Dean considers this portrait of Albert to be one of his best photographs.

Spring 2005

MAPS (Multidisciplinary Association for Psychedelic Studies) is a membership-based organization working to assist researchers worldwide to design, fund, conduct, obtain governmental approval for, 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 is 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 publication are encouraged to do so and are kindly requested to credit MAPS and include our address. The *MAPS Bulletin* is produced by a small group of dedicated staff and volunteers. **Your participation,** financial or otherwise, **is welcome.**

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A letter from MAPS President Rick Doblin

For MAPS, the flow of time and work started accelerating into a higher gear on December 27, 2004, with long imagined possibilities and horizons seemingly within reach. In retrospect, the significance of what seemed to be yet another incremental step forward instead became a turning point. (One unfortunate consequence of our increased workload related to this turning point has been the delay in completing this MAPS Bulletin, for which we apologize. We've been relying on our free email updates to communicate on a more frequent basis, so please consider sending us your e-mail address if you haven't done so already.)

On December 27, *The Washington Post* published an exclusive article by reporter Rick Weiss, highlighted by a gorgeously colored portrait of Timothy Leary by light painter Dean Chamberlain. The article was about MAPS obtaining FDA and Institutional Review Board (IRB) approval for a pilot study investigating the use of MDMA-assisted psychotherapy in subjects with anxiety associated with advanced-stage cancer (page 6). The study, to be conducted at McLean Hospital, Harvard Medical School, under the direction of Dr. John Halpern, represents the first psychedelic research project at Harvard in forty years. Also mentioned were MAPS' plans to conduct research into treating cluster headaches with psilocybin and with LSD, which hasn't been used in legal research in decades anywhere in the world (page 18).

Astonishingly, the *Post* article led to the largest flood of media coverage that MAPS has ever experienced, almost all remarkably positive. Adding to the media's interest, FDA and our IRB permitted MAPS to modify Dr. Michael Mithoefer's study of MDMA-assisted psychotherapy in subjects with treatment-resistant posttraumatic stress disorder (PTSD) (page 3). At our request, the study can now include people with war-related PTSD of five years or less duration, such as Iraq and Afghanistan veterans. This change was misrepresented in some newspapers and Internet sites as having been instigated by the Pentagon, which was reported to be behind MDMA/PTSD research (a fantastic bit of mainstreaming that I'm reluctant to debunk). Most crucially for MAPS, the collective media toyed with but ultimately rejected connecting the revivers of psychedelic research with the feared legacy of Timothy Leary (equated with chaos and social disorder), enabling us to emphasize the lessons we've learned from the past and to move forward with substantial public support.

Seizing the moment, MAPS is going global. On March 24, 2005, MAPS convened a scientific conference in Israel, mostly about MDMA and ibogaine research; the conference will be covered further in the next issue of the Bulletin. MAPS is moving to catalyze three foreign MDMA/PTSD pilot studies, sponsoring studies in Israel and Spain and cosponsoring a Swiss study. MAPS is also developing a roving clinical monitoring team to ensure quality data collection and acceptance of our clinical data by regulatory officials worldwide.

Where blocked, we're better able than ever to articulate the need for change. On April 22, 2005, MAPS' pro-bono lawyers submitted a prehearing statement to the DEA Administrative Law Judge seeking to reverse DEA's refusal to grant Prof. Lyle Craker a license to produce marijuana under contract to MAPS, exclusively for use in federally-approved research. Our challenge is to bring the DEA obstruction of medical marijuana research to the attention of the public and the courts, forcing change by highlighting contradictions between ideals and actions. Toward this end, an ad about DEA's rejection of Prof. Craker's application was placed in a collection of political magazines by Common Sense for Drug Policy (page 5).

The balance between hope and fear has shifted, tipping toward hope and cautious excitement in the possibilities offered by psychedelic psychotherapy. Our castle in the air now has the makings of a solid foundation underneath. Your sustained support makes this all possible, is greatly appreciated, and essential.

–Rick Doblin, Ph.D. MAPS President

MDMA-Assisted Psychotherapy in the Treatment of Posttraumatic Stress Disorder (PTSD): Fifth Update on Study Progress

By Michael Mithoefer, MD
(mmit@bellsouth.net)

Since my last update in the Spring of 2004 our study has progressed smoothly and we've gotten permission to expand the protocol in some significant ways. At this point seven subjects have completed the study, one more has been enrolled and is currently participating in the protocol and several others will soon be screened. A brief chronology of recent events is as follows:

- 8/10/04 Site visit by our Institutional Review Board (IRB) to review documentation and compliance with the protocol
- 9/3/04 Approval from IRB to continue the study—this is routinely required every 6 months
- 11/15/04 Data Safety Monitoring Board (DSMB) met as scheduled to review the records of the first five subjects to complete the study. The DSMB (a psychiatrist, a psychologist and a PharmD pharmacologist not otherwise involved in the study) reported no safety concerns
- 11/16/04 Based on our experience with the first five subjects, who had completed the study safely and with promising results, we wrote the FDA requesting five modifications in the protocol. These requests were approved by the FDA in December and by the IRB in January. These changes have now been incorporated in the protocol and are as follows:

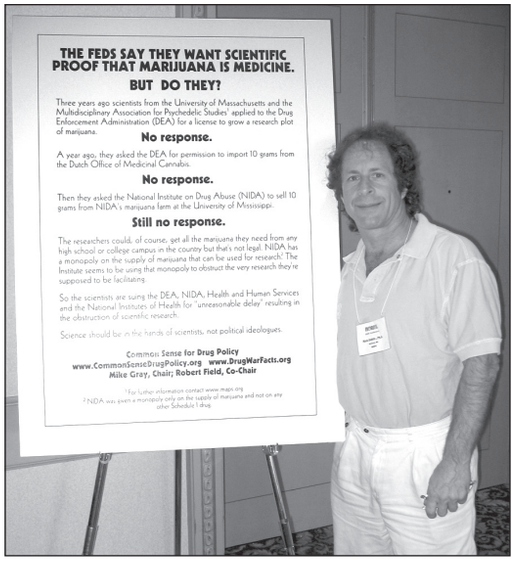
1. At the final (17th) visit of the existing protocol the blind is broken and subjects who received placebo during their experimental sessions are offered inclusion in a second stage of the study (Stage 2) in which MDMA is given in an open label fashion (subjects and researchers know ahead of time that MDMA is being administered in both experimental sessions of this stage). This occurs during the same kind of eight-hour MDMA-assisted psychotherapy session as in Stage 1. There are 6 follow-up therapy sessions in stage 2 and outcome measures are repeated approximately 2 months after the second MDMA-assisted therapy session. In order to protect the blind in Stage 1, the blind will not be broken for the last five of the subjects until they have all completed the study. Any placebo subjects in this group will be offered participation in Stage 2 at that point.
2. In addition to subjects with crime related PTSD we may now also include people with war related PTSD of less than five years duration.
3. The upper age limit is increased from 65 to 70 years. Before this change we had been obligated to turn away some subjects over 65 who were in good physical health and had no reason for exclusion other than the age limit.
4. We are able to use more clinical judgment about how often we must measure blood pressure and pulse in certain situations. We are still required to take these measurements at least every 15 minutes for 4 hours and every 30 minutes for 2 more hours.
5. Although subjects are required to be off all psychotropic medications, we may now make an exception for gabapentin (Neurontin) in a subject who needs it for pain related to traumatic nerve injury.

We are now in the process of sending out another round of recruitment letters to psychiatrists, psychologists and other therapists giving an update on the progress of the study and informing them about these protocol changes. The IRB has now also given us permission to use newspaper advertising for recruitment. This is expensive so it will be used sparingly but we hope it will be helpful with ongoing recruitment. We're in competition for subjects with several PTSD studies going on at the Medical University in Charleston (not using MDMA!) that appear to have large advertising budgets from drug companies or government grants. Pending these additional recruitment methods, some new subjects have been referred by therapists already familiar with the study; some have called because they learned about it by word of mouth from previous subjects or from media coverage of MDMA research. There's been another upsurge in this coverage recently with the approval of John Halpern's MAPS sponsored MDMA study at Harvard. His approval is not only great news in general, it's helpful because it demonstrates that we're not the only ones crazy enough to think the therapeutic potential of MDMA is worth studying.

We're very pleased with the recent adjustments in the protocol. The fact that we can now offer MDMA-assisted sessions to subjects who got placebo is likely to help with recruitment, and it will add valuable data, as these subjects will serve as their own placebo controls. In addition, the preliminary results are encouraging and, most importantly, there has been no indication of harm to the subjects.

MAPS' Medical Marijuana Research Efforts

By Rick Doblin, Ph.D.
(rick@maps.org)



MAPS President Rick Doblin with the ad show on page 5

The vaporizer used in MAPS' medical marijuana studies is called the Volcano—which is a bit reminiscent of our efforts to conduct medical marijuana research. As we've been waiting through a long and seemingly inactive period, underneath the surface pressure has been building . . .

On April 22, 2005, MAPS' able pro-bono lawyers (Julie Carpenter, Jenner and Block; Emanuel Jacobowitz, Steptoe & Johnson; and Allen Hopper, ACLU Drug Law Reform Project) submitted a prehearing statement (see http://www.maps.org/mmj/mmjfacility.html) on behalf of Prof. Lyle Craker, Director, Medicinal Plant Program, Department of Plant and Soil Sciences, UMass Amherst, in his lawsuit against the Drug Enforcement Administration (DEA). Prof. Craker is trying to overturn DEA's December 10, 2004, refusal to issue him a license for a MAPS-sponsored production facility, intended to produce marijuana exclusively for federally-approved research. The hearing will probably take place later this summer or early fall, with witnesses from both sides testifying, and being cross-examined, before a DEA Administrative Law Judge (ALJ).

Realistically, it looks likely that the US Supreme Court will overturn Raich v. Ashcroft and support federal supremacy over state medical marijuana laws. This decision will eliminate all protection from federal prosecution for medical marijuana patients unless marijuana is developed into an FDA-approved prescription medicine (which MAPS is seeking to accomplish).

Our challenge is that the "message" touted by the DEA and the Drug Czar (Office of National Drug Control Policy), that marijuana is "bad" and has no accepted medical use, is more important to them than whether or not the message is actually true. Furthermore, the message is so fragile that to sustain it in the face of widespread experience to the contrary, DEA and ONDCP must expend increasing amounts of energy restricting FDA-approved medical marijuana research.

Fortunately for DEA and ONDCP, they have a major advantage in that the supply of legal marijuana, unlike other Schedule I substances such as LSD, MDMA, and heroin, is produced by a monopoly entirely funded by the National Institute on Drug Abuse (NIDA). NIDA, in association with the Public Health Service (PHS), controls which researchers are permitted access to its marijuana. NIDA/PHS has already refused to supply marijuana to two MAPS-sponsored FDA-approved protocols that were going to examine medical uses of marijuana.

For the last 21 months, NIDA has refused to sell Chemic Laboratories ten grams of marijuana and DEA has refused to permit Chemic Laboratories to import ten grams from the Dutch Office of Medicinal Cannabis, of a potency (THC and CBD) that NIDA doesn't have available. The marijuana would be for MAPS and CaNORML-sponsored research into the use of vaporizers (www.vapormed.de). A vaporizer is a harm reduction tool that creates a steam, rather than a smoke, that emerges from the marijuana plant carrying cannabinoids and some plant material, without creating products of combustion (which are the major culprits in stressing the lungs). Fortunately, MAPS and CaNORML were able to sponsor some vaporizer research before we hit NIDA's stone wall. Dr. Donald Abrams, UC San Francisco, used our data to obtain FDA permission to conduct research comparing subjective effects, carbon monoxide and cannabinoid blood levels, in subjects who smoke marijuana on three occasions and vaporize the same amount on three other occasions. Dr. Abrams' study, funded by California's Center for Medicinal Cannabis Research, was completed in April 2005, with data analysis underway.

DEA and NIDA will perhaps try to improve their position in the DEA ALJ lawsuit by approving Chemic Labs application to purchase ten grams and to import ten grams. Whatever happens, MAPS will continue to struggle to break the marijuana monopoly so that, sooner or later, the controversy over the medical use of marijuana can be resolved through scientific research.

THE FEDS SAY THEY WANT SCIENTIFIC PROOF THAT MARIJUANA IS MEDICINE.

BUT DO THEY?

Three years ago scientists from the University of Massachusetts and the Multidisciplinary Association for Psychedelic Studies* applied to the Drug Enforcement Administration (DEA) for a license to grow a research plot of marijuana.

No response.

A year ago, they asked the DEA for permission to import 10 grams from the Dutch Office of Medicinal Cannabis.

No response.

Then they asked the National Institute on Drug Abuse (NIDA) to sell 10 grams from NIDA's marijuana farm at the University of Mississippi.

Still no response.

The researchers could, of course, get all the marijuana they need from any high school or college campus in the country but that's not legal. NIDA has a monopoly on the supply of marijuana that can be used for research.** The Institute seems to be using that monopoly to obstruct the very research they're supposed to be facilitating.

So the researchers are suing the DEA, NIDA, Health and Human Services and the National Institute of Health for "unreasonable delay" resulting in the obstruction of scientific research.

Science should be in the hands of scientists, not political ideologues.

Common Sense for Drug Policy
www.CommonSenseDrugPolicy.org www.DrugWarFacts.org
Mike Gray, Chair; Robert Field, Co-Chair

*For further information contact www.maps.org
** NIDA was given a monopoly on the supply of marijuana only -- no other Schedule I drug.

This advertisement appeared in the *National Review,* the *New Republic,* the *American Prospect, The Nation, Reason Magazine,* and *The Progressive* in the winter of 2005.

MDMA-Assisted Psychotherapy in the Treatment of Anxiety in Advanced Cancer Patients

By John H. Halpern, M.D.
(halpern@mclean.harvard.edu)
Assistant Director, Alcohol and Drug Abuse Research Center, Harvard Medical School/McLean Hospital

As MAPS members are probably well aware, our projects are finally drawing a considerable amount of publicity. Even as I typed this first sentence, a reporter from the *L.A. Times* called to talk about the resurgence of interest in research of psychedelics! She must have been referring only to media interest, as MAPS efforts are longstanding. All this attention is justified: we truly are on the cusp of commencing research at Harvard. The first project will be to enroll 12 subjects with advanced-stage cancer, a prognosis of less than 12 months of life remaining, and who have a diagnosis-associated anxiety disorder that is not sufficiently improving with standard treatments/medications. All subjects will receive six non-drug psychotherapy sessions and up to two MDMA-mediated treatment sessions, two to three weeks apart.

Eight enrolled subjects will be randomly assigned to a full test-dose group and the other four will be assigned to the control group. The full test-dose of MDMA in session one is 83.3 mg followed 2.5 hours later by 41.7 mg (125 mg total) and, in session two, 125 mg followed 2.5 hours later by 62.5 mg (187.5 mg total). Those subjects assigned to the control group will receive 25 mg followed 2.5 hours later by 12.5 mg (37.5 mg total). This is too small a dose to be considered fully psychoactive but should be enough MDMA to serve as a psychoactive placebo. All doses are divided such that the first 2/3rds are administered first and then the final 1/3 is given 2.5 hours later if all parties agree and we believe it remains safe to do so. By splitting the dose of MDMA this way, we will evaluate whether extending the MDMA experience can deepen the therapeutic work.

In the months following these sessions, we will be collecting data on continued use of medications for anxiety and pain while continuing to assess how much the experimental treatments may have impacted anxiety and quality of life measures. The MDMA/Cancer study now awaits only our DEA Schedule I registration so that we may prescribe MDMA. We already have Schedule I registration from the Massachusetts Department of Public Health, and, once the DEA registration is issued, we will be ordering 3.25 grams of MDMA. Also, suitable facilities for this project have finally been arranged for us here at McLean Hospital. The space is in a modern building that has large skylights in the treatment room.

Members of the research team have already met with Ms. Amy Emerson, who provides us with the clinical research monitoring procedures to ensure that we gather our data in a professional manner. Ms. Emerson is currently providing these services for Dr. Mithoefer's MDMA/PTSD study in South Carolina. Dr. Umadevi Naidoo, my co-therapist, will visit Michael and Ann Mithoefer soon to observe a treatment session and to discuss special issues that may arise when MDMA is administered in a research setting. We estimate that our study will be enrolling cancer patients within the next two to three months! To read more or to find out the latest breaking news related to the study, please go to the MAPS website: "http://www.maps.org/mdma".

Another extremely exciting project at McLean Hospital is described on page 18 of this *Bulletin*. Dr. Andrew Sewell, my lab's first post-doctoral fellow, details our progress on studying how LSD and psilocybin may offer significant relief for people who live with the devastating chronic illness of cluster headaches. Very few physicians have completed residencies in psychiatry as well as neurology, so we are quite fortunate that Dr. Sewell has agreed to forgo the lucrative draw of private practice in favor of collaborating with us. If we do activate a study in which LSD is administered to these headache sufferers, someone with Dr. Sewell's unique training should prove essential in study design, implementation, and in that ever-important issue of convincing all those powers that be that, just like in the MDMA/Cancer study, we have brought together an exemplary team to conduct this work. After publication of our case series describing what current cluster headache sufferers have found from their personal experimentation with LSD or psilocybin (we have medical records on more than 30 patients so far!), we will be drafting all the documents needed for an eventual controlled study, just like we've achieved for the MDMA/Cancer project. If all goes as planned, MAPS could soon be sponsoring the only clinical research project with LSD in the world! And wouldn't that be a remarkable surprise if it occurs during Dr. Albert Hofmanns 100th birthday year in 2006? Stay tuned and please continue to check the MAPS website for further developments as they occur. Many years of hard work are starting to realize some of MAPS most important missions for competent and thorough research. Thanks to you all for your dedication to making it possible for my collaborators and me to do what those of lesser vision would have thought impossible.

Thanks to you all for your dedication to making it possible for my collaborators and me to do what some would have thought impossible.

MDMA and Basic Research: Issues Within and Beyond Therapeutic Applications

By Ilsa Jerome, Ph.D. (ilsa@maps.org)

MDMA (3,4-methylenedioxymethamphetamine, "Ecstasy") is a ring-substituted amphetamine structurally similar to the psychostimulant methamphetamine and the psychedelic/hallucinogen mescaline. While it possesses some stimulant-like and mildly psychedelic properties, it also possesses properties that distinguish it from members of either of the drug classes listed above. MDMA is reported to produce an easily controlled altered state of consciousness with increased sociability, empathy and sensual overtones (Anderson et al. 1978; Greer and Tolbert 1986; Peroutka et al. 1988; Solowij et al. 1992; Vollenweider et al. 1998). Some researchers have classified MDMA and related drugs, such as its congener MDE, as belonging to a novel drug class, the entactogens (Nichols and Oberlender 1986; Oberlender and Nichols 1990), a term meaning "to touch within." A number of studies have examined the physiological and subjective effects of MDMA in humans (Cami et al. 2000; Gamma et al. 2000; Farre et al. 2004; Grob et al. 1996; Forsling et al. 2001; Harris et al. 2002; Hernandez-Lopez et al. 2002; Lamers et al. 2003; Lester et al. 2000; Liechti et al. 2001; Mas et al. 1999; Tancer and Johanson 2001; Tancer and Johanson 2003; Vollenweider et al. 1998). The efficacy of MDMA-assisted psychotherapy in the treatment of posttraumatic stress disorder (PTSD) and other conditions has been described in several anecdotal accounts and an uncontrolled study (Adamson 1985; d'Otalora 2001; Gasser 1994; Greer and Tolbert 1998; 1986; Metzner and Adamson 2001; Widmer 1998). In Spain, six women with PTSD arising from sexual assault were enrolled in a MAPS-funded study of MDMA-assisted psychotherapy that was subsequently halted due to political pressure from the local anti-drug authority (Doblin 2002). A second MAPS-supported study of the safety and efficacy of MDMA-assisted psychotherapy in people with PTSD is underway in South Carolina. Additionally, FDA and the respective institutional review boards (IRBs) at Harvard Medical School's McLean Hospital and the Lahey Clinic have approved or given permission for a proposed study of MDMA-assisted therapy in people with advanced stage cancer and diagnosis-related anxiety.

In addition to its potential value as an adjunct to psychotherapy, MDMA may also prove to be a valuable tool for basic research. Research is basic if it is conducted chiefly to learn more about the area under investigation without specific plans for how to use this information to produce a treatment, program or other immediately useful endeavor. As is the case with psychedelic drugs, studying the effects of MDMA in humans has the potential to provide a better understanding of human cognition, affect (mood and emotion) and behavior. The research problems described below are not intended to be an exhaustive list of possibilities. Rather, they are intended as a sample of possible research programs utilizing MDMA as a tool for exploring social interaction and affect in humans.

The risks involved in administering MDMA to human participants are considerably greater than the risks associated with participation in the typical social psychological or psychophysiological experiment. However, these risks can be minimized by carefully selecting study participants, administering MDMA in a controlled setting, and monitoring physiological signs in each participant throughout and shortly after the procedure. Using MDMA in research in humans may always require collaboration between psychologists interested in basic research and psychiatric researchers. However, I believe that the benefits to be gained by performing human research with MDMA outweigh the risks to participants and the difficulty for researchers.

Some of the studies proposed below may be of immediate importance to those who wish to demonstrate the therapeutic uses of MDMA, and these studies may be performed during or immediately after studies have examined the efficacy of MDMA-assisted therapy. It is encouraging that ethics committees and regulatory agencies have already approved and permitted studies into possible therapeutic uses of MDMA. These studies may pave the way for basic research into the effects of MDMA on emotion, cognition and social interaction. As well, some researchers are already interested in studying MDMA effects on emotion and behavior toward others (see Fiske et al. 2004; Hoshi et al. 2004).

In writing this essay, I hope to stimulate thought and discussion about what human trials with MDMA might contribute to psychology and neuroscience. I also hope to encourage therapists and psychiatric researchers to design and conduct studies that formally identify and quantify the processes and effects deemed most important to the success of MDMA-assisted therapy. Most importantly, I hope to demonstrate the ways in which human trials with MDMA could bring together researchers in different fields to the benefit of all.

Basic Research on Effects Relevant to Therapeutic Use

While recent investigations have produced a great deal of valuable information concerning the physiological and

subjective effects of MDMA in humans, many questions concerning these effects remain unanswered. Several of the subjective effects of MDMA that first attracted the notice of psychotherapists have yet to be formally verified in controlled settings. For instance, research has not yet determined whether MDMA increases feelings of empathy or compassion and whether MDMA induces people to perform empathetic behaviors, such as helping or forgiving others. Participants in at least one study have spontaneously reported increased feelings of closeness to others as an acute effect of MDMA (Vollenweider et al. 1998), and another controlled study found that people reported feeling friendlier and more talkative after 2 mg/kg MDMA (Tancer and Johanson 2003). Retrospective reports from ecstasy users and reports from an uncontrolled study of MDMA-assisted therapy have consistently reported experiencing increased feelings of empathy, closeness to others or sociality (Davison and Parrott, 1997; Greer and Tolbert, 1986; Liester et al. 1992; Peroutka et al. 1988; Solowij et al. 1992; Siegel et al. 1986). Yet to date, the only study that sought to assess self-reported empathy in people given 1.5 mg/kg MDMA did not detect an increase in empathetic feelings (Harris et al. 2002). This study used only two items from a larger questionnaire, suggesting that research into MDMA effects on empathy may need to rely on more extensive measures. Assessing people's behavior may be an even better measure of empathy or increased closeness to others. Such measures might include increased likelihood of helping or cooperating with others, or sitting closer to another person.

Secondly, therapists have reported in narrative and anecdotal accounts that MDMA stimulated recall for emotionally charged events (e.g. Adamson 1985; d'Otolara 2001; Greer and Tolbert 1986; Greer and Tolbert 1998), yet no one has yet conducted a systematic study of how and to what degree MDMA alters recall for intensely emotional events. Participants in some controlled studies reported facilitated recall after receiving MDMA (Vollenweider et al. 1998), but this effect has not been specifically measured within a controlled clinical study. If it can be shown that MDMA facilitates recall for emotional events, and does a better job at it than other psychotherapeutic techniques, then this would lend support for the use of MDMA in therapeutic contexts.

Several of the subjective effects of MDMA that first attracted the notice of psychotherapists have yet to be formally verified in controlled settings.

Lastly, studies examining the reported reduction in anxiety (anxiolysis) after MDMA should be conducted. MDMA has been reported to reduce anxiety, even while simultaneously stimulating recall of unpleasant or upsetting thoughts or events (Greer and Tolbert 1998; 1986; Liester et al. 1992). Individuals given MDMA in controlled studies reported that anxiety was reduced or did not change after MDMA, although there was reported increased anxiety in association with feelings of loss of control (Liechti et al 2001; Vollenweider et al. 1998). Similarities and differences between the anxiolytic (anxiety-reducing) effects of MDMA and that of another drug, such as diazepam (Valium), or anxiolysis produced by a behavioral method (such as relaxation techniques) have yet to be investigated. Anxiety and facilitated recall occurring during an MDMA-assisted therapy session might also be compared with the effects of other means of relaxation and recall induction.

Relating Brain, Emotion and Behavior: Empathy

Social psychologists seek to understand social interactions and the thoughts, feelings and behaviors associated with social interactions. Social psychologists interested in understanding interpersonal relationships and interactions between dyads (pairs) have investigated the role that feelings of closeness to others, intimacy and empathy play in social interactions (Aron et al. 1997; Ickes 1990; Ickes 1991; Reis and Clark 1988; Stotland 1969). These psychologists are more interested in situationally produced empathy, referred to by Duan and Hill as the empathic experience, rather than trait empathy (Duan and Hill 1996), the tendency of an individual to feel empathetic. Many people studying empathy hope to improve interpersonal and intergroup relations by understanding the bases of empathy and the consequences of feeling empathetic toward another person.

Researchers interested in generating empathy in study participants have relied on the use of direct instructions to participants to feel empathetic, or they try to craft staged events or occurrences intended to produce empathy (Duan and Hill, 1996; Stotland, 1969, see, for example, Batson and Moran, 1999; Batson et al. 1999; Batson et al. 1997; Macrae and Milne 1992). Participants are instructed to imagine how another person might feel in a given situation, or they are asked to imagine themselves in the place of another. Instructions and situational manipulation seem to produce empathetic behaviors, such as cooperating on a "prisoner's dilemma" task (Batson and Moran 1999) or allocating resources to another individual, even at the expense of the self (Batson et al. 1999). However, there is a risk that people are behaving in accordance with sociocultural rules on how empathetic people ought to behave in such situations, without actually feeling empathetic. In contrast, MDMA is reported to produce feelings of closeness to others or empathy directly, presumably through its actions on the brain. Setting is probably important, but it appears that ecstasy (material represented as MDMA) and MDMA

consistently produce empathy and feelings of closeness to others in disparate settings. Researchers studying empathy and social interaction might benefit by performing a number of comparative or exploratory studies with MDMA and at least one other form of empathy induction. For instance, a comparison could be made between empathy-related feelings and actions occurring after MDMA, and after people have been directed to imagine another person's feelings.

Researchers could use functional imaging to compare changes in brain activity seen after MDMA-induced empathy and empathy produced by other means.

Researchers could use functional imaging to compare changes in brain activity seen after MDMA-induced empathy and empathy produced by other means. Such comparisons might identify the types of brain activity associated with feelings of empathy or compassion. Functional brain imaging would be able to detect similarities and differences in brain activity across both empathy-producing conditions. At least one behavioral researcher has proposed using functional imaging to study the effects of MDMA on human bonding and empathy (Fiske et al. 2004).

By varying one or more aspect of the environment, investigators could discover what elements of setting most enhance commonly reported subjective effects of MDMA, such as decreased anxiety or increased feelings of closeness to others. Investigations into aspects of setting that promote MDMA-induced empathy could lead to a model of how MDMA produces this effect. These findings, in turn, might shed light on how other methods create or enhance empathy. For instance, factors such as the proximity of another individual, presence versus absence of direct "face to face" communication versus less direct routes of communication, and the presence or absence of prior commitment to imagining another's feelings may all be compared across conditions, using MDMA-induced empathy and some other means of inducing empathy as treatment conditions.

Researchers specifically interested in social interactions in dyads (pairs) or small groups have studied interactions between strangers, friends and romantic partners by videotaping people interacting, and then asking both the participants and independent observers to watch and code the videotaped interactions (Ickes et al. 1991; Levenson and Ruef 1992). This time-consuming and complex method of behavioral analysis has allowed researchers to generate and test hypotheses concerning cognition and behavior that shape the social interaction. This research has demonstrated that people are sometimes especially good at assessing the actual thoughts and feelings of another, a state referred to as "empathic accuracy." (Ickes 1994). Other researchers studying social interaction via this method have found that interaction between pairs of people go smoothly when the non-verbal behaviors of one partner tends to mirror or move in harmony with the behaviors exhibited by the other partner. Sharing information about the self is with another is reported to enhance intimacy between individuals, with higher rates of sharing information (mutual disclosure) associated with greater feelings of intimacy between individuals (Aron et al. 1997; Clark and Reis 1988). Researchers have found that feelings of closeness toward another can be produced by instructing both members of a pair to disclose increasingly personal information to their partner (Aron et al. 1997), indicating that reciprocal self-disclosure can produce feelings of intimacy.

Behavioral researchers could arrive at a better understanding of empathy and the similarities and differences between naturally existing, behaviorally induced and pharmacologically induced feelings of empathy through examining one or more specific behavior in people given a fully active dose of MDMA versus those given a threshold (or barely active) dose of MDMA. Behaviors worth examining might be imitation or reflection of another's non-verbal behavior, accurate perception of another's thoughts or feelings, or mutual self-disclosure of personal information. These behaviors would then be measured in both situations in order to discover whether MDMA increases empathy by leading people to behave in ways that tend to enhance empathy. For instance, people given a full dose of MDMA might be more likely to share personal information with another person than people given a threshold dose, or they might grow more accurate in assessing another's feelings. A naturalistic study that compared people who reportedly used ecstasy with people who used other substances (mostly alcohol and cannabis) found that ecstasy made people more accurate at recognizing facial expressions of fear, while the same people were less accurate at detecting fear four days later (Hoshi et al. 2004). Perhaps MDMA-induced changes in attention or other-directed behavior (such as talk) might play a role in generating or increasing empathy. Investigators would first have to establish that MDMA induces specific shifts in attention or behavior, and then demonstrate that these changes in attention or behavior are associated with

This ability of MDMA to stimulate many of the physiological and immunological aspects of the stress response without producing the subjective effects usually associated with experiencing stress deserves further study.

increased feelings of empathy or closeness to others. If it turns out that MDMA does shift the type or degree of attention given to others, or alters specific types of behavior toward others, then investigators could try to produce empathy in people not given MDMA by instructing them to behave in the same way as the people who got MDMA. These findings could help us learn how to enhance or accentuate feelings of empathy or compassion within and outside of a psychotherapy session.

Research comparing feelings of empathy and empathy-related processes in people who have received MDMA and people who have not has the potential to make a strong contribution to an understanding of the links between brain, behavior, thought and emotion or affect. Specifically, such research might locate the common pathways shared by apparently separate routes for inducing feelings of empathy. Conversely, such research might also discover the differences between MDMA-induced changes in feelings toward others and similar emotional changes produced through some other process. It might also prove interesting to compare and contrast pre-existing feelings people have for each other and their feelings for one another after MDMA.

Physiological Effects Versus Psychological Effects: The "Stress Response" and Emotion Research

Paradoxically, MDMA tends to reduce anxiety, yet its physiological effects are similar to those seen when people are under stress. Though effects on the cardiovascular, immune, and neuroendocrine systems are similar to those seen in the human stress response, effects on mood are generally positive (Grob et al. 1996; Lester et al. 2000; Liechti et al. 2001; Mas et al. 1999; Pacifici et al. 1999; Pacifici et al. 2000; Pacifici et al. 2001; Vollenweider et al. 1998). People receiving MDMA usually do not feel any more anxious than they would without pharmacological challenge (Grob et al. 1996; Vollenweider et al. 1998), and in some cases they report feeling less anxious than usual (Greer and Tolbert, 1986). Yet MDMA increases heart rate and blood pressure (Grob et al. 1996; Lester et al. 2000; Mas et al. 1999; Tancer and Johanson 2001; Vollenweider et al. 1998), and MDMA is associated with the release of stress hormones such as ACTH and cortisol in rats and humans (Grob et al. 1996; Harris et al. 2002; Mas et al. 1999; Nash et al. 1988). MDMA also acutely produces a number of immunological changes in humans, including decreased CD4 cell count, increased NK cell count and increase in the ratio of Th1 cytokines to Th2 cytokines (Pacifici et al. 1999; Pacifici et al. 2000; Pacifici et al. 2001). These immunological effects, lasting no more than 48 hours, are similar to the immunological effects of a psychological stressor (Cacioppo, 1994; Cacioppo, 1996; Pacifici et al. 2000). This ability of MDMA to stimulate many of the physiological and immunological aspects of the stress response without producing the subjective effects usually associated with experiencing stress deserves further study. Similar, though not identical, immunological changes are produced by other psychoactives, such as alcohol (Pacifici et al. 2000), raising questions as to whether these immunological changes can be considered an accurate marker of experiencing psychological distress.

Researchers who study the outcomes of stress in humans could test hypotheses concerning the contributions of physiological versus psychological stress to the stress response by comparing the effects of MDMA with the effects of other stressors. Explanations of the effects of stress on health usually trace effects directly to physiological changes produced by experiencing stress, and several psychological stressors, such as making a public speech, do exhibit physiological effects (Cacioppo, 1994). It is difficult to separate the acute psychological effects of a stressor, such as anxiety or feelings of frustration or powerlessness, from physiological effects, such as increased stress hormones, increased sympathetic activity, or immunological changes. Researchers do not yet know whether negative feelings like anxiety or frustration may, in and of themselves, produce direct or indirect effects on outcomes after stress (as by altering health-related behaviors or producing additional physiological effects). Comparing physiological or immunological effects of MDMA with effects from psychological stressors offers researchers the opportunity to examine what happens when physiological effects associated with the stress response appear in tandem with elevated mood and unchanged or reduced anxiety. It is possible that MDMA and acute stressors produce the same outcomes in healthy humans. However, it is also possible that comparisons of psychological stressors with MDMA may demonstrate that subjective feelings of distress may produce effects that would be absent under MDMA and present after a psychological stressor.

A better understanding of the stress response could also be reached by comparing brain activity after MDMA with brain activity after a specific stressor. Studies might compare MDMA with at least one other stressor, such as preparing for and performing a public speech. Anxiety and distress could be measured, along with cardiovascular and immune responses to the stimulus, and these could be correlated with brain activity. Similarities and differences between the two treatments could be measured across

. . . a number of researchers and commentators, including the editors of a major neuropsychological journal, have concluded that the risks involved in conducting controlled clinical trials with MDMA are minimal

subjects or across conditions. Such research might be able to locate the processes involved in producing the subjective effects of stress, and the processes that might dampen these feelings in humans.

While some researchers might be interested in examining the effects of physiological "stress" in the absence of psychological stress, psychologists and neuroscientists studying emotion might also use MDMA to test hypotheses concerning the role of physiological feedback in the generation of emotion. Some models posit that emotions begin as non-conscious responses to things or situations, and that conscious experience of an emotion arises via feedback about somatic (bodily) processes that are already taking place in response to those stimuli (LeDoux, 1998; Damasio, 1999). MDMA may mimic some physiological and neuroendocrine cues associated with stressful events, but that this feedback is apparently not associated with subjective feelings of distress. Or it may be that increases and decreases in anxiety seen after MDMA follow the time course of specific physiological changes. Hypotheses concerning the relationship between specific physiological processes, emotion generation, and a person's awareness of his or her own emotions might be tested by comparing the effects of MDMA with the effects of other procedures known to alter mood, including mood induction or exercise. Brain activity could be imaged after MDMA and after another mood induction procedure, with brain activity then correlated with changes in self-reported mood and physiological state.

> Investigating the effects of MDMA on how we think, feel and act, and investigating the paradoxical effects of MDMA on mood and physiology offer opportunities for bridging across these domains.

Risks to Research Subjects and Difficulties involved in Conducting Research

The risks of administering nearly any pharmacological agent to humans are higher than the risks of participating in the typical cognitive or social psychological study. Hence it is important to weigh the risks of administering psychoactive substances like MDMA to humans against the potential benefits that might result from performing the research, and to reduce risks to participants whenever possible. Most risks to participants in typical social psychological studies of empathy and social interaction result from deception practiced by the experimenter. Psychologists sometimes mislead participants about the nature of the research, or about some aspect of the study, to keep people from learning what the research hypothesis is, and to engage the participant in a "real" situation rather than relying on self-reports about hypothetical behavior (Aronson et al. 1990). Researchers may not want people to know what their study is about because people might change how they respond if they knew the hypothesis, either to "help" the researcher or to make themselves look better. Risks posed to participants by deception include not being fully informed about the nature of the study and possible distress arising either from being deceived or from a participant behaving in a way that he or she may find painful or embarrassing. These risks are usually countered by providing each participant with information about the nature of the study and an opportunity to express feelings about participation upon completion of an experimental session. Studies of the stress response also involve psychological and physiological discomforts. However, the risks described above are comparatively minor compared to risks associated with drug challenge studies, which can include risks of experiencing potentially life-threatening adverse events. These include risks posed by the acute physiological effects described above and the potential for long-term effects to occur after administration of MDMA. While MDMA has not produced any serious adverse events in controlled studies to date, the typical psychological study possesses far fewer potential risks.

There is concern that administering MDMA to humans could expose participants to long-term health risks. People who repeatedly use ecstasy have lower scores on measures of memory and executive function, often defined as planning and decision-making (see for example Croft et al. 2000; Gouzoulis-Mayfrank et al. 2003; Morgan 1999; Thomasius et al. 2003). Several reviews have examined and critiqued this body of research (Baggott et al. 2001; Cole and Sumnall 2003; Gamma 2000), but the fact remains that many studies continue to find differences between at least some groups of ecstasy users and non-ecstasy user controls. Furthermore, a spate of studies published in 2003 and 2004 suggest that moderate ecstasy use is not associated with impaired memory or executive function (Gouzoulis-Mayfrank et al. 2003; Halpern et al. 2004). Studies using radioactive drugs attracted to the serotonin transporter have also found fewer serotonin transporter sites in the brains of current ecstasy users (see for example Buchert et al. 2004; McCann et al. 1998; Reneman et al. 2001), though it is notable that more recent studies report a comparably small decline in transporter sites when compared with initial reports. Hence the potential for long-term effects to occur with regular, frequent use of illicit ecstasy cannot be dismissed. However, even before the appearance of recent studies finding little or no effects in moderate users, a number of researchers and commentators, including the editors of a major neuropsychological journal, have concluded that the risks involved in conducting controlled clinical trials with MDMA are

minimal (Aghajanian and Lieberman, 2001: Lieberman and Aghajanian, 1999; Vollenweider et al. 1999; Vollenweider et al. 2001). These authors have noted that as of now, no studies exist that examine the effects in non-human animals of one or two administrations MDMA in doses equivalent to those used in humans (Aghajanian et al. 2001; Vollenweider et al. 1999). Furthermore, researchers in Switzerland have failed to find changes in serotonin transporter sites or in measures of cognitive function in individuals who had received a single dose 1.5 mg/kg or 1.7 mg/kg MDMA as part of a research study (Ludewig et al. 2003; Vollenweider et al. 2000). Altogether, these findings seem to suggest that there is little or no risk of experiencing cognitive deficits for people given one or two doses of MDMA in controlled settings.

Because most lack the necessary equipment and training, it is likely that psychologists interested in using MDMA as a basic research tool in humans will have to work within a team of psychiatric or medical researchers . . . the teamwork required of investigators from different disciplines may enrich a research project and may allow each worker to gather relevant data from one study.

While the risks described above should not be considered lightly by researchers interested in human research with MDMA, they are not unique to MDMA or other entactogens. Substances posing similar risks to research participants have been employed by several research teams, including the psychostimulants amphetamine, methamphetamine and cocaine (e.g. Gouzoulis-Mayfrank et al. 1999a; Gouzoulis-Mayfrank et al. 1999b; Justice and DeWit, 1999; Rush et al. 1999) and fenfluramine (e.g. Mortimore and Anderson, 2000). Like MDMA, psychostimulants activate the sympathetic system and may produce psychological distress in some cases. Furthermore, studies in non-human animals suggest that fenfluramine possess the same risks to the serotonin system as MDMA (Schecter, 1990; Series et al. 1994, see also Whitaker-Azmitia and Peroutka, 1990), and methamphetamine may harm the dopamine system (see for example Clemens et al. 2003; Fornai et al. 2003; Miller and O'Callaghan 1996; Seiden and Kleven 1989). Despite these findings, fenfluramine is frequently used as a pharmacological challenge, and was even used in studies comparing ecstasy users with non-users (Gerra et al. 1998; Gerra et al. 2000; Gijsman et al. 2002). Investigators who administer psychoactive drugs to humans reduce risk by including only healthy participants who lack a history of major mental or physical illness, and by monitoring for cardiovascular effects if it is deemed necessary. In some studies, participation is further restricted to individuals with previous experience with the drug the researchers are studying (Rush et al. 1999). After taking these steps, the risks facing participants in human MDMA studies should be greatly reduced.

Other Challenges to Conducting Basic Human Research with MDMA

There are other obstacles to conducting the research described above. Equipment for measuring blood pressure and heart rate is often unavailable in the typical psychological laboratory outside the realm of psychiatric research, and it is likely that only psychiatrists and clinical psychologists currently possess training on how to intervene in cases of intense psychological distress. Because most lack the necessary equipment and training, it is likely that psychologists interested in using MDMA as a basic research tool in humans will have to work within a team of psychiatric or medical researchers. Working in such teams may slow the pace of research and make it more difficult. On the other hand, the teamwork required of investigators from different disciplines may enrich a research project and may allow each worker to gather relevant data from one study.

The potential benefits of conducting psychological or human neuroscience studies with MDMA have already been listed above, and include learning more about emotions, social cognition, and the link between emotions and the immune system. This knowledge could help clinical psychologists and psychiatrists find ways of helping people who are anxious or under stress, and it may help us learn more about how to ease or reduce conflict between people. If MDMA is found to have therapeutic uses, this research will also provide therapists and psychiatric researchers with an understanding of the processes that lie behind its efficacy as an adjunct to psychotherapy. These benefits are worth the minimal risks faced by carefully selected participants in a study involving the administration of one or two doses of MDMA.

Reuniting Brain, Cognition-Emotion and Behavior

Perhaps the greatest benefit to be gained from basic research studies examining the effects of MDMA in humans is the potential to draw together researchers operating in several different fields or disciplines, including clinical psychology, social psychology and psychophysiology. While researchers in each area study human thoughts, feelings and actions, each area of research operates at a

specific level of analysis and uses a specific set of research tools, making communication across research domains both difficult and infrequent. Investigating the effects of MDMA on how we think, feel and act, and investigating the paradoxical effects of MDMA on mood and physiology offer opportunities for bridging across these domains. As a result of the potential (and necessity) for collaboration across research domains, the hypotheses and models that might arise from human research with MDMA are liable to inform broad areas of neuroscience and psychology. Both psychotherapists and social psychologists are likely to appreciate more information about the empathic experience. Clinical psychologists might better understand relationships between "psychological" and "neurochemical" sources of emotion and awareness of emotion, and researchers interested in psychoneuroimmunology might learn more about the nature of the stress response. A clearer and more accurate model of empathy or of emotion generation and perception might, in turn, assist in improving behavioral or psychotherapeutic interventions that increase empathy or alleviate depression.

References

To read the references for this article, please see
http://www.maps.org/news-letters/mdma_basic_resarch_refs.html

Neurocognitive Profile of Long-Term Ecstasy Users: Proposed Research

by Philipp Ruessli
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There is some evidence that MDMA causes neuropsychological deficits in long-term users. The most examined of these are memory, attention, executive functions and the speed of information processes. Although the research field concerning the neurocognitive aspects of MDMA is growing, there is little consensus about where the changes in these domains come from. Some researchers suggest that these are premorbid differences in the subjects, others say that it has to do with the lifestyle of the typical ecstasy users (excessive, all-night rave parties and their side effects) and others argue that it is the result of a neurotoxic effect of MDMA. There are a number of fMRI and PET studies, which examine the relation between changes in brain functions or neuropharmacological markers and changes in different neuropsychological aspects. However, there is, as far as I know, only one MRI study (Cowan R.L. et al., Drug and Alcohol Dependence 72, 2003) which was done together with MDMA. This study was not specifically intended to investigate the relationship between changes in neuropsychological markers and the according anatomical areas.

Our proposed study has several purposes. First, we hope to examine the neurocognitive profile of long-term ecstasy users in several aspects (TAP, VLMT, DCS and so on). Thereby we try to rule out some of the well known confounding variables, like the consumption of Cannabis and others. Second, with our MRI design, which includes diffusion tensor imaging (DTI), we would like to examine the relationship between changes in the cognitive domains (if there are any) to changes in the anatomy. We would also like to investigate if there are changes in the white matter concentration. Specifically, we are interested in areas which are responsible for the mentioned neurocognitive domains. Third, we want to examine/replicate the results of Cowan et al., which no one has yet attempted.

The study design is not yet fully complete. We would like to have three different groups: long-term MDMA users, who have been abstinent for some time (former users), long-term users who are still active consumers (current users), and a control group which matches the other two groups. There are already some people who are interested in participating in the study, but because the procedure will take several hours, we need to offer compensation in order to recruit subjects. I am asking for donations in order to reach our goal of enrolling thirty people, ten in each group. We are seeking a total of about $4000. Of course, we appreciate every little donation.

If you have any questions concerning the study design, the purpose, or other things,
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Making Connections
MDMA Research on the Mechanisms of Affiliation and Trust

By Alan Page Fiske, Lynn Fairbanks, David Jentsch, Wael Salomeh,
and Matthew Jorgensen, UCLA
(afiske@ucla.edu)

One of the most important theoretical problems in social science is understanding what makes people feel solidarity, affection, and trust. Creating these connections among communities is the most important humanitarian and political problem facing humankind. Although we still know little about how people form social bonds, recent discoveries are providing valuable guideposts to lead us toward the answers. Social scientists are beginning to understand the kinds of interaction that create these feelings, while neuroscientists are beginning to understand the chemical processes and brain areas involved. But social scientists and neuroscientists rarely team up to work in this area, and existing research methods have serious limitations. We are taking an innovative, integrated approach to understanding sociability using a new research tool: MDMA.

MDMA is unique in evoking powerful feelings of trust, openness, affection, and identification; no other drug has comparable effects. Consequently, we have launched a program of research using MDMA to understand the natural behavioral, neurochemical, and neuroanatomical pathways through which people form everyday social bonds. Because MDMA makes people feel close to each other, it must act on the mechanisms in the brain that normally respond to the social experiences that bring people together. By studying the neural mechanisms by which MDMA generates affection and affiliation, we aim to illuminate the kinds of social experiences that naturally activate these mechanisms. Overall, our goal is to understand how social interaction affects the neurobiological processes that in turn create affection, trust, and commitment—leading to behavior which in turns elicits these sentiments in others. Understanding these processes may eventually illuminate the mechanisms of love and close relationships, teamwork, ethnocentrism and xenophobia, intra-group cooperation and extra-group aggression, as well as privide insight into autism, psychopathy, personality disorders, and social anxiety disorder.

By studying the neural mechanisms by which MDMA generates affection and affiliation, we aim to illuminate the kinds of social experiences that naturally activate these mechanisms.

We have an excellent and well-integrated team with unique facilities at UCLA for this research. One member of our team is a psychological anthropologist, Alan Page Fiske, whose ethnological research examines how people around the world create and sustain social bonds. Fiske is Director of the FPR-UCLA Center for Culture, Brain, and Development; he was also the co-founder and Director of the UCLA Center for Behavior, Evolution, and Culture. Another member of our team is a behavioral neuroscientist, David Jentsch. His specialty is neuropsychopharmacologic research in vervet monkeys and rodents, including examinations of the behavioral effects of MDMA. Another team member is a psychologist/primatologist, Lynn Fairbanks, who studies the genetics and neurochemistry of social behavior. In her research, she has developed a number of observational protocols for assessing vervet personality, particularly sociability. Fairbanks is the Director of the UCLA Vervet Research Colony (VRC), one of the few research facilities in the world where primates are socially housed. Matthew Jorgensen, a psychologist who coordinates all research activities at the VRC, has 14 years of experience in behavioral research with nonhuman primates. Another team member, Wael Salameh, is an endocrinologist who studies behavioral genetics, especially the impact of X gene overdosage on the altered sociality of XXY patients. Salameh is an expert on hormone assays and molecular biology methods. Three members of this group are collaborating to teach the first UCLA graduate course on the Neurobiology of Sociality. Our team also has close colleagues ready to collaborate in brain imaging, cognitive neuroscience, social psychology, and social anthropology.

Our primary and ultimate goal is to understand the neurobiology of human trust, identification, solidarity, affection, love, and forgiveness. We want to determine whether MDMA affects social motives and emotions through the action of oxytocin, vasopressin, dopamine, and cortisol—chemicals which are known to be involved in maternal care and pair-bonding. We also aim to locate the regions in the brain where MDMA acts, along with the genes that it activates and the receptors involved. The first stages of our research focus on animals because many kinds of neurophysiological research are only feasible in animals. What exactly does that mean? Also, are animals killed in this study? I think a brief discussion of the study

Mother vervet grooming her daughter

ethics is necessary, since animal research is fairly controversial in our membership. Moreover, mammals share many basic neurophysiological mechanisms, despite differences in the behavioral expression of these mechanisms. Working with rats and vervets, we are currently studying how MDMA affects social interaction while the drug is in the brain and afterwards. Specifically, we are looking at whether MDMA increases attraction, reduces social anxiety, or both. Later we want to identify the neurohormones that are crucial for communication between neurons in the areas of the brain that MDMA activates and that mediate sociability. Almost nothing is known about the effects of MDMA on animal social behavior, so our pioneering studies will provide an essential foundation for our own and others' subsequent research.

The next stage of our research—for which we seek funding—will use MDMA to study the neurobiology of group formation, trust, and affection in vervet monkeys. The vervet is an Old World monkey that is an ideal model for research in this area. Vervets live in stable matrilineal societies. Females remain in their natal group with their mothers and female kin, while males leave at puberty and seek admission into neighboring groups. Social relationships within groups are generally affiliative and cooperative, while relationships between groups are hostile. Group members join together to defend their territorial borders against incursions from outsiders. In order to transfer between groups, males must overcome the natural hostility of the new group members to outsiders, and must also compete with other males for dominance. In the wild and in the UCLA Vervet Research Colony (VRC), this is the most challenging experience of an adult male's life and the time of greatest conflict.

As the first step in a series of studies using MDMA to explore the neurobiology of sociality and aggression in this context, we now propose to measure the acute and long-term effects of MDMA on the quality of social relationships following vervet male immigration. For years, Fairbanks and her collaborators have studied the processes of male immigration and social integration at the UCLA VRC. In the course of this research, Fairbanks and her collaborators have developed methods to measure subtle variations in social behavior, personality, and interaction. This expertise will enable us to accurately assess the social effects of MDMA on the vervet immigrants. In collaboration with our pharmacology colleague, William Melega, we will initially determine the doses of MDMA that, for vervets, correspond to prevalent human recreational doses. Then we will launch our study.

In the first study, four groups will be formed with four males and four females per group. In two of the groups, all of the males will be given MDMA at regular intervals, probably once a week, during the group formation process. In the other two groups, the male vervets will undergo the same procedures using a saline control solution. Within each group, males will vary in their prior familiarity with one another. Thus, each of the eight male subjects will have potential relationships with familiar males, unfamiliar males, and unfamiliar females. We have developed (and used in a number of other studies) standardized observational scoring methods for measuring social bonding, including rates of social approaches initiated and received, time spent in contact and proximity, greeting behavior, grooming, and indicators of anxiety in a social context. Conflict and aggression are measured by scoring dominance displays, threats, chases, and fights. This study will take two years, due to the limited number of vervets ready for group transfer each year, and the importance of following up each group for several months to determine the long-term social relationships that emerge. (However, when funding is assured for at least one year, we will get the project underway, since pilot data will enable us to plan future studies and prepare grant applications to NSF and NIH.)

We expect that MDMA will act by reducing xenophobia and hostility toward outsiders, enabling unfamiliar animals to establish positive social relationships more quickly and effectively. We expect that it will have a lesser

We expect that MDMA will act by reducing xenophobia and hostility toward outsiders, enabling unfamiliar animals to establish positive social relationships more quickly and effectively.

effect on relationships among familiar individuals. If this is the case, then we will begin to be able to differentiate between two important components of sociality: overcoming hostility versus facilitating attachment.

The proposed study is the necessary foundation for future studies with rodents and vervets, using agents to block the action of oxytocin, vasopressin, dopamine, serotonin and cortisol, to determine which specific neurochemical systems are involved. Eventually we will attempt to identify the genes whose expression affects sociability, using transgenic or knockout mice.

Mammals share many basic neurochemical processes, so it makes scientific sense to begin with rats and vervets. However, no other animal forms bonds as complex as the human relationships we ultimately aim to understand. Ultimately, we want to use our findings in this animal research to determine how humans form affectionate, trusting, compassionate, committed relationships. Building on our animal work, we plan to use functional magnetic resonance imaging (fMRI) to locate the regions of the human brain that are activated by MDMA. The first study will consist of fMRI scanning of people interacting with the experimenter through the subject's video goggles and headphone. We will compare brain activation without MDMA and with administration of three levels of MDMA. We will correlate brain activation with MDMA dose and with self-report of closeness, empathy, and trust toward the experimenter. Previous imaging studies of activation induced by MDMA have focused on psychological tests which, if anything, blunt the emotional experience. Our goal is to observe the changes in human brain activation facilitated by MDMA when subjects have the opportunity to feel close to others, including others they love.

However, we judge that to develop our research beyond the current rat studies, the study with greatest potential is the vervet study outlined above. We have to begin by showing that vervet response to MDMA resembles the human response. If we can get the funds to demonstrate that MDMA reduces hostility and/or enhances affiliativeness among vervets, we will have excellent prospects for obtaining large scale funding from NSF and NIH for research that will rapidly advance the understanding of the neurobiology of human connection. All of us have obtained substantial grants from these sources for other research, so we are optimistic that the data we collect in the vervet study will enable us to get major federal funding for the MDMA studies that will build on this innovative approach.

If we can get the funds to demonstrate that MDMA reduces hostility and/or enhances affiliativeness among vervets, we will have excellent prospects for obtaining large scale funding from NSF and NIH for research that will rapidly advance the understanding of the neurobiology of human connection.

Our ultimate goal is to understand how these affiliative processes in the human brain are activated by social experience, and how these brain processes motivate and orient social action. The brain is a social organ, and we want to understand how it mediates social relationships, including how the brain is affected by social relations. We hope our brain research will lead us to a better understanding of what human actions enable people to open themselves to others, love, trust, and forgive.

Budget for Vervet Immigration MDMA Study

Year 1

Animal purchase: 8 male subjects @ $1820 each = $14,560 (no charge for the loan of females to the study)

Animal per diem: 16 subjects (8 males + 8 females) @ $4/animal/day = $23,360

Experienced behavioral observer (100% salary + benefits) = $41,000
Matt Jorgensen[1] (25% time) = $15,000
First year total = $93,920

Second year: the same as above

Total for complete study: $187,840

For further information, contact
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Or any of the other members of our UCLA team.

[1] Mott Jorgenson will be responsible for implementing the study design, animal selection, group formation, regulatory compliance, research data management and data analysis.

Why I Support the Pill Testing Program
(and why you should, too)

By Adam Wiggins

At the end of 2003, one of the most innovative and important harm-reduction programs ever implemented stopped running. Not for lack of interest, or lack of need; but for the lack of funds. It was a terrible shame that this program, which has educated millions and perhaps even saved lives, should end so abruptly when it was needed most.

Now it's about to happen all over again.

Sometime in 2005, the funds I provided to bring the pill testing program back online will run out; and I will not be able to replenish them myself. In order for this wonderful and important program to continue, we need your help.

For those of you not already familiar with it: this program allows people to send pills to a laboratory for testing, with the results posted anonymously to ecstasydata.org. Knowing what drug(s) their pill contains gives them an accurate picture of the risks they will face if they do choose to take it.

Why did I decide to step in and help the program one year ago? I'm not a wealthy philanthropist, as you might think. My income does not qualify me for anything better than middle-class. I chose to tap into some of my savings and my disposable income for the year; forgo a few luxuries and improvements to my home. Instead I did something good for the world, something I can be proud of forever.

If you're reading this, you probably take for granted the importance of the testing program. But perhaps in taking it for granted, you've forgotten just how important it really is.

To date, medical science has primarily focused on fixing things when they are broken. Infections, broken bones, specific infectious diseases—conventional medicine is astonishingly advanced in these areas. What has been neglected, however, is overall health and well-being. Any medical practitioner will tell you that, even in this advanced age of science, most of what they do is try to help our bodies heal themselves. And our bodies do this best when we are happy, health, and spiritually fulfilled.

MDMA has such an obvious general-purpose application to this realm that it is difficult to believe that it has been so overlooked by medical science and the general public. The problem, of course, is that research is difficult or impossible, and MDMA's black market status means that the effectiveness and safety of the pills that an individual can acquire are highly variable. This results in many bad experiences, injury, or even very occasionally, death.

The pill testing program gives people the knowledge they need to get real MDMA of reasonable quality. This not only saves lives, but allows people to experience the health benefits of this medicine properly. It provides a buffer against the uncertainty of the black market.

According to the DEA, over 100 million doses of MDMA are consumed in the US each year. The true number is probably much higher. In other words, the danger of the black market stops few, if any, people from using MDMA. The DanceSafe/MAPS/Erowid pill testing program arms millions of Americans, and many more worldwide, with the knowledge they need to keep themselves safe.

But now this program is about to disappear again. The amount of money it needs to keep going for another year is about $18,000: a paltry sum compared to the immense good it will do in that time.

You're not a wealthly philanthropist, but neither was I. You don't have to be. Just 500 people contributing $30 each will save this program!

LSD and psilocybin in the treatment of cluster headaches: a report on proposed research at Harvard Medical School

By R. Andrew Sewell
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Alcohol and Drug Abuse Research Center
Harvard Medical School/McLean Hospital

I am delighted to report to the MAPS membership the progress we have been making towards restarting LSD research at Harvard, as we continue to collect evidence for the medical efficacy of LSD and psilocybin. As Dr. Halpern reported in a previous *MAPS Bulletin*, MAPS had been approached by a group of cluster headache sufferers who were convinced that psilocybin treated their condition and were interested in funding a clinical trial to prove it. You probably have never heard of cluster headache. It's not like a migraine. It's much more rare and much more painful: some compare it to having a hot poker slowly driven through the eye, others to giving birth through their eye socket. Although each headache can last as little as half an hour, they come on multiple times a day, at strikingly predictable times (recent neuroimaging shows that they originate in the hypothalamus, which is the part of the brain that controls the circadian rhythm) destroying jobs, lives and relationships. It is the only headache so severe and unrelenting that patients have been known to kill themselves to end their agony.

And so it appears that psilocybin and LSD may treat this horrible condition. Anti-cluster-headache medications fall into three main classes. The first is medication that takes away an individual headache, such as sumatriptan, ergotamine and—possibly—psilocybin and LSD. The second is medication that ameliorates an entire cluster of headaches, such as lithium, verapamil and—possibly—psilocybin and LSD. The third is medication that prophylaxes against the occurrence of future clusters, which is a property shared by no known medication—except, perhaps, psilocybin and LSD.

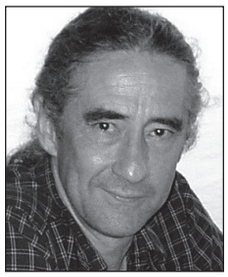
It is the only headache so severe and unrelenting that patients have been known to kill themselves to end their agony.

The first step in verifying these extraordinary claims is simply to collect individual case reports for publication as a case series. A case series typically consists of six to ten cases of an interesting and heretofore unreported phenomenon that some astute doctor has observed over a period of years. It carries no scientific weight, but can be used as a justification for mounting a more formal controlled trial to test if the phenomenon reported actually does exist. Thanks to the power of the Internet and the efforts of the Clusterbusters (www.clusterbusters.com), however, I have been able to collect over sixty cases of psychedelic-treated cluster headaches in only a couple of months! The Clusterbusters website was helpful. A "Quality of Life" survey on Erowid (www.erowid.org/plants/mushrooms/survey/mushrooms_survey_headaches.shtml) yielded a bonanza of email addresses, most belonging to people eager to discuss their cluster headaches. Subsequent word-of-mouth communication about our study has also led to unsolicited emails to Dr. Halpern and myself by cluster headache sufferers asking to be included in our study and willing to discuss their own personal experiments.

Already some interesting patterns are emerging from the cases I have collected so far, including effective dosage regimen, possible efficacy of sub-psychedelic doses, and obstructive interactions with other medications. All of this information will prove extremely helpful in future protocol design, as we move forward with this project.

In a few weeks we will submit this case series for publication. Following submission, Dr. Halpern and I will start drafting a protocol for a randomized prospective trial pitting psilocybin against LSD against placebo, using lessons learned from analyzing the case series to design a trial most likely to provide sound scientific information. O.U.C.H. (Organization for the Understanding of Cluster Headaches) has already donated $1000 to help support the protocol design. This protocol will then be submitted to the McLean Hospital IRB (Institutional Review Board) for ethical oversight, then to the FDA (Food and Drug Administration) for approval. Assuming all goes well, we could be recruiting participants within this year! When this happens, it will be an invaluable test of the potential of psychedelics. It will also be a demonstration of the power of grass-roots activism to turn an idea into action, harness the might of the Establishment and make the world a better place.

Ayahuasca/EEG Research Progress Report and Invitation to Donate



By Frank Echenhoffer, PhD

With the assistance of MAPS in helping to recruit research participants and to raise funds, the Ayahuasca/EEG Research Project has successfully completed the EEG recording phase of the project. Twelve research participants gathered from January 7–18 on the Island of Santa Caterina in Dr Luis Eduardo Luna's unique and beautiful facility, Wasiwaska. Wasiwaska serves as a Research Center for the Study of Psychointegrator Plants, Visionary Art, and Consciousness, not far from Florianopolis, Brazil. The participants journeyed from Finland, Sweden, South Africa, Hungary, Brazil, England, Cyprus, and the United States and were all well acquainted with the ayahuasca brew. Dr Luna created an 11 day seminar in which participants were able to take part in four evening ayahuasca ceremonies, to later share their experiences, to learn from each other, and to explore the culinary delicacies and great beauty of the island.

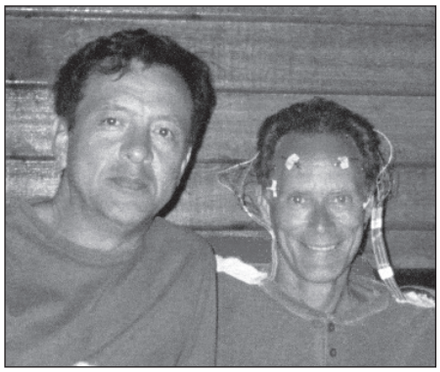
> It is possible that high EEG gamma coherence/synchrony may be markers for states of heightened awareness common to the sacred use of meditation and entheogens, and that these states involve enhanced binding processes.

During this seminar, each of the participants also took part in one seven-hour individual EEG ayahuasca research session. Katee Wynia was the primary research team member supervising the EEG recording effort in this unique environment. She directed and supervised the 12 EEG sessions, with the help of Hratch Nargizian, over the course of the seminar. Dr. Luna was present for all sessions to facilitate, using traditional shamanic techniques when needed. On two occasions participants asked Dr. Luna to facilitate while EEG was being recorded, which might be the first time that such techniques have been monitored using EEG. While EEG analysis has yet to be done, the preliminary visual inspection of the EEG for both participants showed high amplitude EEG delta waves (1-4 cycles per second). This occurred only in the frontal EEG locations of the brain when participants were experiencing difficulties in their ayahuasca journey. During the approximately 10 minute interventions, the EEG delta diminished and finally was not noticeable upon visual inspection.

Wasiwaska

Since our return from Brazil, the next phase of this research project has begun, along with additional fundraising needed to complete the EEG analysis portion of the project. What remains to be done is the analysis of the EEG data, so that the August 2000 pilot data that Frank Echenhofer and his dissertation student David Stuckey acquired on two individuals can be

Research participants and staff



Luis Eduardo Luna with Michael Bailot just prior to his ayahuasca EEG session

replicated. This earlier EEG research indicated that very high coherence was discovered among the majority of EEG recording locations in the EEG gamma frequencies (from 36 to 64 Hz) during the eyes-closed ayahuasca condition, as compared to the eyes-closed baseline condition.

The implications of this finding may be very important for consciousness research in general, and psychedelic and ayahuasca research in particular. Many neuroscience studies suggest that moderate levels of gamma coherence occur in the "binding" together of the many elements comprising normal consciousness into a unified experience. Antoine Lutz, Richard Davidson, and others reported that long-term Tibetan meditators also show very enhanced EEG gamma synchrony during a compassion meditation practice (www.pnas.org/cgi/doi/10.1073/pnas.0407401101). It is possible that high EEG gamma coherence/synchrony may be markers for states of heightened awareness common to the sacred use of meditation and entheogens, and that these states involve enhanced binding processes.

It is quite important to attempt to replicate our prior EEG pilot research because it may open important new lines of investigation for EEG and consciousness-oriented research. Clearly, robust EEG and experiential correlates can be used to develop biofeedback protocols, which, in turn, might be used to assist individuals to reproduce the specific patterns of EEG gamma coherence that occur during ayahuasca experience, enabling them to access shamanic states without using an entheogen.

Individuals interested in making tax-deductible donations: To support this continuing research project contact MAPS, an IRS approved 501(c)(3) non-profit corporation, and MAPS will allocate 100% of the donations ear-marked for this project as well as providing donors with needed documentation for tax purposes. It is important that you indicate to MAPS that your donation is for the Echenhofer Ayahuasca EEG Project. For any additional information about making a donation MAPS can be contacted at (617) 484-8711 or by mail at MAPS, 2105 Robinson Avenue, Sarasota, Florida, 34232. If you are considering making a donation and would like further information, please e-mail Dr. Echenhofer at fechenhofer@ciis.edu or call (415) 377-3153.

The proposal for this research project is on the maps.org website: Go to the maps.org website, click the Psychedelic Research Worldwide link. Then on the left column under Research click the ayahuasca link. Scroll down to Ayahuasca under development to locate the link to Exploring Personality, Phenomenological, and EEG Correlates of the Ayahuasca Journey Experience to Facilitate an Individual's Spiritual Development.

Authors: Echenhofer, F.G., Wynia, K., Luna, L.E., Gunkelman, J, and Whitehouse, W.G.

The view from the Wasiwaska EEG lab

Ibogaine in the 21st Century: Boosters, Tune-ups and Maintenance

By Patrick K. Kroupa & Hattie Wells
(transcendence@phantom.com).

History

The history of using ibogaine to break the cycle of drug-dependence is relatively short. While it is likely that the CIBA pharmaceutical company and the US government were aware of ibogaine's anti-addictive properties as early as 1957, the anecdotal observations of Howard Lotsof in 1962 are generally accepted as the starting point, initiating waves of interest that have continued spreading since that date.

Reading through the early anecdotal literature, the overall tone is overwhelmingly positive. The experiences indicate instant and abrupt cessation of desire to use drugs, the idea being that you take ibogaine once and never want to use drugs again. It is hailed as a "cure" for addiction.

The problem with most of these reports is that they do not withstand the light of day, or correspond with our own experience. Over the last five years, we have treated a total of 45 individuals with ibogaine, for the specific purpose of breaking a cycle of drug dependence. The vast majority of these do not fall under the "instant cure" category. Four people could be categorized as such, having had extremely profound experiences, which facilitated complete cessation of their drug dependency after a single dose. The rest have required additional treatment or more formal follow-up care in order to maintain their goals. "One-hit wonders," it seems, are exceedingly rare in the 21st century.

There are a variety of factors which may account for the discrepancy between initial claims made for ibogaine and subsequent results. Firstly, the categorization of what constitutes a "junkie" is hugely variable. All heroin users eventually develop a tolerance, needing larger doses to achieve the same effect. Daily use combined with ever-increasing tolerance results in physical dependence. However, there is a significant difference between someone who is experimenting with drugs within a social context, and happens to become inadvertently drug-dependent, and a hardcore dope fiend who has been IV-ing heroin for 20 years and whose whole life revolves around junk.

Early reports of individuals dosing with ibogaine may be paraphrased as, "I took ibogaine once, saw God, found myself, came down to Earth, food tasted great, I stopped smoking, starting experiencing life as I haven't since I was a child, and rode off into a rosy sunset."

In 2005 there tends to be one additional sentence following up all of that, "...and two to four weeks after I wrote those words, I had a needle back in my arm or was sucking on a crack pipe."

Another issue is incomplete or missing data. Information regarding follow-up treatments is not publicized. "I did ibogaine once, and was no longer an addict!" is not followed up with the information, "Oh, and then I took it another 15 times that year for spiritual insight!"

Information regarding follow-up treatments is not publicized. "I did ibogaine once, and was no longer an addict!" is not followed up with the information, "Oh, and then I took it another 15 times that year for spiritual insight!"

The published history of ibogaine administration for drug dependence is relatively consistent in reporting a single-dose modality. In our experience, this has proven to be sub-optimal or ineffective for many people.

However, some treatment providers must maximize the benefit of a single dose because many clients will not have the chance to re-dose with ibogaine following the initial treatment. "Detoxing" prior to treatment, by tapering opiate intake down over a period of months, is one method used to ensure easier reintegration post-ibogane. Subsequently, patients often return to their home country, where ibogaine is a Schedule I substance, and therefore cannot be retreated if necessary. The "detoxing" strategy has both pros and cons, but evaluating these is beyond the scope of this article.

Boosters

After an initial treatment with ibogaine, the physical dependency is no longer there. However, the complex

series of psychobiological interactions that caused someone to become addicted in the first place are still present. Ibogaine is not a "cure" for drug addiction.

Booster doses of ibogaine HCl can be extremely beneficial and often make the difference between relapse or success. Individuals with a long history of being drug-dependent who have detoxed from extremely high doses of narcotic analgesics will usually have at least 85% to 90% of their withdrawal symptoms lifted after the initial reset.

However, a few days out, many people derive tremendous benefit from one—or more—booster doses. Typically a booster will fall within the 500–800Mg (total dose) range. All the same precautions should be observed, as when doing the higher dose of ibogaine HCl (16–18Mg/kg. range).

Tune-ups

Tune-ups differ from boosters in intent and timing. While boosters increase the efficacy of an initial full-blown dose of ibogaine HCl, tune-ups usually happen anywhere from several weeks to many months following the last full-blown dose of ibogaine. The dose-range tends to fall within the same 500-800Mg category (as with most things there are no absolutes, someone may do a gram as a tune-up) as boosters. Tune-ups are used by people who reach their goals (presupposing their goal was to remain clear of narcotic analgesics), maintain sobriety, and discover that they're depressed, overloaded, starting to come undone, or simply develop a desire to do ibogaine again. And for whatever reasons, they want to avoid a full-on psychoactive dose.

Another category is people who haven't managed to achieve their goals, and have slipped back into active drug-use. These individuals often want to get "reset" again, but have a strong aversion to doing full-blown resets. Dislike of tripping and fear of facing the self may be strong deterrents. A tune-up, followed by a few boosters, will bring someone to roughly the same state they would achieve with an initial 16–18Mg/kg reset.

"Clean" Maintenance

Ibogaine is metabolized by the liver and converts to noribogaine (12-hydroxyibogamine). There is also evidence that ibogaine has a high propensity for being deposited in adipose tissue, resulting in a depot-like effect. In practice, for roughly seven to ten days after dosing with ibogaine—assuming you have relatively normal bodyfat levels—your mood will be noticeably enhanced. Life will seem particularly good.

This is the mythical "window of opportunity" that has been mentioned repeatedly with regards to ibogaine administration. It is extremely important to plan ahead and make use of this time in the most effective manner possible, because it *will* pass. A week later, ten days at most, the warm fluffy clouds will break, and you will be left dealing with your life.

Many people who are self-medicating can derive significant benefit from conventional medications which can be extremely helpful during this time period, but the bottom line is many people go from feeling like everything is possible, to . . . nothing is possible. People crash and hit reality.

The concept behind clean maintenance is this: What if you could take someone who has been detoxed, and is presently drug-free, who is trying to put their life back together again, and extend the time-frame during which all things are possible to a period of weeks or months, giving them time to develop new coping mechanisms for dealing with life sober?

The concept behind clean maintenance is this: What if you could take someone who has been detoxed, and is presently drug-free, who is trying to put their life back together again, and extend the time-frame during which all things are possible to a period of weeks or months, giving them time to develop new coping mechanisms for dealing with life sober?

Individual 1: Male, early 40s and in overall good health, who has done four full-blown resets using ibogaine over a three-year period. He initially did ibogaine with the intent of ending his addiction to crack cocaine. Post-ibogaine he entered aftercare, sought psychotherapy and attended self-help groups. In short, he was the ideal patient. He is extremely intelligent, has a high level of self-awareness, functions within society and has no limitations due to a lack of financial resources.

He thrived immediately post-ibogaine but gradually wandered further and further out, until at roughly three months, he hit the wall, fell apart, and relapsed. This occurred after each session. After the initial relapse the downward spiral began and continued until he was smoking crack on a daily basis and eventually re-dosed with ibogaine once more. Each bottom was getting progressively lower. He had fears that if he repeated this cycle again, he would reach the stage where he simply would

not be coming back from the last binge and either die, or come to his senses five years later instead of pulling out after a few months.

The last time he hit the initial relapse, he was dosed with 350Mg of ibogaine HCl in an attempt to halt the downward spiral. This worked in helping him break through this critical phase and allowed him to move onwards. After the initial 350Mg dose, he has continued using ibogaine HCl on an "as needed" basis. For him this amounts to 50Mg twice a week on average, and 100Mg every 45 days or so.

At the present time, utilizing this methodology, he has been clean for seven months, which is his longest period of abstinence in the last ten years. He has continued with psychotherapy but stopped attending self-help groups, and plans to do a full-blown 18Mg/kg dose of ibogaine HCl sometime in the near future, for the purpose of spiritual insight.

"Dirty" Maintenance

For some, abstinence from narcotic analgesics is not a reality-based goal. Many chronic pain patients are really not going to cast off their crutches, light up some medical marijuana and dance in the meadow, after ibogaine.

In addition to chronic-pain patients, there are many people who are using narcotic analgesics to self-medicate a variety of comorbid conditions. In some cases a "successful" detox from opiates means that somebody can look forward to a lifetime's worth of maintenance on neuroleptics.

For some chronic pain patients, abstinence from narcotic analgesics is not a reality-based goal.

Given the choice between opiates and neuroleptics, there is no simple answer, but the side-effects of current anti-psychotic medications can be devastating. When you compare the quality of someone's life when they are controlling schizophrenia, for example, through the use of opiates (which tend to have extremely mild side effects) vs. the qualify of life attained using sanctioned medicines (usually neuroleptics, with Cogentin to alleviate some of the side-effects anti-psychotics produce), it is entirely possible, even probable, that the person is happier with the opiates.

Ibogaine is remarkably effective in addressing one of the primary problems in any sort of opiate or opioid maintenance: tolerance. Over time, individuals find they must do extremely high doses of their medications in order to achieve any effect whatsoever.

WARNING: the following category should be considered highly experimental. There is a complete lack of published scientific data regarding the following examples. The difference between 50mg. And 500mg. Is extremely significant and quite possibly fatal. Ibogaine potentiates the analgesic effect of opiates and opioids.

Individual 1: Male, mid-30's, in good health, who has experienced full-blown resets using ibogaine HCl in the past. His average daily intake was 20Mgs oxycodone and 4–6Mgs hydromorphone (Dilaudid), which he is prescribed for pain management.

By using a very low-dose regimen of 25–50Mgs of ibogaine HCl on a daily basis, he was able to taper down to a point at which 3.75Mg of oxycodone is subjectively providing him with identical pain relief.

He began by taking 25Mg ibogaine HCl per day, and was able to immediately halve his intake of narcotic analgesics with no withdrawal symptoms or discomfort whatsoever. After 6 days he increased the ibogaine HCl to 40Mg, and at week two, he went up to 50Mg a day of ibogaine HCl. After 22 days of ibogaine maintenance, he took a ten day break, before returning to 50Mg which he presently takes every other day. His intake of oxycodone has remained consistent at 3.75Mg/day.

In his own words, "The goal with adding ibogaine to the oxycodone is to minimize if not end the need for it [oxycodone] for pain management. The HCl seems to help with the pain, or at least gives me awareness to take better care of my body by stretching, drinking more water and to get outside for exercise and sunshine."

"Most importantly the HCl has given me a feeling of well being and feeling comfortable in my place in the universe, allowing me to process through a depression I have been suffering from. I feel GREAT. The darkness has lifted, the impending doom is cast away! The low dose regimen has also been extremely helpful in musical inspiration; songs I had half-written are coming to completion and new songs are being created. There is a distinct connection between ibo and rhythm/melody, and further underscores for me the important aspect of music in the Bwiti ceremonies."

Individual 2: Female, early 40s, overall good health but suffering from anorexia, has been physically dependent on narcotic analgesics for 19 years. Her use started with heroin and eventually shifted to methadone maintenance and finally hydromorphone (Dilaudid). She has extreme fear and dislike of "tripping" and has repeatedly refused to take a full-blown ibogaine reset.

Her average daily intake was 28Mg of hydromorphone which she "cold-shakes" (breaks down the pills in a cooker so they can be injected) and IVs.

She began by doing 35Mg of ibogaine HCl and was immediately able to stop injecting the hydromorphone and obtained similar analgesia from 24Mg of Dilaudid. Over a period of five days she maintained on 35Mg of ibo-

gaine HCl while continuously decreasing the hydromorphone, which she was taking orally, as prescribed. After five days she was on 16Mg of hydromorphone.

At the start of day 8 she began attending psychotherapy. Over the next two weeks she gradually increased her intake of ibogaine HCl to 50Mg/day, and decreased hydromorphone to 6Mg. On day 19, she took a 10 day break from ibogaine HCl, and her hydromorphone intake rose back to 12Mg/daily (oral), before tapering back down to 6Mg/day within hours of restarting ibogaine maintenance at 35Mg.

At six months out, this cycle appears to be consistent. She takes a break from ibogaine maintenance every 20 days. Slowly drifts from 6Mg/day of hydromorphone, up to 12Mg, before restarting ibogaine at 35Mg/day, at which point she drops back to 6Mg—which appears to be her comfort zone—while gradually increasing ibogaine HCl to 50Mg/day.

She has plans to try a 500Mg dose of ibogaine HCl, and attempt complete cessation of narcotic analgesics.

Ibogaine Maintenance: Hitting the Wall

Whether an individual is doing ibogaine maintenance while clean, or with narcotic analgesics—utilizing daily maintenance, or skipping days—there seems to be a point of diminishing returns somewhere between day 20 and 25. At this point people discover that for all intent and purposes they're "speeding". There is a general feeling of being wired, jittery, and severe sleep disturbances begin manifesting themselves.

Taking a break from ibogaine for a week or two at this point appears to be sufficient time to allow roughly another three-week cycle of ibogaine before once again hitting the wall. Three weeks "on" followed by ten days to two weeks "off" has been a cycle people have maintained without any particular side effects.

Conclusion

Drug-dependent individuals have a variety of obstacles to surmount. One of the largest tends to be years—or decades—of being at the receiving end of what passes for drug treatment in Western society. This includes years of being categorized as disease-afflicted criminals.

Currently, however, ibogaine boosters, tune ups and maintenance are improving the long-term effects of ibogaine administration.

Ibogaine is akin to the peeling away of a veil, the removal of the soft focus glasses. After the noribogaine disappears (the so-called window of opportunity) the harsh reality of life is often unbearably uncomfortable. Ibogaine doesn't eradicate the underlying causes of addiction, which for many people may take years to understand and come to terms with. Ibogaine is more than a detox, but it's a catalyst, not a "cure."

Ibogaine treatment is in its infancy. The future holds the possibility of second-generation drugs such as noribogaine and 18-mc, which may—or may not—supersede ibogaine maintenance. Currently, however, ibogaine boosters, tune ups and maintenance are improving the long-term effects of ibogaine administration.

Post-ibogaine, all that anyone absolutely must have in order to progress towards whatever goal they have set for themselves, can be distilled down to one word: BELIEF. What exactly you choose to believe in is irrelevant, so long as you infuse it with enough energy to make it real. Unfortunately, what most drug-dependent individuals have been taught is that they are powerless, diseased, and flawed. Which creates the need for two more words: SUPPORT SYSTEM. This is some sort of environment where your beliefs and goals will be supported instead of attacked and invalidated.

http://ibogaine.mindvox.com
http://www.ibogaine.org/manual.html
http://www.ibogaine.co.uk

Ibogaine Outcome Study Progress Report

By Valerie Mojeiko
(valerie@maps.org)

The outcome study of people treated with ibogaine for chemical dependence has suffered several serious setbacks since my last report, as I've been racing to develop a research protocol and begin data collection at two precarious quasi-underground treatment facilities. With these setbacks, however, came several new possibilities, which, if led to fruition, will bring overall improvements to the original study.

During the early stages of protocol development, one of these facilities, the Iboga Therapy House in Vancouver, BC unexpectedly lost funding and was forced to shut down in August 2004. The clinic was previously funded entirely by marijuana seed entreprenuer Marc Emery, and provided treatments for free to those who qualified. Emery suffered some legal trouble last summer, in addition to a fire in the Marijuana Party Bookstore, two possible factors that led to his decision to abruptly withdraw funding for the facility.

The clinic had treated a total of 31 people, for whom preliminary data suggested positive outcomes. Our preliminary follow-up took place in June 2004. We were able to contact 20 out of about 31 people treated at the Iboga Therapy House, at varying lengths of time post-treatment. Our results suffer from a potential selection bias and should be considered tentative, short-term and involving subjects selected for treatment by the clinic for being most likely to succeed. Of the sample that we were able to contact, 6 out of 7 people who had been treated for cocaine or crack reported abstinence, 3 out of 8 people treated for opiates reported abstinence, and 4 out of 5 people treated for other substances or a combination of the above substances reported abstinence. Iboga Therapy House Program Director Sandra Karpetas and I presented these findings at the 16th annual International Transpersonal Psychology conference in Palo Alto, California.

On February 28, 2005, The Iboga Therapy House applied for a Canadian government grant to provide ibogaine detoxification services to 20 people as a pilot project.

After the loss of this clinic, we continued protocol development, intending to begin the study at the Ibogaine Association, a for-profit facility in Playas de Tijuana, Mexico offering low-cost treatments and busing in mostly American clients who fly into the San Diego airport.

In early January 2005, protocol development and training was finally finished. Data collection commenced on January 10, 2005 when two patients, one addicted to alcohol and one to crack cocaine, completed baseline interviews with Ibogaine Association Aftercare Coordinator Jill Stammer.

After gathering outcome data from the first three patients treated sequentially, the Mexican clinic unexpectedly shut down, causing the study to be halted prematurely. After spending nearly a year and a half developing a solid research protocol to collect and analyze outcome data from these two clinics, both had shut down.

When the Ibogaine Association closed its doors, MAPS turned once again to the Iboga Therapy House, and began offering assistance in applying for a grant to re-open the facility, and making plans for improvements to their program.

On February 28, 2005, The Iboga Therapy House applied for a Canadian government grant to provide ibogaine detoxification services to 20 people as a pilot project. The Drug Strategy Community Initiatives fund was created under the leadership of Health Canada in April 2004 to facilitate the development of local, provincial, territorial, national and community-based solutions to problematic substance use and to promote public awareness of problematic substance use.

Ibogaine-assisted therapy fills a gap in British Columbia's existing harm reduction and treatment services by offering a unique detoxification option to treatment resistant chemically-dependent persons, such as those who are resistant to substitution therapies, and to methadone patients seeking an immediate detoxification. British Columbia, where North America's first heroin prescription trial is in development and North America's only safe injection site is currently operating, has a harm reduction and health promotion outlook to substance use problems that offers a fertile ground for implementing North America's first above-ground ibogaine clinic.

In an effort to assist the Iboga Therapy House in providing optimum services, MAPS organized a consultation for its staff with San-Francisco-based certified Holotropic Breathwork practitioner Dr. John Freeman. Dr. Freeman, who recently completed medical school in Mexico with an emphasis on cardiac care, visited the potential site for the new clinic and offered consultation on medical practices. Based on feedback from Dr. Freeman and others, the Iboga Therapy House will implement new medical procedures upon re-opening including purchasing emergency medical equipment and hiring a Level III EMT to supervise patients while they are experiencing the acute effects of ibogaine. The facility is also looking into hiring a Canadian doctor to oversee its operations. These measures are necessary to increase the safety of chemically-dependent patients treated with ibogaine, as ibogaine has the potential to cause heart failure and death, especially in people who have pre-existing medical issues (as a result of their drug use or other factors).

This spring we will hear announcement of the grant award. Plans are in progress to re-open the Iboga Therapy House as a for-profit business this summer if the grant is not awarded. MAPS will provide guidance and funding for an evaluation component to the Iboga Therapy House's program, once treatments have begun. Outcome data from the first 20 patients treated will be gathered by Iboga Therapy House Evaluation Coordinator Leah Martin. As Principal Investigator for MAPS' ibogaine outcome study, I will evaluate and analyze this data, to provide feedback for their program and to use in a research paper investigating outcomes of ibogaine therapy in the treatment of chemical dependence.

For up-to-date progress reports on this study and to download the research protocol, visit: www.maps.org/ibogaine. If you would like to donate funds to help pay for the completion of the study, please e-mail me at valerie@maps.org.

The Drug Strategy Community Initiatives fund was created under the leadership of Health Canada in April 2004 to facilitate the development of . . . community-based solutions to problematic substance use and to promote public awareness of problematic substance use.

A Psychedelic Neurochemistry of Time

By Kim A. Dawson, PhD, R.Psych. (kadawson@mentalhealthconsulting.ca),
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In 1958, Rollo May observed "the most profound psychological experiences are peculiarly those which shake the individual's relation to time" (p.68). An accumulating literature suggests that a wide array of psychedelics can induce potent changes in time perception (Baruss & Vletas, 2003; Dawson, 2001; Hayes, 2000; Melges, Tinklenberg, Hollister, & Gillespie, 1970; Shanon, 2001; Strassman, 2001). For example, as Strassman (2001) writes of DMT:

Past, present, and future merge together into a timeless moment, the now of eternity. Time stops, inasmuch as it no longer "passes." There is existence, but it is not dependent upon time. Now and then, before and after, all combine into this exact point. On the relative level, short periods of time encompass enormous amounts of experience (p. 234).

Very little is known about the nature of these changes. However, the repeated theme of temporal distortion amongst many archives of psychedelic experiences (e.g., Hayes, 2000; Siebert, 2004; Strassman, 2001) strongly supports the notion that psychedelic drugs do, in some way, impact the underlying neurochemistry of time perception.

Describing an experience with the psychedelic plant Salvia Divinorum, Daniel Siebert (2004) writes:

> *The last words to pass through my head went something like, "Just as I thought. This stuff is inactive. I'll go toss it in the trash." Then quite suddenly I found myself in a confused, fast moving state of consciousness with absolutely no idea where my body or my universe had gone. I have little memory of this initial period of the experience, but I do know that a lot was happening and that it seemed quite literally like an eternity, when in fact it must only have lasted a few minutes . . . In this state, all the points of time in my personal history coexisted. One did not precede the next. Apparently, had I so willed it, I could return to any point in my life and really be there, because it was actually happening right now.*

These experiences raise questions regarding the very nature of existence and of the mental universe. Since the work of Einstein, distortions of the fabric of space-time have been commonplace in discussions of the speed of light, relativity, and cosmology. Likewise, subjective accounts of psychedelic experiences often include perceptual distortions that include insights about cosmological questions like "What was God doing before the beginning?", "How did the universe begin?", and "What is the nature of time?"

There are few illustrations of the astronomical-psychedelic link as specific as the following recent report of viewing a total lunar eclipse after consuming LSD (Dawson, 2001):

> *As the eclipse became total, with the sun behind us as we viewed the moon in front of us, only a point of light remained on the moon. Completely without warning, the bright rays of light from this point seemed to attach to my head, lift it off my shoulders, and physically move it … to the edge of the moon where I was given a clear view of the entire Milky Way extending outward from my head! It seemed to flow through my head at the level of my eyes.*

Consistent with the astronomical associations of such experiences, an astrophysicist has recently proposed that models used in astronomy and mathematics can also be used to better understand the non-ordinary mental time of psychedelic experience (Saniga & Buccheri, 2003). Metod Saniga (from the Slovak Academy of Sciences) employs advanced concepts that link algebra and geometry, like projective spaces and so-called Cremona transformations that appear in chaos theory. In providing a workable mathematical model of subjective experience, Saniga raises mental experience to a par with physical reality. As Siebert (2004) writes:

> *I had the sudden realization that although I had*

. . . the repeated theme of temporal distortion amongst many archives of psychedelic experiences . . . strongly supports the notion that psychedelic drugs do, in some way, impact the underlying neurochemistry of time perception.

managed to pull myself back into my body I had somehow ended up back in the wrong spot in the timeline of my physical existence. I was convinced that I might be stuck in this situation and would have to continue my life from this point in my past.

Certainly, a useful set of new studies of psychedelic experiences would explore and evaluate the mathematical modelling of archived experiences of psychedelic and other non-ordinary mental times. This set of studies would hopefully shed light on the way that time binds and unifies conscious experience and how it is "un-bound" by psychedelics (Dawson, 2004).

To return to the words of Rollo May (1958, p. 68):

> *Severe anxiety and depression blot out time, annihilate the future. Or, as Minkowski proposes, it may be that the disturbance of the patient in relation to time, his inability to "have a future, gives rise to his anxiety and depression." In either case, the most painful aspect of the sufferer's predicament is that he is unable to imagine a future moment in time when he will be out of the anxiety or depression.*

The association between perceptual time distortion and psychedelic experience also points to the usefulness of studies of existential crisis. The person in existential crisis cannot even answer the question of whether they exist in a "time" that other people have in common. As concerns emerge about harmful side-effects of traditional antidepressants (Health Canada, 2004; US FDA, 2004), case studies have recently appeared suggesting Salvia Divinorum may have antidepressant properties (Halpern, 2003; Hanes, 2001/2003).

Moreover, psychedelics may specifically activate an endogenous neurochemical system that regulates time perception (Dawson, 2004). If this is the case, and there is certainly ample evidence to suggest it is (e.g., Baruss & Vletas, 2003; Dawson, 2001; Hayes, 2000; Melges, Tinklenberg, Hollister, & Gillespie, 1970; Shanon, 2001; Strassman, 2001), the study of this temporal neurochemical system is critical. Phenomena such as aging, mental illness, and drug-induced changes in time perception may all have this system in common (Dawson, 2004). Because psychedelics seem to tap quickly and directly into this system, they may be one of the most suitable technologies for its study.

However, the risks of a one-way trip through time are important to acknowledge and raise the need to adequately prepare inexperienced travellers for the totally alien times they may discover. As Ornstein (1979) writes:

> *Very often this experience cannot be placed in linear coordinates, for it is outside this mode of operation, outside words, outside normal time. The best the verbal-logical mode can do to account for the experiences is to term them "timeless" . . . which allow for "an infinite present" to exist. These experiences, for many, represent the first significant break from a normal linear consciousness, normal reality, and normal time. For some, the break into a new area of experience is unsupported by the remainder of their lives and their training, and they may not be able to return to normal consciousness (p. 89).*

The phenomenological and empirical research suggests a clear association between the activity of the brain and the suspension of linear time and perceived cause-effect relationships by psychedelic and entheogenic substances. Cannabinoid, serotonin, dopamine, and opiate receptor systems are associated with altering time consciousness and included in a neurochemical system that regulates the perception of time. Consciousness of time is as critical as the very sense of self, identity, or being, and to the sense that there is any meaning to life at all. Psychedelic neurochemistry highlights the temporal boundary between our perception of "who I am" and "who I am not." This perspective leads to an exploration of boundary conditions: between self and other, between medications and street-drugs, and between mental health and mental illness.

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Extending Strassman's (2001) proposal, it is suggested here that time and the way it is regulated neurochemically is responsible for the perception of interpersonal boundaries. These boundaries include age, gender, family relationships across generations, the boundary between life and death, and time pressure (or sense of being busy). When these boundaries are transcended with the use of psychedelics, we encounter fusion of self with other. It is here that one person's consciousness may become temporally located at overlapping levels of reality. Rather than perspectives "missing each other," different perspectives integrate and become one. From a therapeutic standpoint, this transcendence is extremely valuable and the fear of this transcendence should—at least to some extent—be overcome. If movement of consciousness to other times is possible, hypothetically, speeding up the movement from a time of illness to a time of health may be as well.

This is yet another perspective from which the psychedelic class of drugs can be seen as candidates for facilitating psychotherapy and coping with illness. This potential is being explored in a number of new research projects reported primarily by the Multidisciplinary Association for Psychedelic Studies (www.maps.org). As with so many applications, psychedelics await study by cognitive and clinical scientists with interest in gaining further insight into the function and applications of timelessness and other transition states and boundary conditions.

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Towards a Psychospiritual Understanding of Psychedelic Therapy

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Between the first and second year of my master's program in counseling psychology I had my first experience with the famous fungus. One of the many things I learned during that session was that everything I was being taught about the best that psychotherapy had to offer, was available (and to a greater level of phenomenological depth), through the plant. Subsequent experiences with a popular empathogen confirmed this view.

Two and a half years later, at the beginning of my doctoral program in counselor education at the University of Idaho, I was able to begin an in-depth academic study of the psychospiritual uses of entheogens. I obtained university approval to conduct a qualitative study of how psychedelic use can result in psychological and/or spiritual change. My intention was to write a comprehensive dissertation that linked psychedelic experiences with traditional theoretical orientations of psychotherapeutic change processes and spiritual change processes.

Recognizing that my audience would be fellow counselors and psychologists, I decided to interview mental health professionals as my research participants, in order to establish a level of credibility for their stories. I interviewed and audio-taped 20 individuals, all of whom had graduate degrees in one of the mental health professions, and who had personal experience with psychedelics for their own psychospiritual development.

Using a semi-structured interview format, I inquired into the processes involved in how participants' entheogenic experiences led to long-term change. Employing the qualitative research tradition of grounded theory, I allowed the categories to emerge from the data inherent in the transcribed interviews. Data analysis was performed using three levels of coding (open, axial, and selective) and the constant comparative method of grounded theory (Strauss & Corbin, 1998). From this analysis of the relationship between variables, a 5-stage process model emerged.

The I-5 model

Intention: Intention sets the stage for the phenomena of the experience itself, and what is done subsequently. Preparing for a therapeutic psychedelic session includes attending to the set and setting variables that will affect the experience.

Ingestion: Both the chemical agent and the dosage of that agent are included here. Drug and dosage should be tied to the intention of the experiencer, as particular drugs at particular doses in particular people will be more or less appropriate.

Insight: Once the doors of perception are opened, what happens? A wide range of perceptual experiences such as symbolic imagery, activation of cognitive/emotional schemas, or interpersonal connections may manifest. Increased self-awareness is generally facilitated by psychedelics' ability to suspend one's usual defense mechanisms.

Integration: Integration involves making sense of the phenomena experienced. This begins during the session, but often needs to continue in the following days and weeks. As one research participant succinctly put it, "The light of reason and the element of time" are needed to fully integrate psychedelic experiences.

Awareness itself is often not enough to lead to lasting change. Implementing one's integrated insights requires acting in ways that are congruent with what was learned. This is what differentiates between having spiritual experiences and living a spiritual life.

Implementation: Awareness itself is often not enough to lead to lasting change. Implementing one's integrated insights requires acting in ways that are congruent with what was learned. This is what differentiates between having spiritual experiences and living a spiritual life.

This five-stage model differs from previous models in its comprehensive description of the various processes involved in entheogen-facilitated psychospiritual change. The standing models of psychedelic psychotherapy have addressed each of these components, in various combinations, and to various degrees (such as a focus on set and setting, or high dose vs. low dose, see Fadiman, 1965; Grof, 1975; Leary, Litwin, & Metzner, 1963; Leuner, 1967; Masters & Houston, 1966; and Sherwood,

Stolaroff, & Harman, 1962). Models from the 1960's often subsumed implementation as a part of integration. This may be an artifact of the psychodynamic influence of the times (with psychodynamic psychotherapy's emphasis on insight and integration). Contemporary views of human change processes in the field of psychotherapy require an explicit focus on how therapy sessions lead to behavioral changes after therapy ends.

It is my hope that this model can help guide the human-trials research of psychedelic psychotherapy that has recently resurfaced (thanks in large parts to the efforts of MAPS). Attending to these five processes will increase the likelihood of positive therapeutic outcomes, regardless of the population or disorder being treated. Additionally, attention to the unique psychospiritual outcomes of psychedelic sessions, apart from predetermined desired goals (i.e., healing of traumatic wounds, or reduction in obsessive-compulsive behavior) can help researchers identify therapeutically important outcomes variables not included in the original research design.

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My current research interest involves linking the common factors of psychotherapy (those factors that are transtheoretical) with the processes identified in the I-5 model. Outcome research of psychotherapeutic change continues to highlight the fact that client-related variables, rather than specific therapist interventions, constitute the most influential variables in the change process (Hubble, Duncan, & Miller, 1999). These variables include psychological factors such as expectations, psychological mindedness, motivation, hope, and locus of control. From this perspective, therapists simply act as contributors to set and setting of naturally occurring client change processes. Similarly, psychedelics, when taken for the "right" reasons in the right settings also activate inner wisdom in the experiencer. As four of the five processes in the I-5 model are inherent within the experiencer, a focus on these variables may further our understanding of the change process in conventional psychotherapy.

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Heffter Research Institute: Update January 2005 (www.heffter.org)

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As readers of the *MAPS Bulletin* know by now, the Heffter Research Institute has objectives and goals that overlap to a certain degree with those of MAPS. Our central mission is to encourage and support research on consciousness, but in particular to use hallucinogens as tools in that undertaking. Ultimately, we hope to identify medical indications for these substances that will allow them to be used to treat psychiatric disorders that today are addressed only with palliatives. Thus, a long-term goal is to develop these substances so they can be used as prescription medications.

Many readers will know from recent media stories that, along with MAPS, the Heffter Institute supported the study at the University of Arizona on the use of psilocybin in obsessive-compulsive disorder. The first phase of that study has been completed and generated sufficient promise to warrant its further continuation and expansion. In addition, we presently have an ongoing program at UCLA Harbor Medical School to study the value of psilocybin in the treatment of anxiety in terminal advanced-stage cancer patients. That study is completed, and we presently have an ongoing program at Harbor-UCLA Medical School to study the value of psilocybin in the treatment of anxiety in terminal cancer patients. Under the direction of Board member Dr. Charles Grob, we are attempting to replicate the significant results of this form of therapy that were obtained more than three decades ago by Drs. Al Kurland and Stan Grof and their colleagues. Those earlier studies employed LSD, but our objective is to determine whether treatment with psilocybin can provide similar efficacy.

If you know of persons who might qualify for this study, they can obtain further information concerning protocol design and subject selection criteria at: www.canceranxietystudy.org.

We have now studied three subjects in a double-blind, placebo-controlled design. In addition to examining the response of anxiety to the experimental treatment, effects on mood regulation, pain, and quality of life are also being assessed. All three subjects were women in their late fifties who had had personal experience with psychedelics in the 1960s and 1970s. Notably, all three tolerated the procedure well, and reported improved psychological status subsequent to treatment. Two of the three subjects experienced mild blood pressure elevation, which gradually returned to normal.

Recruitment of new subjects has been very challenging, largely because we are adhering to very tight inclusion/exclusion criteria. Of course, as readers of the *Bulletin* will also appreciate, the controversial nature of this study adds an additional burden when convincing oncologists to refer patients to us. The setting for the research is the Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center. If you know of persons who might qualify for this study, they can obtain further information concerning protocol design and subject selection criteria at: www.canceranxietystudy.org.

The Heffter Institute also provides support to the Heffter Research Center, Zürich, at the University Hospital of Psychiatry, Zürich, under the direction of Dr. Franz Vollenweider. Besides Dr. Vollenweider, the research group includes Felix Hasler, Olivia Carter, and Rael Cahn, who have been working on the projects described below. The work there presently focuses on establishing a very fundamental basis for understanding how these substances work in the brain; for example, how they affect cognition, perception, memory, etc. The work coming out of our Zürich Center is of the very highest scientific caliber in the world. Indeed, this laboratory is now internationally recognized by scientists as perhaps the world leader in the study of altered states of consciousness in response to hallucinogens.

A number of investigations into the neurobiological basis of perception and consciousness were completed late last year. One such study area has been the relationship between time perception, operationalized measures of sensorimotor integration, and ego boundary alterations in normal and altered states of consciousness induced by psilocybin (in collaboration with Marc Wittmann at Ludwig-Maximilians University, Munich).

A second area of investigation has been the determination of the level(s) in the neural hierarchy of visual perception with which psilocybin interacts (in collaboration with David Burr, University of Pisa, and Jack Pettigrew, University of Queensland). Using psilocybin and the 5-HT2A receptor antagonist ketanserin, we have also been attempting to assess the role of serotonin 5-HT1A and 5-HT 2A receptors in mediating the perception of ambiguous visual stimuli (Necker cube, binocular rivalry, etc.) and their relation to cognitive functions like working memory. Further studies of the effect of psilocybin on sensorimotor gating in relationship to sensory filtering models of psychiatric illness have also been completed (in collaboration with Mark Geyer at UC San Diego). We have now implemented a neuroimaging paradigm using Positron Emission Tomography (PET), with the aim of deepening our understanding of the role of 5-HT2A receptor function underlying these phenomena, and its potential role in the pathophysiology of obsessive-compulsive spectrum disorders (in collaboration with August Schubiger, Department of Nuclear Medicine, University Hospital Zürich).

These studies demonstrate to the world the unique properties of hallucinogens as tools to study consciousness, and hopefully will spur other laboratories to become involved in this fascinating area.

Finally, an EEG/ERP study into the neural correlates of ego-functions/sense of self and perception is now underway. This investigation aims to assess the neurophysiological correlates to the altered visual processing of ambiguous visual stimuli, as seen in our work on binocular rivalry. Further, for the first time we are directly comparing altered states and traits of consciousness as induced by psilocybin and meditation, using both subjective reports and a series of high resolution 3-dimensional EEG brain mapping techniques. The meditation portion of this study is being supported by a grant from the Fetzer Institute, and M.D./Ph.D. student Rael Cahn from UC San Diego is primarily working on that project.

As you can see, we are supporting a mix of both clinical and basic science applications. On the one hand we are establishing the safety of these agents for research in the context of fundamental studies of consciousness. These studies demonstrate to the world the unique properties of hallucinogens as tools to study consciousness, and hopefully will spur other laboratories to become involved in this fascinating area. They are of a very fundamental nature, revealing important things about who we are, with more direct payoffs in the future.

On the other hand, we are complementing these basic cognitive science studies with practical clinical investigations in attempts to identify medical indications that may have a direct and more immediate benefit to society. Our biggest limitation has been financial resources, and if those expand, the Zürich Center would potentially also become involved in developing clinical applications.

It is also one of our goals to encourage and support young scientists who wish to carry out research in this field. We are pleased to announce that one of our former grantees, Dr. Charles Nichols, who received a Heffter grant to carry out modern microarray studies of the effects of LSD on brain gene expression, has now been appointed Assistant Professor of Pharmacology at Louisiana State University, in New Orleans. He plans to continue his studies of the effects of drugs on gene expression, and the relationship of gene changes to behavior. The Heffter Institute is pleased to have been able to help this young scientist in his professional development.

In 2004, Heffter President Dave Nichols was also named the "Irwin H. Page Lecturer" by the International Serotonin Club, the new President of which, Mark Geyer, is also a Heffter Board Member. Dave presented an invited lecture in Porto, Portugal titled, "35 Years Studying Psychedelics: What a Long, Strange Trip It's Been." Finally, 2004 also saw the publication of a comprehensive scientific review on the subject of hallucinogens, also written by Dave Nichols. This review, titled simply, "Hallucinogens," was published in the journal Pharmacology and Therapeutics, Vol. 101, pages 131–181 (2004). Scientifically-savvy readers can consult this tome for an up-to-date perspective on what scientists know today about hallucinogens.

The MAPS Online Benefit Auction

In March 2005, MAPS held its first-ever benefit auction. Thanks to the generous donations of MAPS supporters, we listed over 40 different items, using Ebay's charitable giving program, Giving Works. Despite our inexperience with Ebay, the auction was a big success, raising about $20,000!

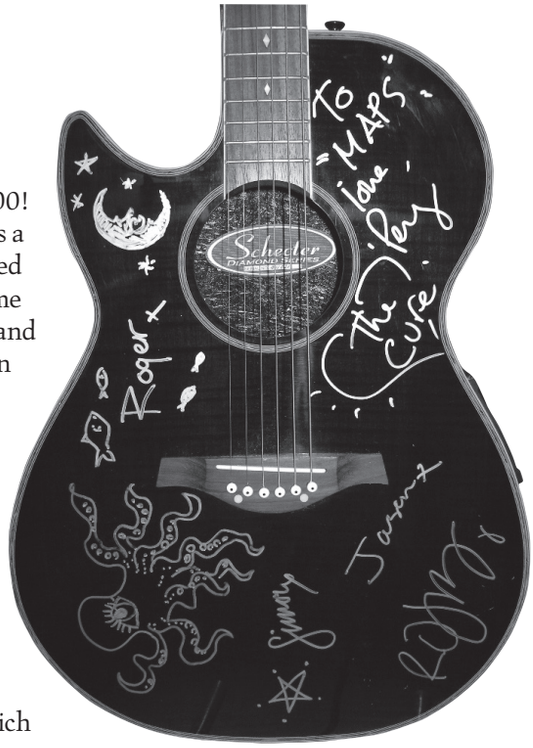
The items donated varied widely, though "psychedelic memorabilia" was a broad theme that many items fit. Psychedelic chemist Sasha Shulgin donated what were probably the most unique items, glassware from his famous home laboratory. MAPS made about $2000 from the sale of these beakers, vials, and flasks. We received books signed by authors like Albert Hofmann, Jonathan Ott, and Myron Stolaroff, as well as blotter art signed by Hofmann, Tim Leary, John Lilly, and Sasha Shulgin. Feminist porn guru Annie Sprinkle (who contributed to our "Sex, Spirit, & Psychedelics" issue) even donated a blotter art tit print.

The highest-selling items were art, including a set of 14 signed, framed prints of psychedelic luminary portraits by Dean Chamberlain, which sold for $2600. (See the inside front cover for an example of Dean's work.) A gorgeous Huichol yarn painting sold for $1500.

Not all the items were psychedelic-specific, however. Authors Tom Robbins and Andrew Weil each signed books specifically for the auction, and the very popular rock band The Cure signed a guitar for the event, which sold for $1025.

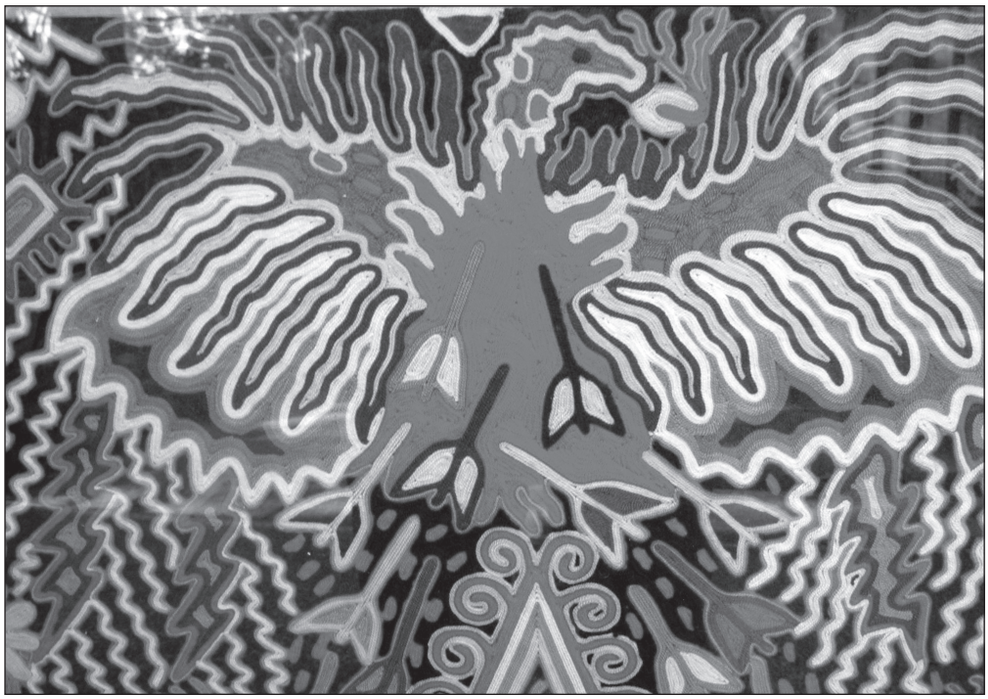
We had an unexpected stroke of good luck in advertising the event when Wired.com ran a front-page feature about the auction, called "It takes money to feed your head." You can read it at: http://wired-vig.wired.com/news/culture/0,1284,66924,00.html, or if you don't want to type all that in, go to www.wired.com, then click on News Archives, then go to 3/18/05.

Thanks to everyone who donated and everyone who bid—you made our first auction a fantastic fundraiser for MAPS' operational expenses. And if you were bid out, don't worry—we plan to continue this project in the future. Contact Brandy Doyle at brandy@maps.org if you already know what you'd like to donate for next time.



Guitar donated by The Cure, $1025

Pyrex flask donated by Dr. Shulgin, $200



Huichol yarn painting, $1500

THE ALBERT HOFMANN FOUNDATION

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WWW.HOFMANN.ORG

Dr. Albert Hofmann celebrated his 99th birthday on the 11th of January, 2005. Still articulate and in good spirits, he celebrated with family and close friends, including a round table exchange prepared by Rick Doblin of MAPS that included many important figures in the psychedelic world. Details are available on our site, www.hofmann.org, and on the MAPS site. Dr. Hofmann is looking forward to reaching his 100th birthday; may we all support him in achieving this outstanding accomplishment. We dearly hope he will live to see research with LSD reinstated via a program being supported by MAPS—an accomplishment which has not been permitted by our government for more than thirty-five years, and which might possibly be achieved within a few months.

A major development for the Hofmann Foundation is the help contributed by a knowledgeable and skilled computer expert, Oliver Maandrake. Oliver has rescued our ability to remain on line, along with the contribution of MAPS for a place on their site. Oliver's talents have completely revitalized the operation of our website. He has now been elected as the president of the Albert Hofmann Foundation.

For just over a year, the Albert Hofmann Foundation has devoted it's entire attention to exposing the very important accomplishments with LSD research from the past. Our government has failed to acknowledge this very important work, thereby excluding large numbers of people from relief of suffering, as well as eliminating the possibility of achieving leaps of understanding and well-being available through the appropriate use of LSD.

Dr. Hofmann, Director of Research at Sandoz Corporation, over a period of 40 years collected roughly 4,000 research papers on LSD and psilocybin. He arranged to have this collection transferred to the Albert Hofmann Foundation in America. With the most helpful financial aid of Bob Wallace, most unfortunately now deceased, and with the help of Rick Doblin of MAPS, funds were made available to have all of these papers placed on the Erowid site

While there were many investigators who experimented with LSD during the 1950's and 60's, a large majority of them were totally ignorant of the proper application of LSD and it's potential for learning and healing. But there were a small number who came to fully understand the nature of LSD and its potential, which resulted in excellent therapeutic results for a widespread number of afflictions. With the help of a group of eager volunteers who were willing to write reviews, we have been able to post a number of investigations reported by knowledgeable researchers. These reviews are available on the Hofmann website, www.hofmann.org. To read them, the easiest was is to open

WHAT'S NEW, scroll down to the reviews listed, and a click will open the chosen item. If the reader is interested in further information, an additional available click will take the viewer to the Erowid site, where the entire paper will be presented.

Another addition to the Hofmann site is the Gary Fisher Collection. Gary Fisher is one of the most knowledgeable researchers with LSD, and has done some excellent work, including cooperating with Joyce Martin, M.D., another very knowledgeable investigator in England. We recommend that interested viewers check out these complete documents on the Hofmann site.

The uphill struggle to gain acknowledgement of this most powerful tool, LSD, is in my opinion based on the fact that most modern scientists, as well as many leaders of government, have become practically completely involved in cognitive processes, which cuts them off from their true center of spiritual realization. A major dynamic of the action of LSD is that it can open our hearts and souls to the extraordinary wonder of who we truly are as human beings, probably the most wonderful realization available to mankind. Let us hope that more and more of us can come to recognize the truth of who we really are, and honor the remarkable tools waiting to help us out.

Myron Stolaroff
Editor, Albert Hofmann Foundation Website

Upcoming Conferences

May 21, 2005
Entheogenesis 2: From Darkness Back to Light
Vancouver, BC, Canada
www.entheogenesis.ca

May 27–29, 2005
Mind States VI: Technology and Transcendence
San Francisco, California
www.mindstates.org

July 16–22, 2005
Amazonian Shamanism Conference
Iquitos, Peru
www.soga–del–alma.org

August 17–25, 2005
Psytopia
Negril, Jamaica
www.psytopia.org

August 18–20, 2005
Toward a Science of Consciousness: Methodological and Conceptual Issues
Copenhagen, Denmark
www.cfs.ku.dk/tsc2005

August 19–20
Science and Response: 2005 1st National Conference on Methamphetamine, HIV, and Hepatitis
Salt Lake City, Utah
www.harmredux.org

November 10–12, 2005
2005 International Drug Policy Reform Conference
Long Beach, CA
www.drugpolicy.org

Reducing Harm and Enhancing Benefit: A Report on MAPS at Burning Man 2004

By Brandy Doyle
(brandy@maps.org)

Every once in a while, we take a break from seeking government approvals and conducting research to actually envision and enact a little piece of the world we hope to create. Last year MAPS returned to the Burning Man Festival to build on the psychedelic emergency services we offered in 2003. Burning Man is a fantastic place to create a vision for the future; it's a surreal landscape of art projects, interactive performances, and high tech music and light. More importantly, it's a dynamic community focused on self-reliance and building relationships outside the bounds of commercialism. Again working with the Black Rock Rangers, the khaki-clad volunteers who patrol Black Rock City, we brought an amazing team of psychedelic therapists and peer volunteers.

Returning from last year were MAPS president Rick Doblin, MAPS-funded Harvard psychiatrist John Halpern, "Sam," a highly skilled underground psychedelic therapist, trauma therapist Kate Sorenson, and myself. Joining us this year were MAPS staffer Valerie Mojeiko, MDMA/PTSD study investigators Dr. Michael Mithoefer and Annie Mithoefer, Harvard neuropsychiatrist Andrew Sewell, and Jill Stammer, the former follow-up coordinator for the Ibogaine Association clinic in Mexico.

> Burning Man is a fantastic place to create a vision for the future

We worked shifts alongside the Rangers, many of whom were also trauma counselors, psychiatric nurses, and other professionals, in their chill-out space, Sanctuary. Throughout the week-long festival, visitors included flustered Burning Man staff, dehydrated participants, feuding campmates, and a number of folks having difficult psychedelic experiences. This group included people on LSD, MDMA, psilocybin, and various combinations.

We tried to provide a safe space for those in difficult psychedelic states, giving them a quiet place and caring company. Depending on their needs, we spoke with them about their experience, helped them find their friends, or let them rest. Many of those in psychedelic states were simply anxious, as was the case of a young woman on LSD and MDMA, who spent several hours in our tent in the company of her boyfriend. Once in a safe space, she was able open up to her experience and found it valuable rather than distressing. Others were more overwhelmed; Annie Mithoefer spent hours holding a young woman and helping her feel safe.

Troubling aspects

One disturbing part of working in Sanctuary was helping several people who had been dosed unwittingly by strangers. Apparently this happened to several Rangers, probably by practical jokers who saw them as authority figures deserving of a "prank." This is unconscionable. Psychedelic states, especially when unexpected, can be frightening and powerful. Launching someone into such an overwhelming experience without consent is akin to psychological rape.

I spoke with a young man who had been dosed this way, whose experience was especially difficult because he had never taken any psychedelics or other drugs in the past. Several days later, he still felt panicky, confused, and vulnerable. As a concerned peer, rather than a therapist or doctor, I simply listened to him with sympathy. He was relieved to hear me say that his reaction was understandable; such an experience would be overwhelming for anyone.

Valerie talked with a Ranger who had been dosed, also his first psychedelic experience. When he arrived, he was confused, angry, and frightened. After assessing his situation, however, and accepting it, he relaxed. An hour later, he decided to leave the tent and go out into the festival to enjoy the music.

Sadly, not all difficulties can be resolved easily within the length of the festival. One young man stayed with us for several days without improving much in his grasp on reality. He hadn't taken any substances in quite some time, and yet seemed to be delusional and unable to care for himself. After observing him for a couple of days, the therapists and psychiatrists on our team determined that he had undergone a true psychotic break, and they transferred him to the care of the medics. It's disappointing to be unable to help someone, but I felt good that our group made a distinction between those who needed understanding and those who needed more involved psychiatric care.

Building on the project

Our second year at Burning Man built on the first year in some exciting ways. First, we're better known and more respected within the Burning Man organization, as we've proven our intentions and our skills. With more

integration and communication within the organization, we are in a better position to help more people.

Second, members of our team participated in the annual "Palenque Norte" talks on psychedelic topics. Rick Doblin spoke on MAPS and its strategy, Valerie Mojeiko discussed the ibogaine outcome study, John Halpern discussed MDMA research, and I participated in a panel entitled, "Psychonavigating Heaven and Hell." We discussed ways to create positive psychedelic experiences and ways to help oneself or others through difficult ones.

We continued to gain value from the project with a talk, entitled, "Psychedelic Harm Reduction: Reducing Harm and Enhancing Benefit with Psychedelic Emergency Services," that Valerie Mojeiko gave at the 2004 Harm Reduction Coalition Conference in New Orleans in November. We are working on other ways to disseminate information on this model, for instance with a short video on dealing with difficult psychedelic experiences, that will be used as part of the drug education curriculum developed by Unitarian Universalists for Drug Policy Reform.

Broader implications

MAPS offers psychedelic emergency services in order to demonstrate a practical model in which the psychedelic community can care for its own, without medical or law enforcement intervention. Knowledgeable peers are often able to help disoriented trippers feel grounded before the situation escalates into something more traumatic. Even when the situation is traumatic, gentle guidance from experienced guides is far more likely to resolve it than the usual medic or police intervention. This is a valuable model for any group of friends using psychedelics, or for festival, concert and rave promoters, who can save money and bad public relations by allowing experienced peers to handle psychedelic emergencies.

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MAPS is increasingly turning to focus on the risks as well as the benefits of psychedelics and marijuana, to obtain a balanced picture of these substances and their use in medicine and in recreation. By lending a hand to help with psychedelic emergencies, we face the sometimes difficult outcomes of people's choices. I think it's important to acknowledge these harms as well (though often I feel that the harms are increased, rather than lessened, by prohibition).

Sandra Karpetas, Iboga Therapy House coordinator and Sanctuary volunteer

We also offer these services in order to train ourselves. Dr. John Halpern is the primary investigator on the MAPS-funded protocol examining MDMA as a treatment for anxiety in advanced stage cancer patients. Also, he and Dr. Andrew Sewell are working on a protocol for LSD and psilocybin as treatments for cluster headaches. Helping people at Burning Man and other events is a rare opportunity to gain experience working with difficult psychedelic states. As these doctors begin to work with subjects in their studies, they will already have experience helping people in altered states, and will have the added advantage of working with other government approved researchers such as the Mithoefers, as well as with an outstanding underground psychedelic therapist.

We are working now on expanding the project for Burning Man 2005. We plan to give more talks on psychedelic research and hope to provide better services for more people. Look for us in the event and camp listings at Burning Man. To learn more about Burning Man, go to www.burningman.com.

From a Sanctuary Client

How I came to arrive at Sanctuary

I came to Burning Man with three friends. We had all been drinking an hour or more before we entered through the Burning Man checkpoint. We continued drinking for about another hour, until we finally reached the area in which we were to camp. During this time, I paid no real attention to where we were going.

I later got separated from my friends at Main Camp. After a while of looking for them it was starting to get dark and cold, so I tried to find my camp on foot (I also lost track of my bicycle). I stumbled from street to street, only making the situation worse. Now I was completely lost, I didn't even know how to get back to the Main Camp. I was panicked and I needed help.

Eventually, a kind stranger brought me to the Ranger Station, where he spoke to one of the Rangers named "Calamity Jane". As he explained to her my situation, I stood off to the side, feeling like a five-year-old, holding a corndog, who just lost his mommy at an amusement park. Since I didn't know the location of my camp, there was little the Rangers could do, except let me stay the night at a place called Sanctuary.

How I felt when I arrived

"Calamity Jane", who I found out later to be a wonderful girl named Brandy, led me into a tent full of cots, blankets, pillows, rugs, and people. Just outside the door of the tent was a cardboard sign. On the sign, someone had scrawled the name "Sanctuary" in black permanent marker.

Brandy led me to a cot, handed me a blanket and pillow, then joined a group of others that were gathered around the entrance inside the tent. Five or six other people were lying in cots. Some of the people standing at the entrance were Rangers (like Brandy), others were not, and it appeared that they were performing some type of shift turnover.

I was no longer cold nor panicked, but still worried about where my camp was, and what this "Sanctuary" place was. That feeling quickly went away as I listened to the shift turnover. The people in the cots were victims of overdose and/or bad trips, mostly from psychedelic drugs. The others were volunteers helping them.

I had sobered up and now I felt embarrassed for being at Sanctuary. I was embarrassed for getting lost and not being prepared for the cold. I felt that I was taking up space in a place that offered understanding and compassion to those who were more deserving than me. I was worried that the volunteers at Sanctuary would feel the same way towards me that I felt towards myself.

After talking with the volunteers a short time, they helped me feel that I was welcome there and I felt better about being there.

What happened to me at Sanctuary

Within the first hour at Sanctuary, feeling embarrassed and ashamed of myself, I went out into the cold to have a cigarette. While I was smoking, Valerie came out with a blanket, wrapped it around my shoulders, and joined me. We talked for a while. She made me feel that it was okay that I was there. I enjoyed her company so much that I wanted to find out more about the people who volunteered to be at Sanctuary.

Rick talked to me about what the volunteers did for a living. The volunteers consisted of doctors, researchers, and assistants all knowledgeable in psychiatric and/or psychedelic studies.

I watched the volunteers work. It was amazing. They worked unselfishly, doing all they could to help those in need. The largest display of compassion that I witnessed came from a doctor named "Annie." Annie helped a girl who wouldn't speak. The girl just held on to Annie like a small child. Annie ended up holding the girl for about 8 hours, until the girl finally lay down to sleep.

Of all the people that received help at Sanctuary, I feel that I received the most. What was supposed to be a temporary shelter from the dark and cold turned out to be a life-changing awakening. I was amazed at the acts of kindness around me.

Why? Slowly through the years, the older I got, the less hope I had for humankind. It seemed that there was so much selfishness and evil in the world. I've spent most of my life focusing on these bad things, rather than the good. This "Look at the Good Side" wasn't a new concept for me, but pushing that concept to the forefront of my mind and putting it into practice was. It has given me new hope. It's not always easy to see through these new eyes, especially after all those years of seeing through the old pair.

This might not seem like a big life-changing awakening, and in itself, it may not be. It's like a butterfly effect though, in that its cascading effect is taking me along paths that I've never ventured. I want to thank all the volunteers at Sanctuary for this. I wish I could give each of you a gift equal in measure to the one you've given me.

The good, the bad, and the ugly

Although I am no psychiatrist, the psychological care that was given to those in need was astonishing to me. I kept expecting someone to flip out and scream or get violent, but it never happened. The psychological environment was calm and quiet. The volunteers were kind, sincere, and attentive to the psychological needs of each individual, including me. The volunteers bent over backwards to see that everyone was physically comfortable by ensuring that everyone had blankets, pillows, water, and anything else that was within their ability to give.

I did observe what I felt were problems at Sanctuary. They are listed below:
Temperature: It was extremely cold at night and extremely hot during the day within the tent.
Cleanliness: The bedding is being shared amongst several people with unknown hygiene.
Limited Beds and Bedding: There was concern at one point that there might not be enough blankets.
Entertainment: (Am I being picky or what?) It might be a good idea to have some cards, board games (Chess), and a radio for music. I know when I've had a bad trip; these things helped me to get my mind off of focusing on what was freaking me out. It may also help to get the subject to relax so that they may open up and talk. And if that doesn't work, the volunteers can entertain themselves while everyone is asleep.

When I left Sanctuary

To help me find my camp, Brandy let me use her bike. She barely knew me but trusted me to return it. This act of kindness and trust, along with the time I spent with the others at Sanctuary, helped me to realize that there are a lot of great, unselfish people out in the world.

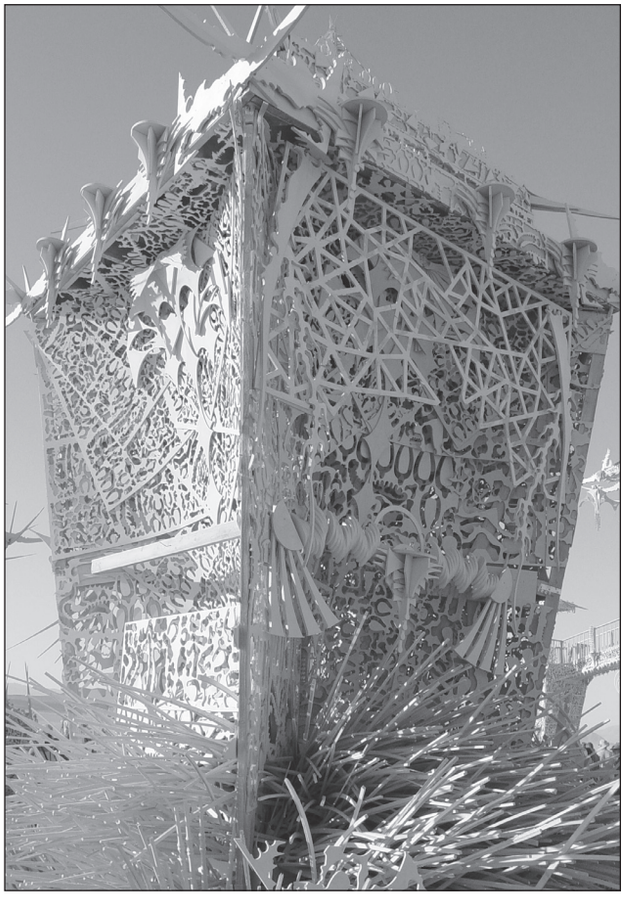
When I got to Burning Man, I thought it was mostly about partying. It wasn't until after I left Sanctuary that I felt that partying is only a small part of what Burning Man is about. Community and helping out one another is the underlying factor that makes Burning Man work as well as it does.

The Rangers and medical facility seem to be funded nicely by Burning Man. Sanctuary to me is just as important as the other two. I've stopped by there a few times to look in and there was always a few people using the facility. Why is it not funded as well as the Ranger Station and Medical Clinic?

It has been two months since I've left Sanctuary. I thought that once I returned to the world in which I normally live, I would lose hope in humankind again. Just the opposite has happened. My hope is stronger and I see more good in people and situations than bad now.

I thank all those who made Sanctuary possible.

Sincerely,
Ryan Gomez
11-4-04



One part of the Temple of Stars, Burning Man 2005

Letters to the editor

The "Kids and Psychedelics" Issue

Hi folks,

I just wanted to say a big thank you to the MAPS team, and to Jon Hanna and Sylvia Thyssen in particular, for the fantastic bulletin. It has tackled a deeply contentious issue with intelligence, courage and wisdom. It will be an invaluable resource for those of us on the drugswork frontline committed to developing new ways of working and as a vehicle for introducing new thinking into the field. Thank you and well done.

Richard Spurgeon

Just a note to say how much I appreciated the latest print version of the MAPS Bulletin—*Kids and Psychedelics*. This is a topic that cries out for such honest discussion, though I'm sure you will get many who disagree, preferring to sweep such an important subject under the rug . . . Just say NO, and keep up the good work.

James Stewart Campbell, MD.
MEDesign

I think congratulations are in order to Sylvia Thyssen and Jon Hanna for putting together an excellent issue on *Rites of Passage: Kids and Psychedelics.* The stories and interviews reveal a bit of grace that all could apply in these type of situations and to our turbulent times.

I have talked to my son since he was 11 about these wonderful plants and substances, and he is used to our friends coming over for discussions. He knows what the different plants do, that they must be treated with respect. Though he has a mental picture of it all, his experiences will ultimately be different in these fields of study, as he has unswerving support from us and a wide community who know him and have his interest at heart.

More and fuller education is needed for our young ones, so they can make informed choices. I think the bulletin is becoming a tool for a wider audience, and this kind of issue can be shared out to those who have never experienced these states of bliss and challenge, and will go far in opening communications.

Again, a nod to the editors!
Gwyllm

The article in your current edition of the MAPS Bulletin, *A Father and Daughter Journey Together,* page 15, is an important article pursuant to MAP's interest in rites of passage. The entire area of study of rites of passage in our society is one that deserves more attention as it addresses basic underlying approaches to personal growth and well being.

Howard S. Lotsof
President
Dora Weiner Foundation

Harvard MDMA/Cancer Study

Hello MAPS,

I was very interested in your article in Yahoo today on the use of ecstasy in cancer patients. As a surviving family member of several terminal cancer patients, I think what you are doing is very admirable.

I know that from watching both of my grandfathers die from this disease there is very little one can do to comfort someone when they are near the end and in pain. I hope that your research goes well.

Thank you,
J.J. Hanna

Letters to the editor, continued

to whom it may concern,

i happened upon an article regarding your use of mdma for terminally ill cancer patients today, and i simply wanted to say thank you. though i have no personal relationship to either the use of mdma or the experience of cancer, i browsed your website extensively and am very happy to know that someone has taken the initiative to make controlled psychedelic use an issue. i have long suspected psilocybin to be a profoundly beneficial substance in rectifying mind/body disparities and hope you do more research with it. anyway, i thank you once again for being bold enough to do what you are doing. i am nothing but a concerned college student without even the funds for your student membership, but if you need any type of help at all with anything, even simply a kind word, there is a generation that stands behind you.

Sincerely,
Billy Schweig

Membership

. . . On the subject of MAPS membership: Even though I am convinced that I would benefit from MDMA as say a prescription drug for PTSD, I don't believe that I will ever enjoy the fruits of MAPS's efforts, as they are concentrated today on specific use of MDMA within a psychotherapeutic setting and even this will take years to really get of the ground. (My joining would be like you joining the Israeli Prosthodontic Society because you have teeth and you know me). Nevertheless, I have decided to subscribe to MAPS because of the Vision you outlined for me in our meeting. I would like to share the vision with you in a concrete way (even though we probably won't see "licensing" of MDMA to the general population in our lifetime).

The other reason I want to subscribe is to support you morally, as you are in effect supporting me by providing serious, logical, rational and accessible information on an issue of so much importance to me.

D. Weiss
Har Gilo
Jerusalem

In a recent letter to MAPS, imprisoned LSD manufacturer Leonard Pickard asked us to let people know that he would appreciate correspondence from the psychedelic research community. Leonard was busted in 2000 in the largest LSD lab seizure in DEA history. He was convicted and sentenced to life without parole in 2003. To reach him, write to:

William Pickard
82687011
USP Victorville
POB 5500
Adelanto, CA 92301

YES, I would like to join MAPS and receive the quarterly Bulletin!

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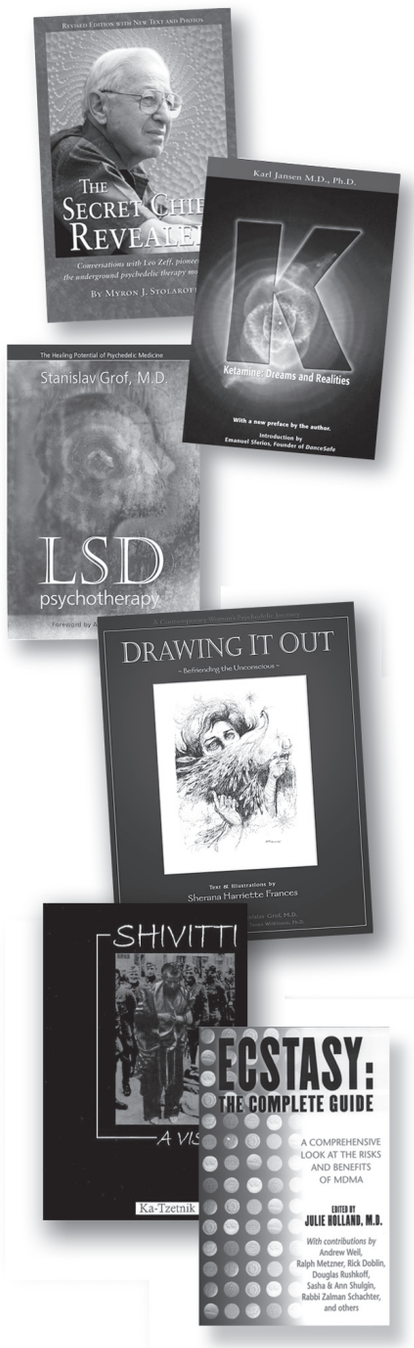

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ALSO AVAILABLE FROM MAPS

1. ***The Secret Chief: Conversations with a Pioneer of the Underground Psychedelic Therapy Movement*** by Myron Stolaroff; new edition forthcoming, check web site for details: www.maps.org
2. ***Ketamine: Dreams and Realities*** by Karl Jansen, MD, PhD • 355 pp, **$14.95**
3. ***LSD Psychotherapy*** by Stanislav Grof, MD • 352 pp, **$12.95**
4. ***Drawing It Out: Befriending the Unconscious (A Contemporary Woman's Psychedelic Journey)*** by Sherana Harriette Frances • 128 pp, **$19.95**
5. ***Ecstasy: The Complete Guide*** by Julie Holland, MD • 281 pp, **$15.00**
6. ***Shivitti: A Vision*** by Ka-Tzetnik 135633 • 144 pp, **$15.95**

SHIPPING FOR BOOKS: *U.S. and Canada—Priority mail (3–7 days):* ***$4.00****, add $1.50 per additional book. Overseas airmail rates (7–10 days):* ***$12.00****, add $10.00 per additional book. Overseas surface mail rates (4–6 weeks):* ***$5.00*** *per book.*

MAPS MEMBERSHIP INFORMATION

MAPS IS A MEMBERSHIP-BASED ORGANIZATION working to assist researchers worldwide to design, fund, conduct, obtain governmental approval for, 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 members.

MAPS has previously funded basic scientific research in both humans and animals into the safety of MDMA (3,4-methylene-dioxymethamphetamine, 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 join MAPS in supporting the expansion of scientific knowledge in this area. Progress is possible with the support of those who care enough to take individual and collective action.

THE MAPS BULLETIN

Each *Bulletin* will report on MAPS research in progress. In addition to reporting on research both in the United States and abroad, the *Bulletin* may include feature articles, reports on conferences, book reviews, Heffter Research Institute updates, and the Hofmann Report. Issues raised in letters, calls, and e-mail from MAPS members may also be addressed, as may political developments that affect psychedelic research and use.

Rick Doblin, MAPS' founder and President, earned his PhD in Public Policy from the Kennedy School of Government at Harvard University. Doblin was also in Stan and Christina Grof's first training group to receive certification as a Holotropic Breathwork practitioner.

Brandy Doyle, Communications and Projects Director, edits the *MAPS Bulletin*, writes website and e-mail updates, and coordinates educational projects. Her interests include drug policy reform, healing, and ecstatic experience. She graduated from New College of Florida in 2001 with a degree in cultural anthropology.

Valerie Mojeiko, Membership and Sales Coordinator, enjoys building and corresponding with the MAPS community. She is an aspiring drug researcher and has recently begun working on a MAPS-sponsored study of ibogaine therapy in the treatment of drug addiction. Other interests include GHB and MDMA research.

Nicole Tavernier, Director of Operations, has a background in various fields of business and is currently working on her degree in Business Administration.

"I assert that the cosmic religious experience is the strongest and the noblest driving force behind scientific research."

—Albert Einstein

The ecstasydata.org pill testing project, cosponsored by MAPS, DanceSafe, and Erowid, needs funds to continue operating. See page 17 for more information on this crucial project.