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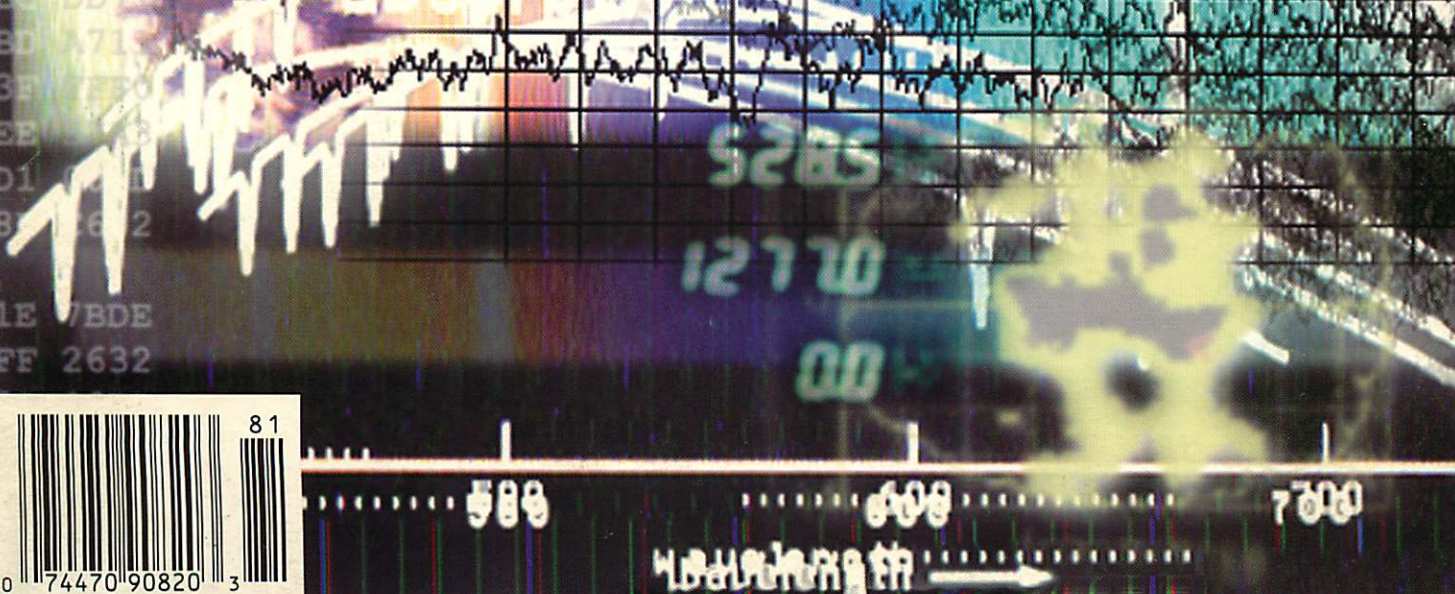
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**Poem embedded
in cover illustration:**

psycholuminescent discharges
a wave of bursting chrome
my dragon mind soars into this white sky
deep down surface turns to mercury
orbiting the iron cage we call reality
this planet shrinks in size and meaning
my sunhead splatters light across the spheres
shaken to plasma level
transform into a spiral of myoelectrical frenzy
— Daniel Luther

COVER ILLUSTRATION:

Trip Science

“The idea behind this image was to use elements from my own research (and from science in general) in a purely visual-aesthetic context, stripped of their scientific meaning. PET scans, brain waves, electromagnetic spectra, diagrams and molecules all intermingle to create the impression of a psychedelic trip. Scientific data representation can be enormously visually appealing. In my graphic, I wanted to play with this artistic aspect of science and, for once, ignore the abstract meaning behind.”

— Alex Gamma

Alex Gamma is a neurobiologist involved in MDMA research. His update on Swiss MDMA research is featured in this issue on page 4. He lives in Zürich, Switzerland, and can be reached by electronic mail at gamma@bli.unizh.ch.

Daniel Luther is a biologist and creator of verbal and sonic forms to explore new psychosensory realities.



MAPS

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Back cover photo of Nicholas Saunders by Richard Yensen

MAPS (Multidisciplinary Association for Psychedelic Studies) is a membership-based organization working to assist psychedelic researchers around the world design, obtain governmental approval, fund, conduct and report on psychedelic research in humans. Founded in 1986, MAPS is an IRS approved 501 (c)(3) non-profit corporation funded by tax deductible donations. MAPS has previously funded basic scientific research into the safety of MDMA (3,4, methylenedioxymethamphetamine, *Ecstasy*) and has opened a Drug Master File for MDMA at the U.S. Food and Drug Administration. MAPS is now focused primarily on assisting scientists to conduct human studies to generate essential information about the risks and psychotherapeutic benefits of MDMA, other psychedelics, and marijuana, with the goal of eventually gaining government approval for their medical uses. Interested parties wishing to copy any portion of this newsletter are encouraged to do so and are kindly requested to credit MAPS including name and address. The MAPS newsletter is produced by a small group of dedicated staff and volunteers. Your participation, financial or otherwise, is welcome. © 1998 Multidisciplinary Association for Psychedelic Studies, Inc. (MAPS) 2121 Commonwealth Avenue, Suite 220, Charlotte, NC 28205. Phone: 704/334.1798. Fax 704/334.1799. Internet: info@maps.org, and <http://www.maps.org>

Letter from Rick Doblin, MAPS President

DEATH HAS A WAY OF FOCUSING ONE'S ATTENTION on what is truly important. In symbolic form, the death/rebirth process is a frequent aspect of psychedelic psychotherapy, and the extent to which a patient is able to experience that process fully contributes substantially to therapeutic outcome.

THIS ISSUE of the MAPS Bulletin contains a posthumous tribute to a pioneering psychedelic researcher; Dr. Jan Bastiaans, a Dutch psychiatrist who explored the psychotherapeutic use of LSD in the treatment of concentration camp survivors suffering from post-traumatic stress disorder (*p. 18*). We also mourn the loss of a psychedelic activist; Nicholas Saunders, MAPS' partner in England in the struggle to open the door to human clinical research into the benefits and risks of MDMA (*p. 61*). Nicholas died in an automobile accident while in South Africa conducting research on iboga for a book he was writing about the religious use of psychedelics.

IN A DREAM shortly after I learned about Nicholas' accident, I found myself speaking about him with an old friend of mine. We used a curious phrase, noting that Nicholas was "cracking paradise," perhaps both simultaneously cracking out of and into paradise. We remarked that his death had shattered his creation of a form of paradise on earth—right before his death he was by all accounts happier than he had ever been in his life. We then speculated on the possibility that his death may have also catapulted him into some mythical paradise in heaven. We decided that his life had prepared him well for the uncertainties of death. Though not a saint, Nicholas seemed worthy of heavenly paradise, if it exists, as result of his kindness and generosity.

UPON AWAKENING, I imagined that if Nicholas had known ahead of time when he was going to die, he probably wouldn't have changed anything about his last years. After some self-reflection, I reconfirmed that working with MAPS, despite its frustrations and however limited the accomplishments, is a direct expression of how I want to live my life. I am deeply grateful to all MAPS members who have enabled me to do work I love.

I AM PLEASED TO REPORT that progress is being made on several research projects that MAPS, the Heffter Research Institute (*p. 42*) and the Albert Hofmann Foundation (*p. 43*) are working to support. The FDA is reviewing the research protocol submitted by Dr. Charles Grob, Harbor-UCLA Medical School, designed to evaluate the use of MDMA in the treatment of emotional distress and physical pain in end-stage cancer patients. Dr. Donald Abrams' historic study of the effects of smoked marijuana on HIV patients is about to begin at UC San Francisco. Dr. Evgeny Krupitsky's study of the use of ketamine in the treatment of heroin addicts is on-going at the Leningrad Regional Center for Alcoholism and Drug Addiction Therapy. Data analysis is well underway in the long-term follow-up study of 40 subjects who volunteered to take LSD in the phenomenological research conducted by Dr. Oscar Janiger from 1954-1962.

MAPS HAS ALSO BEGUN TO COLLABORATE with the organizers of a small upcoming gathering of Psychedelic Elders at a meeting planned for the fall and sponsored by the Institute of Noetic Sciences and the Fetzer Foundation. The project is designed to record for posterity the elders' reflections on the impact that their use of psychedelics has made on their personal spiritual development. All these projects seek to demonstrate that psychedelics or marijuana can, when used skillfully, enhance life.

BEST WISHES
TO ALL for another Spring and another crack at paradise. – Rick Doblin, MAPS President

UPDATE

MDMA research in Switzerland

Alex Gamma and F.X. Vollenweider, M.D.
Psychiatric University Hospital
Research Department



Alex Gamma



F.X. Vollenweider, M.D.

EIGHTEEN MONTHS HAVE PASSED since we presented several studies into the effects of MDMA on drug-naive subjects that were to be conducted in our laboratory (see MAPS Vol. VI, No. 3, Spring 1996). Most of the experimental work and parts of the data analysis involved in these studies have been completed. First results will be published soon.

Positron Emission Tomography (PET) & Electroencephalography (EEG)

A 1.7 mg/kg dose of MDMA was given orally to 16 MDMA-naive subjects in a placebo-controlled, double blind design. PET and EEG were recorded simultaneously, and psychometric self-ratings were performed after the scans. Data acquisition has recently been terminated and a preliminary analysis indicates that MDMA leads to marked changes in regional cerebral blood flow compared to placebo. This effect is most notable in the cerebellum and the prefrontal cortex. EEG analysis is in progress and will involve 3D-tomographic localization of active neural populations using the new LORETA methodology (LORETA=Low Resolution Electromagnetic Tomography).

Acoustic startle reflex & Stroop Test

Thirteen MDMA-naive subjects were included in this placebo-controlled, single-blind study. After receiving 1.7 mg/kg MDMA or a placebo, measurements of prepulse inhibition (PPI) of the acoustic startle reflex, a Stroop test and psychometric rating scales were performed. Blood pressure and temperature were monitored pre- and post-drug. The PPI/startle data obtained was compared with animal data from Prof. Mark Geyer, UCSD, who used the same dose of MDMA in rats. Surprisingly, in humans, comparable doses of MDMA altered prepulse inhibition in the opposite direction than in rats. These divergent findings might be due to differences in neurotransmitter release profiles, receptor mechanisms or both. It appears that extrapolation from animal to human data is difficult and further mechanistic studies are needed to elucidate species related differences. Also the Stroop findings were of some interest. This task taps selective attention and distractibility, i.e. the (dis)ability to focus on one dimension of a stimulus while ignoring other, irrelevant dimensions. We found that a single dose of 1.7 mg/kg MDMA did not affect Stroop performance. Apparently, processing of selective attention was intact, although most subjects reported that under MDMA, their thoughts

would often drift off during the test, while a more "automatic" level of their minds seemed to take control and obviously managed the test without much difficulty.

Psychometric ratings & vital signs

Analysis of the psychometric rating scales (The Altered States of Consciousness questionnaire APZ-OAV, the EWL mood rating scale) revealed an MDMA-induced increase in well-being and positive affect. Thought disorder and first signs of loss of body control were present, as well, though not associated with any significant degree of anxiety. Visual perception was characterized by optical illusions and an intensification of colors, but no hallucinations occurred. Objects and persons in the immediate surrounding gained new meanings. Sense of time and space was profoundly altered. Locomotor stimulation in the laboratory setting was minimal. At the dose tested, MDMA produced a significant elevation of blood pressure, while there was only a small, non-significant rise in body temperature (0.2 - 0.5°C)

Effects of regular Ecstasy use

Currently, we are conducting a study looking into the long-term effects of heavy Ecstasy use. We are recruiting preferential Ecstasy users who have consumed at least 100 doses. Detailed drug histories of subjects are being taken so that the possible effect of drugs other than MDMA can be brought into data analysis. Areas to be examined are attention (Stroop Test), memory (Auditory Verbal Learning Test), brain waves (EEG), cerebral blood flow (PET) and the acoustic startle reflex. The experimental part of this study will be concluded in Spring/early Summer 1998. For more information on these projects, please contact us at the address below. •

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Ibogaine Therapy in Chemical Dependency and Post-traumatic Stress Disorder:

A Hypothesis Involving the Fractal Nature of Fetal REM Sleep and Interhemispheric Reintegration



Carl M. Anderson, Ph. D.

"Banzie (the members of the Bwiti, properly, "those of the chapel") also say that eboga enables a man or woman to return to infancy and to birth - to the life in the womb... by returning initiates to the uterine condition, a condition in any case very close to life in the land of the dead [and so] restores them to their own integrity - their pristine conditions."

—From *Bwiti: an Ethnography of the Religious Imagination in Africa*. James W. Fernandez, Princeton University Press, 1982, p. 491.

INSPIRED FIRST by a synchronistic meeting with Dr. Deborah Mash and Dr. Julie K. Staley, then by enigmatic descriptions of Bwiti lore, I have developed a hypothesis supporting the use of Ibogaine, as well as other analogs or compounds with oneiric [dream inducing] properties for the treatment of chemical dependency and post-traumatic stress disorder (PTSD).

In short, Ibogaine interacts with many neurotransmitter systems to drive amygdaloid-brainstem dynamics into a critical oneiric state, with fractal time patterns of phasic events similar to those existing during fetal rapid eye movement (REM) or Active sleep. In effect, Ibogaine pharmacodynamically destabilizes the functional connectivity of the brainstem and its habitual interactions with bihemispheric temporal lobe structures such as the amygdala, creating a functional state of plasticity in these areas which facilitates the reintegration of traumatic memories by altering psychopathological interhemispheric dynamics, ultimately dissipating addiction-related behavioral patterns. This psychotherapeutic oneiric state is similar to the complex behavioral states of REM sleep and attentional orienting in that they all share the signature of the self-organized critical state, $1/f$ (one-over-f) patterns of activity involving many levels of the nervous system from the subcellular to the behavioral.

Observed similarities between the neurophysiology of the REM state and that induced by selective psychedelic drugs such as LSD or psilocybin further support this hypothesis as does the observation that REM sleep, which is disrupted by drug abuse and traumatic experiences,¹⁻⁵ has been shown to be essential for emotional regulation, learning and memory consolidation.

Recent findings by many researchers, including the author, that stress or abuse in early life induces abnormal hemispheric functional asymmetries, disrupting REM sleep and predisposing patients to addictive and self-defeating behaviors resulting from impaired interhemispheric integration,⁶⁻¹¹ support this new view of the psychobiology and treatment of addiction.

How it all got started

I met Dr. Deborah Mash and Dr. Julie Staley in 1994 while I was working at Florida Atlantic University on my Ph.D. dissertation which involved using fractal geometry to study the structure of REM sleep in fetal animals and its disruption by early stress. The occasion was a guest lecture given at the University of Miami by my mentor at FAU, Dr. Arnold Mandell, a pioneer in the application of chaos and nonlinear dynamics to psychiatry and neuropharmacology.¹²⁻¹⁷ Before the talk, Dr. Mash had taken me and others to lunch. There, during the rich conversation that ensued, Dr. Staley spoke of evidence for the oneiric properties of Ibogaine, and it suddenly became clear to me that this might be related to the fractal patterns of REM sleep that I was investigating.

After completing my dissertation in 1995, I began working on the effects of early sexual or verbal abuse in young adults, and continued my work on the effects of early deprivation with Dr. Martin Teicher and Dr. Friedric Schiffer at McLean Hospital.^{6,9,18,19} Previous work by Dr. Schiffer and Dr. Teicher has demonstrated the profound and persistent neural and psychological changes induced by early trauma in EEG evidence of asymmetric hemispheric activation during the recall of past trauma.¹⁰ Further, abnormal hemispheric EEG coherence and reductions in the size of the corpus callosum were observed by Dr. Teicher and others with analysis of MRI images from abused and neglected children treated at McLean Hospital.¹¹ Based on his clinical experience and the seminal work of Roger Sperry,²⁰ Dr. Schiffer has proposed, that we all have, in fact, two minds or personalities, one in each hemisphere.^{21,22} Using a new therapeutic technique called lateral visual field stimulation (LVFS), he has observed clinically a dramatic manifestation of disparate dual personalities in subjects who have suffered from abuse or PTSD during their lives. In effect, Dr. Schiffer proposes that our two hemispheres are like joined minds, mental Siamese twins, who learn in early life to function harmoniously sharing their unique specializations. This harmony is fragmented by abuse or trauma, which unbalances the twins and leads to an unending pathological struggle for dominance resulting in a wide range of personality disorders.²² For example, one twin, the right in many cases, retains the abuse memory and

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as a result is less mature, and will take control in times of stress or anger, sabotaging the good efforts of the more mature side. This replaces the Freudian concept of the unconscious with Sperry's findings of two minds. Interhemispheric struggles, primarily a result of child abuse, may be the fundamental psychological root of drug addiction. In a seminal chapter, entitled "The euphorohallucinogens," Mandell and Geyer¹⁴ described how normal dual hemispheric organization may be particularly relevant to conceptualizing the neurobiological basis of psychedelic states:

"It seems clear that the lateral specialization of the human cerebral cortex provides two distinct and complementary modes of consciousness and that they function more or less in concert with one another. By virtue of its focal organization and sequential processing, the dominant (usually the left) side is best suited for verbal, mathematical, and analytic thought, whereas spatial orientation, artistic talent, visuoconstructive ability, and abstraction of part-whole relationships may well depend on the more diffuse organization that usually characterizes the right hemisphere. The startling perceptual experiences produced by hallucinogenic drugs may be more comprehensible in light of the capacity of the nondominant hemisphere for simultaneous integration of information. The heteromodal influx of perceptions produced by increased attentiveness and sensitization to sensory stimuli may overwhelm the systematic sequential processing of the language hemisphere and invoke the analogical integrative mode of the right hemisphere to consolidate the perceptual flood. However, with particular doses of hallucinogenic drugs, many subjects experience mind trips, bursts of ecstatic and sequentially logical thoughts, or the insight accompanying discovery (p. 592)."

Further, they anticipated the far reaching implications of interhemispheric warfare in psychotherapeutic approaches to the treatment of psychopathology:

"Supportive psychotherapy, often an alliance between the therapist and only one of the patient's hemispheres based on a common enemy—doctor and patient agree that the mother is the villain—makes one side dominant, eliminating conflict by splitting, just as tricyclics [antidepressants] exaggerate the influence of one lobe (p. 597)."

In contrast, Dr. Schiffer's LVFS-based psychotherapy may allow clinicians to bring the psychopathological struggles between the twin hemispheres to the patient's full awareness, facilitating a degree of resolution and harmony. Within this unique and creative perspective of abnormal relationships between the two hemispheres or minds, LVFS therapy can provide a fundamentally new understanding of traditional psychotherapeutic techniques, as well as controversial and groundbreaking techniques such as eye movement desensitization reprocessing [EMDR²³] and transcranial magnetic stimulation [TMS²⁴]. In addition, this view can inform traditional and innovative psychopharmacological approaches (e.g., the psychotherapeutic use of psychedelics). After researching the ethnological literature and many anecdotal accounts of addicts over the last four years, I believe that Ibogaine, when used in a proper long-term supportive social and psychotherapeutic context, can end drug addictions and possibly the underlying PTSD, by promoting, especially during the cognitive evaluation phase, balanced

hemispheric interactions. Just as The Fang adopted the use of eboga to promote social and religious harmony during colonialism-induced social and cultural fragmentation,²⁵ our world society which is experiencing a similarly deep social fragmentation, accelerated by the soulless march of materialism and concurrent environmental degradation, and marked by escalating drug addiction and suicidal behavior among our youth, may benefit from judicious use of Ibogaine or related agents. Ibogaine, possibly in combination with hemispheric reintegration techniques, may potentially free the minds of many individuals (addicts, rape victims, violent criminals, victims of child abuse, war or natural disasters) suffering from the debilitating emotional dysregulation resulting from hemispheric disharmony.

Publishing this paper in MAPS is an attempt to present this hypothesis in the context of new perspectives on the role of fractal patterns and abnormal hemispheric interactions in brain function to an "open minded" or "hemispherically-balanced" audience for wider constructive criticism. In the following sections I will attempt to give the reader a useful introduction to fractal concepts and why they provide an essential point of view for understanding brain/mind. Fascinating connections among REM sleep, attentional and psychedelic states will be established using fractal concepts leading to a description of Ibogaine therapy in the context of the involvement of cortical-amygdaloid-brainstem loops in hemispheric disharmony.

Neurophysiological Similarities Between REM Sleep, Orienting and Psychedelic States

In 1979 Drs. Barry Jacobs and Michael Trulson published a speculative article in the then newly formed journal *Trends In The Neurosciences* entitled "Dreams, Hallucinations, and Psychosis—the Serotonin Connection," suggesting a connection between hallucinogenic drugs, dreams and amphetamine psychosis.²⁶ Previously, they had developed an animal behavioral model of the effects of LSD and related hallucinogens in cats.²⁷ This model was based on the observation that cats given LSD demonstrated two dose-dependent behaviors (i.e., limb flicking as if the cats were trying to remove some foreign substance from their paws and abortive grooming as if they had been interrupted during the normal grooming act) that were not present with administration of non-psychedelic drugs. Recordings from the brainstem of cats demonstrating these behaviors confirmed the electrophysiological observations of Dr. George Aghajanian that the behavioral effects of these drugs were associated with a suppression of a complex network of serotonergic neuron cell body groups (I will call this the S-Net) in the brainstem reticular formation (RF), primarily in the dorsal raphe nucleus, DRN.²⁸ During the late 1970s Jacobs et al. had also been investigating the changes in activity of 300 or so of 60,000 serotonergic (5-HT) neurons which are clustered into 8 interlinked nodes or raphe nuclei, during the sleep-waking cycle in cats and had discovered that the onset of REM sleep was accompanied by the same suppression of activity in the DRN.²⁹

They summarized their ideas in the following way:

"Thus, at the cellular level, there is a striking parallel between brain activity following administration of hallucinogenic drugs and [that]

during REM sleep: a significant depression of the electrical activity of the brain's serotonin-containing neurons. The change in raphe unit activity seen spontaneously across the sleep-waking cycle may be the key to understanding altered states of consciousness. In response to a drug such as LSD, a key brain mechanism such as the serotonin system may function in a manner which is appropriate for a different behavioral state (e.g., the discharge rate and pattern during the drug experience may be that of [REM] sleep rather than active waking.) (p.279)."

In short, cats administered LSD appeared to be dreaming while awake, although this idea remains controversial,³⁰ in part due to new findings of dissociations between drug effects on behavior and average DRN activity.³¹ In a later section I will make the case that fractal patterns of reorganized S-Net unit activity, in concert with dynamic changes in other brainstem and forebrain areas are more relevant to understanding drug effects than average DRN unit activity.

Do cats dream?

Work in the early 1970s by Michel Jouvet and collaborators involving small lesions in the pontine reticular formation (PRF) of cats has provided a partial answer to this question.³³ The PRF, located just behind the DRN in the midbrain, is linked with the source of ponto-geniculo-occipital (PGO) waves which are responsible for phasic eye movements and the twitching of whiskers, ears or paws in dreaming cats. Just behind the PRF is the bulbar RF, site of origin for postural atonia or paralysis of body movements and loss of neck muscle tone called nuchal atonia (NA). NA becomes apparent when anyone tries to sleep in an airplane seat; as one goes into REM sleep NA occurs and one's head drops, usually waking him or her up. Oneiric behavior is observed in cats with small lesions in PRF after DRN activity shuts down and they enter REM sleep. As REM sleep begins, the cat, instead of having an episode of NA suddenly raises its head and moves about as if it were watching something. This type of behavior, called an orienting response, is usually associated with a heightened state of arousal and attention. For example, if you have ever watched a cat when birds are nearby, you have probably observed the birds eliciting an orienting response in the cat. During oneiric behavior, the nictitating membranes still cover the open dilated eyes as the cat pursues nonexistent prey.

Many unpredictable patterns of oneiric behavior can occur; for example, predatory attack with play-like pawing, followed by biting and even full rage responses can be observed (sometimes in cats who are always very friendly when awake). Another pattern is the occurrence of non-goal directed grooming behavior. In this case the cat will start licking its forelegs or the cage floor but would not notice a piece of paper placed on its fur. This is strikingly similar to the abortive grooming and limb flicking seen with LSD, with the exception that cats treated with LSD haven't entered slow wave sleep prior to displaying these behaviors.

1/f Fractal Patterns in Time: The Common Ground of REM Sleep, Orienting and Psychedelic States

In the same year as the Jacobs and Trulson paper, Adrian Morrison proposed a connection between REM sleep and attentional states such as orienting.³⁶ His thesis, that cats and

other mammals are in a state of more-or-less continual orienting during REM sleep, is profound in its implications for conceptualizing states of consciousness. This idea was based on his observations that similar amplitudes of PGO waves were evoked in cats during normal orienting responses to loud sounds, during normal REM sleep when behavioral orienting is absent and during elicited oneiric behavior in cats with PRF lesions.³⁷ Other work has demonstrated that PGO waves are suppressed by 5-HT, so that cats chronically administered 5-HT synthesis inhibitors generate many more PGO waves, more orienting and display disrupted REM sleep for a period of days.^{38,39} In support of Morrison's idea, Yamamoto et al.^{40,41} have observed common 1/f fractal patterns (explained below) in recordings of interspike intervals in the RF and other regions of the cat brain during orienting to birds and during REM sleep, only not during other types of sleep or quiet wakefulness.

Further, they observed that this 1/f fractal pattern is diminished by serotonergic agonists, indicating that tonic S-Net activity during quiet wakefulness and slow wave sleep (SWS) is not conducive to the 1/f state.⁴² In fact, nodes in the cat S-Net, such as the DRN show total inactivation during REM sleep and at the start of orienting responses, but become very active at the offset of these states.^{43,44} For example, during REM sleep S-Net activity resumes at the end of an epoch but at twice the rate of quiet wakefulness; this suggests that REM sleep is, at least in terms of 5-HT systems, a prolonged orienting response. Also, brain states when most S-Net nodes are inhibited or destabilized, such as during REM sleep, orienting, and after LSD administration, exhibit unique 1/f fractal patterns of activity in time.

Interestingly, a study from 1957 by Schneider and Sigg⁴⁵ shows that cats given Ibogaine behave similarly to cats displaying oneiric behaviors. They found that cats given Ibogaine (2 to 10 mg/kg i.v.) show an almost immediate arousal response with rage (similar to that seen with electrical stimulation of the RF): the cats hiss as if trying to scare off an imaginary threat. This may be due to loss of global habituation to the test environment, resulting from Ibogaine's possible effect on the amygdaloid-brainstem pathways. EEG patterns which, prior to the injection, were characteristic of non-arousal, shifted with Ibogaine to a pattern similar to that seen in REM sleep or during orienting responses. In addition, these cats displayed ataxia and a clonic extension of the hind limbs and front legs, not unlike the movement problems encountered in dogs or humans administered Ibogaine.

So, in cats at least, Ibogaine seems to induce a REM-like state with oneiric behaviors more characteristic of PRF lesions, showing more force and intensity than low doses of LSD. I do not mean to imply by this description that Ibogaine merely induces REM sleep; in fact Ibogaine possesses a uniquely complex polypharmacology.⁴⁶ This is often seen as a disadvantage for drugs (e.g., drugs are termed "dirty" as opposed to "clean" if they don't target a specific neurotransmitter receptor); however Ibogaine's more widespread actions may in fact explain its extraordinary behavioral effects. Although this drug-induced oneiric state has many of the behavioral and neurophysiological markers of REM sleep without atonia in cats, it has other unique properties which

may result from a sudden massive destabilization of the normal behavioral-state-rhythmicity of the tonically firing S-Net,⁴³ olivocerebellar systems, and other linked RF and forebrain sites. Ibogaine affects a complex dynamic network of interdependent dopaminergic, noradrenergic, opioid, cholinergic, and NMDA receptors and systems.^{46,47} Ibogaine, like LSD, is “switching the channel” from normal attention to a dream-like state, but it is also jolting the S-Net and RF into a unique state, one that may require a return to activity patterns more characteristic of fetal ontogeny to reinstate normal functional organization. In a sense, following Ibogaine treatment, the RF and associated brain regions are functionally “born again.”

Now that we have established a few connections between the effects of LSD and Ibogaine and the behavioral states of REM sleep state and orienting in cats, we can explore how Ibogaine may work through long-range fractal correlations provided by a “fetal REM-like” state and reexperienced memories in humans suffering from chemical addiction and/or PTSD. First it is necessary to review the important role of REM sleep during development and some of my recent findings concerning the fractal-in-time nature of fetal REM sleep phasic processes and their disruption by early stress. In the following sections I will describe and apply ideas from the science of complexity that may help us visualize these unique states with $1/f$ patterns.

The Fractal Geometry of Time in Neurobiology and Fetal REM sleep

Only a decade ago, patterns of bunching or clustering in the opening and closing events of ion channels, quantal release of neural transmitters, or spontaneous patterns of firing neurons, heart beats, and breaths in the fetus or even cars on an expressway were perceived as random and uncorrelated noise-like processes.⁴⁸ A revolution in the scientific perception of such noisy natural processes was started with Benoit Mandelbrot's 1983 book *The Fractal Geometry of Nature*.⁴⁹ Fractal geometry has evoked a fundamentally new view of how living and nonliving matter is organized into complex recursively nested patterns over multiple levels of space or time. Patterns termed “fractal” or “self-similar” are recurrently irregular in space or time, with themes repeated like the layers of an onion at different levels or scales.

The term fractal applies to objects in space or fluctuations in time that possess a form of self-similarity: fragments of the object or sequence can be made to match the whole object or sequence by shifting and stretching. Another way to think of fractals is in terms of clusters of points or events in space or time. Self-similar clusters have smaller clusters within larger clusters of clusters. Clouds, broccoli, or the surface of the brain can all be visualized as clusters of clusters in space. These clustering patterns, described as bursts within bursts, are a universal characteristic of spontaneous behavior in living systems of cells, neurons and the early motility of embryos of both vertebrates and invertebrates.⁵⁰ Self-similar burst-within-burst patterns are ubiquitous, observed in ion channel currents fluctuations,⁵¹ neurotransmitter release,⁵² neuronal firing patterns,⁵³ the searching patterns of animals,^{54,55} human judgment and decision making^{56,57} and traffic patterns both on expressways and over computer networks such as the

World Wide Web.⁵⁸ Examples of the burst or clustering patterns are, in fact, familiar to anyone who has driven in or observed highway traffic from a passing airliner. Rush hour or holiday traffic slows to a stand still due to the tendency of nearby automobiles to spontaneously cluster together, forming larger and smaller jams of all sizes. The pervasive nature of these self-similar clustering patterns is again apparent when trying to gain access to the Internet during peak times.

Although the self-organized fractal burst patterns common to both traffic situations appear to be only epiphenomena, they place fundamental constraints on traffic flow. In sharp contrast, biological systems appear to thrive and grow via self-organized fractal burst patterns. In the following, I will attempt to sketch the self-organized critical state, which although still in its infancy, may provide a foundation for understanding the association of $1/f$ fractal time patterns^{59,60} with REM sleep, orienting and the therapeutic effects of oreiric substances such as Ibogaine.

Self-Organized Critical States in Ion Channels and Traffic Jams on the Road or the Web: A Bridge from Clusters of Molecules to Clusters of Minds

At first glance, perhaps, it is disorienting to be reading about fractal patterns of highway and internet traffic in an article on REM sleep and Ibogaine. Nevertheless, complex systems like traffic or large-scale cortical networks share universal characteristics that in one way or another lead to the reoccurrence of similar patterns in very different systems. The great benefit of the sciences of complexity is a perspective that affords open-mindedness to concepts linking diverse fields and applicable to any level of biological or physical description. One such concept is that of the self-organized critical (SOC) state, which describes how complex spatially distributed entities, such as traffic networks, interact across many time and space scales. This concept was originated by Per Bak, a physicist, to explain the widespread presence of $1/f$ fractal patterns in time^{59,60} in nature. The fluctuations of many phenomena—flow of the Nile, light from quasars, ion channel currents, neuronal firing patterns, earthquake distributions, electrical current fluctuations in man-made devices, inter-car-intervals in expressway traffic, and in variations in sound intensity in all melodic music⁶¹—have been found to exhibit $1/f$ patterns.

The Sandpile model, developed by Bak and his colleagues, provides an intuitively simple description of the mysterious ubiquity of $1/f$ fluctuations. As grains of sand are added to a pile of sand, a number of processes begin to occur. The added sand will accumulate giving the pile a slope. Now and then, as the sides get too steep somewhere on the pile a single grain causes a sand-slide or avalanche. The sand pile stops growing in height as it reaches a characteristic or “critical” slope, and at this point the sand pile is in what is termed the SOC state. Avalanches of all sizes can occur with the addition of a single grain of sand at the critical state; however, on average, large slides occur less frequently than smaller slides. In fact, over time the pattern of large and small slides is $1/f$. The concept of a SOC state allows you a new way of understanding and visualizing the organization and interaction of complex phenomena over many scales of time or space. For

example, work using simplified models of traffic flow indicates that, in situations where the highway is filled with cars on a highway, usually on holidays, fractal clusters of traffic jams of all sizes are more likely to occur. Traffic tends to self-organize into a critical state, where small fluctuations can lead to traffic jams of all sizes or magnitudes and the $1/f$ signature. What new insights can SOC bring to REM sleep, orienting and psychedelic states?

REM sleep, Orienting and the Psychedelic Experience as Self-Organized Critical States

The concept of SOC has only been used, thus far, to describe behavior in homogenous populations of sand grains or cars, where each interacting element is nearly identical. The brain, in terms of neurons and connections, couldn't be more heterogeneous. Heuristically, SOC may help us to visualize a common critical state that exists throughout the brain and brainstem, during states of REM sleep, orienting or those induced by LSD and Ibogaine, resulting in $1/f$ patterns of interspike intervals as observed by Yamamoto et al.

I propose that PGO spikes and other phasic activity during these states are analogous to the sand slides or traffic jams of all sizes, representing critical fluctuations in neural activity and connectivity. The SOC state during the orienting response may facilitate rapid functional brain reorganization in response to the qualities of the eliciting stimulus. The critical connectivity that exists during these states may primarily involve orienting synergies (among ocular, neck and facial motoneurons). PGO waves may link this critical brainstem-centered connectivity with limbic and cortical structures such as the amygdala and temporal lobes. PGO spike density increases as tonic REM sleep begins, suggesting, as Morrison observed, that REM sleep is a dense, coalescence cluster of PGO activity. From the fractal point of view, REM sleep is a kind of fractal of PGO bursts, and in support of this image, bursts of fine finger twitches during a single REM sleep period appear statistically self-similar to sleep architecture over the entire night. With eyes closed, during the oneiric state, PGO-like spikes among amygdaloid and brainstem sites could generate and direct waking dream sequences. After drug effects subside, with the return of tonic, stereotyped S-Net activity, the natural tendency for PGO spikes to coalesce is forced back into the discrete patterns we know as the nightly periods of REM sleep, constraining the daytime expression of this critical state of connectivity to orienting attentional states.³⁸ 5-HT neurons during quiet wakefulness fire in an almost stereotyped, clock-like pattern at 1-5 spikes per second.^{43,44} When a cat begins to groom or chew, the S-Net fires at 2-5 times this rate. Jacobs and Fornal have proposed, that in fact, S-Net activity facilitates stereotyped motor output patterns and concurrently inhibits sensory input.⁴⁴ If the cat is distracted during grooming, the S-Net pauses to allow sensory processing, and possible motor system functional reorganization, otherwise it returns to grooming. S-Net activity, in concert with dopamine release in the basal ganglia, appears to facilitate functional connectivity among clusters of cortical-striatal thalamic loops during motor output.⁴⁴ I would go further, and suggest that complex habitual sequences of motor output

(e.g., drug seeking and drug consuming behavior in addicts) represent hypercomplex sequences of cortical-striatal-thalamic activation, triggered by sensory dependent amygdaloid-brainstem modulation of the monoaminergic systems during critical states. The power of Ibogaine to break habitual patterns of addiction may reside in an induced SOC state that disrupts and functionally reorganizes this amygdaloid-brainstem system,^{32,63} in effect resetting the brain/mind.

Fractal Bursting and Clustering: Vertical Integration During Brain/Mind Self-Organization

My underlying thesis is that Ibogaine works on many brain systems to drive firing dynamics into a SOC state with avalanches of phasic events similar to that existing during early development. To fully explore this thesis I will show how different development processes and disorders can be reconceptualized in terms of phenomena involving fractal clustering based on ideas such as SOC and vertical and horizontal integration. During embryonic development, cell division creates a ball of cells, which will if all goes well, self-organize into a coordinated interconnected system of tissues. Concordant with cellular and molecular differentiation into tissues and organs is the development of functional connectivity among these complex systems of cells. This formation of functional connections and interactions from molecules and cells to tissues and organs, I will term "vertical" integration.^{64,65}

Biological systems are in a constant state of criticality and self-organization. In contrast to highways and traffic jams, analogous critical states in developing brains may lead to the enhancement of synaptic connections, sparing of axons, and synchronizing twitches that allow distant regions of the organism to link and coordinate gene expression and neural-motor development. Traffic jams on the internet are almost as complex because of the highly interconnected nature of computer networks, and the vastly different timescales, from microseconds to seconds and hours, are closer to those present in developing organisms and the brain. Long patterns of bursting have statistical self-similarity and $1/f$ power spectra; in some cases, they appear very similar to the bursting patterns of ion channels, neurons and phasic REM processes such as PGO waves. WWW bursting patterns originate in the complex interactions among computer processes, network dynamics and user "think times."⁶² For example, the cognitive psychologist D. Gilden^{56,57} has found that fractal time variation is a basic element of human judgment and decision making, implying that the user and his or her fractal processes, through vertical convergence over the network, may supply some of the fractal bursting present in the WWW.

Psychedelic Drug Induced Fractal Clustering in Serotonergic Network Output Patterns

Fractal clustering provides new ways of thinking about the behavior and interrelationships of networked brain systems. For example, the S-Net enmeshed in the RF⁴³ and interlinked with other monoamine, cholinergic and peptide systems could, like the WWW, be visualized as a backbone of primary nodes, with links to secondary networks and nodes. The differential effects of psychoactive drugs could be mapped to changes in the SOC state of the S-Net, knocking out the activity of some nodes and

resulting in atypical fluctuations in 5-HT release in different brain regions.⁶³ For example, LSD, 5-methoxy-DMT and psilocin have primary effects on the DRN, the nucleus centralis superior (NCS) but little effect on nucleus raphe pallidus (RPA) activity. On the other hand, phenylethylamine hallucinogens have few effects on NCS or RPA activity.⁶⁶

These fractal fluctuations in S-Net activity may synergise with drug effects in other neurotransmitter systems to bring new qualities to self-organized critical oneiric states. LSD, unlike 5-methoxy-DMT and psilocin, has effects on cortical-limbic dopaminergic cells in the ventral tegmental area (VTA) of the midbrain, resulting in enhanced dopamine release in the amygdala and prefrontal areas. The duration of these drug effects has broad range of time scales, and may fluctuate wildly as the S-Net tries to reinstate stereotypical stability. The resulting alterations in synaptic flux of monoamines may influence the degrees of segregation or clustering of functional subcircuits of various bilateral brain regions such as basal ganglia, amygdala and cortical areas which in turn feed back on the subnets of monoamine cell body groups. Ibogaine, due to its complex polypharmacology and active metabolite which is a selective 5-HT reuptake inhibitor (SSRI), Ibogaine may prolong S-Net reorganization during therapy. Thus, systems with fractal bursting patterns over many time scales, such as the WWW, may provide general models for drug action or neurodevelopmental processes.

The Fractal Structure of REM Sleep in Fetuses

The REM-like sleep state is pervasive during fetal life, playing an essential, but up to now, unexplained role in the developmental organization of brain and behavior.⁶⁸ In 1996, Dr. Mandell and myself proposed that the correlated fractal bursting nature of REM, or Active sleep, as it is sometimes called in the fetus and newborn, provides a fractal time framework in which cortical and subcortical networks can organize and consolidate changes.⁶⁹ The central focus of my doctoral research, underway at the time I met Dr. Mash, was to test this proposal.^{70,71}

I measured the durations of NA (nuchal atonia, loss of neck muscle tone) over extended periods in fetal sheep and neonatal rats, species which are in a REM sleep-like state > 50% of the time. I found that the recorded NA episodes demonstrated the expected developmental changes reported for other REM sleep markers, as well as non-random fractal clustering patterns in time during the last trimester in fetal sheep,⁷¹ and during the first 12 days of life in neonatal rats. These findings are striking in that they illustrate that phasic REM-associated events, at least during development, are not fundamentally independent random processes, as is implicit in Allan Hobson's activation-synthesis model of REM sleep,^{72,73} but rather are fractal in time.

Disturbances of phasic REM processes are also a common thread in many disorders of sleep in infants, children and adults.^{4,74-76} As mentioned earlier, PTSD is linked to a fundamental disturbance of phasic REM sleep mechanisms resulting in recurrent stereotypical anxiety dreams as well as disturbed limbic system and brain stem-mediated functions such as abnormal startle responses.¹⁻⁵ Chronic use or abuse of many drugs results in

alterations of phasic REM sleep processes.⁷⁵ Delirium tremens or "the DTs" that follow withdrawal from chronic alcohol use appears to represent an intense period of rebound REM sleep accompanied by waking hallucinations.⁷⁷ Analogous to Ibogaine therapy (see below), recovery from an episode of DTs is followed by a prolonged bout of deep, refreshing sleep called "terminal sleep" from which the patient awakens essentially recovered from withdrawal.⁷⁸ Temporal lobe dysfunction involving limbic structures such as the amygdala and hippocampus are frequently associated with sleep disturbances and REM sleep-related events such as sleep-walking and parasomnias.^{35,79} Disorganization of sleep architecture over many timescales (from microstructure to circadian structure) is commonly associated with many psychiatric illnesses, including anxiety disorders.⁸⁰ Hemispheric asymmetries, resulting from lateralized temporal lobe dysfunction and alterations of commissural development,¹¹ the aftermath of childhood stress or trauma, could represent another key factor in sleep disorders.^{81,82}

General models proposed for REM sleep function in adults do not usually provide a common theoretical foundation for understanding and incorporating these disorders. In the following I will describe how alterations in the vertical consolidation of self-similar bursting patterns of phasic sleep events can provide a conceptual bridge between the disorders of REM sleep in adults and in children. This conceptual foundation underlies my hypothesis of Ibogaine action in bihemispheric reintegration.

Duelling Amygdalae in Sleep Pathology: Insights into Autism and Interhemispheric Reintegration Via REM Sleep

Recent work on the neurobiology of autism has implicated bilateral medial temporal lobe structures such as the amygdaloid complex as key brain sites of the socioemotional abnormalities seen with this severe developmental disorder,^{83,84} although many other brain regions have also been implicated. The amygdaloid complex composed of two almond-shaped structures deep in the medial temporal lobe (amygdala is latin for "almond") appears to be involved in REM sleep onset, sleep architecture and ultimately dream content. For example, amygdaloid stimulation in unrestrained cats evokes significantly increased PGO number, spike and burst density.⁸⁵ Regional cerebral blood flow in the human amygdala is positively correlated with REM sleep.⁸⁶ The central nucleus of the amygdala is reciprocally innervated by brainstem regions, such as the parabrachial region which is involved in alerting and in the generation of REM and PGO waves.⁶⁷ Also cholinergic activation of the central nucleus produces long-term facilitation of REM.³² In addition, the amygdala receives most of its serotonergic innervation from DRN which has a strong inhibitory influence upon amygdaloid neurons.⁸⁷

LSD may disinhibit amygdaloid neurons and has also been reported, at low doses, to increase the duration of REM sleep periods.¹⁴ Symmetric activity in bilateral amygdaloid-parabrachial pathways may be required for the occurrence of typical global sleep architecture during a nightly sleep period. As it seems in amygdaloid kindling in cats,⁸⁸ asymmetric hemispheric activation of amygdaloid-parabrachial pathways results in abnormal sleep

architecture and pronounced changes in the patterns of phasic REM events.

How might temporal lobe dysfunction associated with amygdaloid-parabrachial pathways in autism manifest in patterns of phasic REM sleep? Tanguay et al.⁸⁹ have investigated the phasic clustering nature of REM in autistic and normal children, through their observation of ontogenetic changes in the bursting structure of eye movements (EM) during REM sleep. They found that eye movements in normal children on the whole did not become organized into bursts until 40 weeks gestational age; thereafter changes in the clustering of the bursts of EM were correlated with developmental age. Also, from 2 to 24 weeks postnatal, as total REM decreases, the number of EMs remain constant resulting in an increase in the mean number of EMs/sec of REM. This recurrent theme in many developmental processes, horizontal integration or the coalescence of clustering with age, as described for NA, was observed in normal children between 3 months and 5 years of age. At this age, a major organizational change occurred in the patterns of EMs, marked by the increasing tendency of bursts of EMs to cluster, with more and shorter EMs packed into bursts within bursts. However, autistic children were found to have substantially less clustering of EMs. In fact, no significant differences between burst structure in 2-5 year old autistics and younger (<18 month) normal children could be found. Autistic children seem to display a failure to complete integration at this stage of development. It's as if they are stuck at one dynamic stage of development, unable to progress. Perhaps the functional dynamics of abnormal asymmetric cortical-amygdaloid-parabrachial pathways are involved⁸³ and hinder vertical integration, resulting in excess phasic activity and the appearance of immature global sleep architecture. Increased phasic activity, analogous to fetal activity, could be an attempt by the brain via enhanced bursting to establish long-range correlations and promote horizontal integration. Successful behavioral therapy for the treatment of autism by sustaining long-range fractal correlations between events in the emotional-behavior experience of the autistic child may enhance integration within these pathways. Ibogaine therapy may also provide fractal long-range correlations during waking dream and reevaluation phases.

Emotional Memory, the Amygdala, and Tripping in Fractal Time:

Going Back to the Womb with Ibogaine

During Ibogaine therapy, patients have reported a dose-dependent experience of dream-like states, except that they are awake and can respond to questions. What follows is a general description of the Ibogaine experience and many variations in the length, occurrence or quality of stages are often observed. Soon after administration, the patient:

- 1) First experiences a loud humming or oscillatory sound, changes in visual perception and signs of ataxia when trying to walk;
- 2) Within 1 to 2 hours this auditory experience ends and images may appear, especially after eyes are closed. The patient then notices a rapid visual presentation of various images, sometimes specifically reviewing traumatic events or circumstances from their childhood and/or life of addiction for a long period (3 to 8

hours). Distortions of time perception by the patient are also reported, in which the dream experience is perceived to take much less time.

3) Following the end of dream stage (3 to 9 hours post administration), a period of intensive reevaluation of previous life experiences can take place. The stimulant or opiate-addicted patient may then sleep for long periods, and awaken without characteristic withdrawal symptoms (analogous to "terminal sleep" following DTs).

4) Long term effects of the Ibogaine treatment sometimes include a reduction in the need for sleep to 3-4 hours per night for up to a month or more and the elimination or amelioration of the craving and desire to do drugs.

The Pervasive Oscillatory Sound

During this stage, the pharmacological effects of Ibogaine and its primary metabolite may start to destabilize the habitual amygdaloid-brainstem modulation of global bihemispheric monoaminergic systems. The disturbing effects of lights and sounds could result from loss of normal global habituation due to RF destabilization, resulting in the fear and rage responses observed in cats. Trauma or drug abuse history is strongly associated with asymmetric hemispheric function^{7-11,90,91} and recent anatomical MRI and fMRI data show that temporal lobe structures such as the hippocampus and amygdala are particularly sensitive to the effects of child abuse and trauma.^{9,21} The oscillatory sound could indicate rapid shifting or cycling of attentional resources between the left and right hemispheres, possibility in association with pharmacological downshifting of the normally constant 10 Hz rhythmicity of the olivocerebellar system.⁹⁴ This sign may be stronger in subjects with more pronounced asymmetric hemispheric function and awaits further investigation. As this oscillatory auditory effect downshifts, possible flooding of the left hemisphere by material from the uninhibited right may take over primary conscious focus, as outlined by Mandell and Geyer.¹⁴ This sets the stage, along with phasic fluctuations of the S-Net and uninhibited PGO, for the sudden onset of the self-organized critical state and the waking dream period.

Waking Dreams: A Healing Journey Through the Fractal Hyperspace of Emotionally Indexed Childhood Memories

I propose that the basolateral amygdala (BLA) is a critical neural substrate of the waking dream stage as fractal neural bursting in this subcortical cortex-like structure may represent access points in a fractal hyperspace of emotionally indexed memories. The effects of early trauma on the development of the amygdala and other temporal lobe structures may interfere with its normal bilateral function during REM-sleep mediated consolidation of emotionally significant events. The recall of traumatic childhood experiences in adults, due to the immaturity of limbic structures at the time of trauma, may require electrical stimulation or intensive PGO-like activity present during the Ibogaine oneiric state. Habitual disruption of normal sleep processes by stress associated with combat, bereavement, divorce, child abuse, neglect or chronic drug abuse interferes with the natural restorative function of phasic REM process, resulting in patho-neurophysiological sequelae of events further exacerbating physiologi-

cal and psychological addictions and rigidifying emotional traumas into PTSD and chronic hemispheric imbalance. Ibogaine-mediated exploration of the subspaces of emotional memories associated with these traumas may help to free these rigidities, restoring after cognitive reevaluation and horizontal and vertical consolidation of amygdaloid brainstem systems some degree of normal hemispheric balance.

The amygdala is also known from many studies in animals and humans, to act as the meeting place between emotions and the mind. Vietnam Veterans with PTSD, for example, have increased regional cerebral blood flow in the right amygdala when generating mental images of combat-related pictures.⁹⁰ We each have bilaterally interacting right and left amygdala which give us our internal emotional experiences by processing and attaching affective response to the rich flow of information from all the five senses and modulating our perception and the autonomic centers of the brain. Extensive research involving patients with temporal lobe epilepsy originating in the BLA has demonstrated that emotional experiences, in some cases highly charged, can result from electrical stimulation of this area. Although these experiences cover the full range of human emotions, fear and anxiety are the most common and are evoked frequently from the right amygdala. The following, from Gloor et al.,⁹¹ is a description of a childhood trauma memory evoked during electrical amygdaloid stimulation in an adult male prior to surgery:

"When the right amygdala was stimulated with a 1 mA current, {the patient} experienced something that he found difficult to describe but finally likened to a feeling of falling into water. {after another stimulation} The patient immediately opened his mouth with an astonished look on his face, sat up, and said that now he knew what it was: it was the feeling of being at a picnic in Brewer Park in Ottawa. "A kid was coming up to me to push me into the water. It was a certain time, a special day during the summer holidays and the boy was going to push me into the water. I was pushed down by somebody stronger than me. I have experienced that same feeling when I had petit mals before. {...} When questioned whether he actually saw himself being threatened by the "big fellow" he said no, but it was a feeling as if he were there and was being chased."

Thus it appears from the work of Gloor^{91,92} and many others that the amygdala, particularly the right BLA,⁹³ is where the "right mind" and brain meet to generate and bring to awareness the associated memories and emotions of a traumatic experience. Ibogaine may evoke the appropriate fluctuating milieu of neurotransmitters and neuromodulators to trigger a SOC state in the BLA, amygdaloid-brainstem pathways, and extrastriate areas activated during dreaming.⁹⁵ The unique morphology of the BLA pyramidal cells and lack of tangential or radial cortical organization may reflect functional connectivity specialized for non-sequential interactions over multiple timescales (or broad-band synchronization) with other temporal lobe cortical and subcortical regions. Distortions of time perception noticed by patients may reflect the "rescaling in time" afforded by the fractal bursting of BLA pyramidal cells during this critical state.⁶⁹ Taken together, these observations, speculations and experiences point to the role

of common self-organized critical states states in the amygdalae, extrastriate cortex and brainstem as the emotional and visual and substrates for Ibogaine "experiential" dream-like phenomena.

Reevaluation & the Long "Terminal Sleep"

After the end of the SOC dream-like state and rapid image experience, subjects are able to reflect on and integrate the experience, free of craving or withdrawal symptoms. The subject has experienced "the big picture" and a unique perspective on his or her life. If struggles between the twin minds underlie drug addiction, then the "experiential" recall of trauma experiences may help bring understanding and insight to these struggles. Many addicts report a feeling of "getting in touch with their soul" or a feeling of oneness with the universe and that "...all the people in the universe and all things in the universe are only one." These experiences and feelings, in part, may result from a new sharing and harmony between long dissociated twins. A long period of sleep may then ensue, and patients after waking have reported having had "the best sleep of their lives." As described above the sequence of stages in Ibogaine therapy has some interesting similarities with Delirium tremens and terminal sleep that follow withdrawal from chronic alcoholism and other kinds of drug addictions. In this regard, the Ibogaine state may represent a kind of facilitated "REM-rebound" process, making up for sleep loss since trauma or abuse first affected sleep architecture.

Recovery and Insomnia

In the month following Ibogaine therapy insomnia may be due to the presence of a long-lasting metabolite (Mash, personal communication) and/or a reduction in the physiological need for sleep because of the intense emulation of dreaming (or REM rebound) which occurs during the treatment. This intensifies adjustment problems for addicts, due to the loss of old patterns of behavior and social support during this phase. Among The Fang, where eboga is used ritually, a strong social network already exists. After initiates recover from their "journey to the land of the dead," they are reborn socially, and have new social status. One insight that the fractal perspective can bring to psychotherapy is the necessity of the "long-view." Although the brain generates long-range correlations, abuse, trauma and the stress of modern life can quickly destroy these correlations.

Ibogaine in context

While the Ibogaine experience may restore long-range correlations through the self-organized critical state and horizontal and vertical processes, it is also necessary to complement these sources with support groups, long-term therapy or follow-up as well as community involvement and reintegration. A supportive social network, as with The Fang, should be a fundamental part of any large-scale Ibogaine treatment program.

Summary and Future Directions

I have presented a comprehensive hypothesis supporting the use of Ibogaine (and other oneiroic substances) in the treatment of chemical dependency and PTSD due to its unique neuropharmacological and psychobiological properties. These two disorders are usually interrelated in that the majority of drug addicts have a

history of traumatic abuse that may result in functionally abnormal hemispheric interactions precipitating emotional instability and addictive behaviors. In the hypothesis I proposed that Ibogaine works through multiple neurotransmitter systems to create within amygdaloid-brainstem systems a self-organized critical oneiric state or state of plasticity, similar to states of plasticity existing during fetal development. This critical brain state may facilitate the consolidation of traumatic memories, reversal of abnormal hemispheric functional and the dissolution of habitual motor patterns associated with addiction. It is the hope of the author that this hypothesis may provide a spring-board for experimental investigations of many of the related ideas presented, providing an integrated theoretical view of the action of Ibogaine and other oneiric drugs, with the final goal being the introduction of Ibogaine or other oneiric compounds into widespread clinical use. The following are a few proposals for further research with this goal in mind:

Measurement of Phasic Events

In Addicts Pre- and Post-Ibogaine:

With relatively little expense, non-invasive measurement of eye movements or galvanic skin response (GSR) before, during and after Ibogaine therapy could be carried out in addicts undergoing treatment. Changes in the fractal clustering of phasic events such as EMs or GSR may provide a useful objective assessment of the progress and long-term effects of therapy. Also, lateral visual field stimulation goggles and ear temperature measurements could provide correlates of hemispheric asymmetry changes.^{18,19,21}

Measurement of changes

in hemispheric functionality with Ibogaine:

A much larger study to assess changes in hemispheric asymmetry using quantitative EEG, PET imaging or functional MRI measures of brain activity pre- and post-Ibogaine, could test the dual hypothesis that hemispheric asymmetry is involved in addictive behavior and that Ibogaine may ameliorate these asymmetries. Pre- and post-Ibogaine sleep studies could also explore the relationship between hemispheric asymmetry, addiction, phasic events and general sleep architecture. Due to the more invasive nature of this testing, and the lack of testing facilities in countries where Ibogaine is legal, these studies could not be performed at this time during actual Ibogaine treatment. •

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Cannabis in acute migraine treatment project: Response to National Institutes of Health Critique

Ethan Russo, M.D.

I recently received the "formal" critique of our team's proposal by the NIH Review Committee. Although I would admit to discouragement, and my doubts as to how to rectify deficiencies that may not in fact exist, my research partners and I intend to re-submit this proposal to NIH for the Spring cycle.

AS A NEUROLOGIST with research interests in migraine and ethnobotany, it was natural that I would be interested in the controversy concerning medical marijuana. Over the years, I have had numerous patients relate to me the efficacy of smoked Cannabis in allaying their migraine symptoms.

In 1997, with benefit of some financial support from MAPS, I submitted an application to the National Institutes of Health (NIH) for a grant to study the use of smoked marijuana in the treatment of migraine. This application process has been mandated by the Federal government as necessary for the approval of any therapeutic clinical Cannabis studies. To date, the Short-term Effects of Cannabinoids in HIV Patients study of Dr. Donald Abrams and his team remains the only other application of this type to NIH. That study was recently approved, while the Cannabis in Acute Migraine Treatment Project was rejected.

I recently received the "formal" critique of our team's proposal by the NIH Review Committee. After examining it, I feel that virtually all points of that criticism can be adequately addressed. My team plans, with additional support from MAPS, to submit a revised grant application to NIH for its June 1, 1998 grant cycle. The following is a review of the points of the critique along with my initial inclinations as to how they might be addressed.

Study design

It is always a daunting task to defend one's work, particularly when the effort involved was as intense as for this one, and with so much at stake. The entire protocol was written so as to incorporate systematically the approaches and procedures that were outlined by Dr. Robert Temple (Associate Director for Medical Policy, FDA Center for Drug Evaluation and Research) at the NIH *Workshop on the Medical Utility of Marijuana* in February 1997.

The study is designed to examine migraine sufferers who have either failed to respond to or tolerate subcutaneous sumatriptan injection, the current *ne plus ultra* in acute headache manage-

ment. Patients selected for the study would then be initially treated with one of the following: smoked Cannabis with 4% THC content (the highest potency provided by NIDA), oral dronabinol 10 mg. (synthetic THC), placebo capsules, or an injected meperidine/hydroxyzine mixture (a common emergency room fallback approach).

Criticisms

The criticisms leveled at the protocol by the NIH are multiple, and occasionally contradictory. One reviewer felt the protocol too ambitious, another not sufficiently rigorous. Finding middle ground acceptable to all was not the intent of this study. Rather, the guidelines from Dr. Temple did not call for either a preliminary "open label" study of therapeutic marijuana use or definitive "Phase 3" studies. They did call for comparison of smoked marijuana to oral dronabinol, as well as a control. We arrived at the figure of 30 study subjects through a sophisticated statistical analysis that indicated that this number would be sufficient to demonstrate clinically relevant differences between the four study drugs.

Precedent of anecdotal accounts

Another criticism revolved around the inclusion in the protocol of multiple "anecdotal" accounts as evidence of the efficacy of Cannabis in headache treatment. It bears repeating that this agent has been used therapeutically and continuously for 4000 years or more, and was pre-eminent, or nearly so in migraine treatment for eight decades among American and European physicians (Grinspoon and Bakalar, 1997; Mikuriya, 1973; Russo, 1998). We might still be using it were it not for the government's prohibition of Cannabis on false pretenses in 1937. During that previous era, there were no controlled studies, nor were any needed for this agent. Doctors as prominent as Queen Victoria's personal physician, J. Russell Reynolds (Russell, 1890), Sir William Gowers (Gowers, 1888), and Sir William Osler, the father of modern medicine (Osler and McRae, 1915), preferred Cannabis for migraine patients because it worked effectively and safely. In more modern times, there have been no controlled studies of therapeutic use of Cannabis solely because they have been politically prohibited. This is precisely why studies such as ours should be allowed to proceed.

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The proposal contained many scientific citations as to proposed mechanisms for Cannabis' analgesic effects and modulation of serotonergic mechanisms, but apparently these were not sufficiently compelling to the reviewers.

One critique suggested that marijuana might work on headaches due to its soporific effect, promotion of relaxation, or because of its anti-nausea properties. I find this unsupported by the facts. Most people who use Cannabis therapeutically do not fall asleep; rather, many use only enough to reduce symptoms so that they may return to their prior activities. Several of my patients use it in this manner. It is well known that relaxation techniques may modestly reduce migraine pain, but transiently, and incompletely. As to nausea, the 5-HT₃ antagonists ondansetron and granisetron are powerful agents in its control, but have no effect on migraine pain (Peroutka, 1990). These criticisms betray a basic lack of familiarity with migraine pathogenesis.

Elements overlooked by reviewers

The critique contained many instances calling for elements that the protocol in fact already contained: use of visual analogue scales for symptom quantification, clear exclusions for pregnancy, drug abuse, etc. Perhaps the protocol was not carefully read, or the appendices that contained some of this material were not circulated. In any event, it is difficult to be criticized for omissions that did not, in fact, occur. A valid request would be tighter controls for women in childbearing years to ensure that pregnancy risks are minimized (i.e., contraception, spousal vasectomy, etc.).

One reviewer suggested that anyone who ever smoked marijuana be excluded from participation in the study. I have never seen this as a criterion for previous studies, and it seems totally unnecessary. We planned a mixture of experienced and Cannabis-naive subjects to more closely test "real-world" clinical issues.

Objections to confidentiality procedure

Objections were raised as to confidentiality procedures. We outlined every reasonable precaution for locked records, limited access, etc. I personally felt these were adequate. It is true to say they are not foolproof, but short of draconian police-state tactics, they would be the best that could be provided. The study would receive the usual intense monitoring by NIH personnel, and additionally the local Investigational Review Board, which happens to be located one floor below that where the study would be performed.

A stinging personal criticism was leveled at me, questioning my ability to carry out the study due to a perceived lack of experience in "human trials." This seems to be a variation of the old chestnut that one has to have a job to get a job. In fact, I have been carrying out "human trials" for twenty years: it is called the practice of medicine, where every prescription is an experiment with its failures, side effects and pitfalls. To say that this study contains elements beyond my expertise is unfounded, unsubstantiated, and inaccurate. As a faculty member of two universities at an undergraduate, graduate, and professional level, and with personal recommendations from two distinguished chairmen of university departments of pharmacy for this study, I had hoped not to be

The critique

contained many instances calling for elements that the protocol in fact already contained.

disparaged in this manner.

One critic upbraided me for inclusion of an anecdote that suggested Cannabis was no better than standard pharmaceutical for one patient. Is that surprising? Nothing works for everyone. That is called clinical variation, and inclusion of such information is required in a critical review of the subject in order for it to retain the kind of scientific objectivity that I am not applying in this document written for readers of the *MAPS Bulletin*.

Inclusion criteria questioned

One reviewer questioned selection criteria for patients. How would we know that they really had migraine, and not some more dire brain disease? It was even suggested that patients might require MRI scans before entry (each scan costs \$1,200). Actually, established criteria exist, provided by the IHS (International Headache Society) and were incorporated in our questionnaires (*Headache*, 1988). Each subject can be clinically examined prior to entry, and this has been sufficient for virtually all previous clinical headache protocols. Imaging studies for migraine patients are not always necessary.

Another questioned whether 30 study subjects could be recruited. I believe that I could find them solely from my patient clientele! Many headache patients are seeking better treatments and are very open to "new ideas," for better or worse, even ones that are currently illegal. Let us crunch a few numbers. Migraine afflicts 14% of females and 8% of males (Linet et al., 1989), for a composite of 11%. One fourth of those are severe or 2.75% (Stewart et al., 1992). About 70% of people respond to subcutaneous administration of sumatriptan (Mathew, 1997). About 30% fail, or an even greater number have sufficient side effects that they prefer not to use it. Multiplying that by an estimated adult local population of 60,000, that would be: $60,000 \times 0.0275 \times 0.30 = 495$ potential subjects. I feel that this is, in fact, a very conservative figure. Obviously, not all would wish to be part of a study in which they would smoke marijuana, but this is a university town, and many would not object; some may be doing so now. I am confident we can recruit sufficient subjects if only allowed to do so.

Question of placebo

Another issue concerned use of placebo. One reviewer mistakenly thought that certain subjects would be stuck with placebo or other treatment for their entire course of ten treatments. I believe they failed to understand the randomization scheme as it was presented. Here I was caught in a bind. I would prefer not to use placebo: it is inhumane. It was my intention to eschew "dummy dope" that would require subjects to smoke an inert material with the attendant risks, but no benefits. It has previously been shown that even marijuana-naive subjects can detect when they are receiving placebo as compared to active Cannabis. The placebo was included in the protocol because it was considered essential by the NIH Committee on the Medical Utility of Marijuana. Moreover, no subject in our study would receive placebo more than once.

Another questioned our use of intramuscular meperidine. Once more, I included it because, for better or worse, it seems to be

the drug of choice in treating migraine in emergency rooms across the United States. I personally never use it, and do not recommend it. However, it does provide a recognized point of comparison to a potential alternative treatment such as smoked Cannabis. Alternatives such as morphine increase nausea, while butorphanol (Stadol) has been associated with myriad dangers (Fisher and Glass, 1997).

One reviewer felt a two hour period of observation was insufficient, and suggested patients be kept overnight. This requirement alone would serve to more than triple the cost of the study (not that we the taxpayers should be concerned). Since migraine is primarily an outpatient disease, this stipulation represents extreme overkill, and would impair subject recruitment, perhaps prohibitively. One of the main aims of this study is to ascertain whether people can function better after migraine treatment with Cannabis. They can not do that wasting time and money in the hospital. What about that confidentiality anyway? In this small town, your nurse might be a friend of your cousin, and tell him you were in the hospital.

We plan to treat patients up to ten times in a six month period. Another fear expressed was that patients might not have 10 headaches during business hours in the 6-month period of time that each patient will be enrolled in the study. I feel this is unlikely. Most headaches are generated in AM hours, and our selected study subjects will have sufficient frequency of attacks to ensure that many will reach this goal. Our statistical analysis did not require that all study subjects meet the ten-treatment goal.

Rigor of clinical measures

A difficult issue revolved around whether our clinical measures would be adequate to answer the questions asked. In fact they are more rigorous than those employed in the studies that established the efficacy of sumatriptan in migraine treatment (Cady et al., 1991). Again, I am confident that useful results will be obtained if the study is ultimately allowed to proceed.

One reviewer wondered how non-responders to sumatriptan might be characterized, and why they might be better treated with Cannabis. The initial issue has been studied (Visser et al., 1996). The answer is that sumatriptan non-responders may be obese, or take the medicine too early. Beyond that, the study found no features distinguishing responders from non-responders. I would add one other observation from my clinical experience: people with chronic daily headache (a difficult subset of migraine) respond poorly to subcutaneously sumatriptan. Because this proposal focuses on migraineurs with episodic attacks, CDH patients would not be accepted for inclusion.

Inadequacy of review process

Finally, I would level criticism of my own at The National Institutes of Health. Not unexpectedly, none of the reviewers of my protocol were on the panel of the *Workshop on the Medical Utility of Marijuana* that proposed criteria for clinical Cannabis studies. What is surprising, and unacceptable is that this group was apparently not informed of NIH's own expressed suggestions for such studies

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into the medical use of marijuana. Unfortunately, government agencies have a longstanding tradition of ignoring their own commissions' recommendations. Additionally, of 29 members of the review team for the Division of Neurological Diseases and Stroke, only eight were neurologists, and none appear to be headache specialists. I do know this much: none are members of the American Association for the Study of Headache, the premier research organization devoted to the study of migraine. I am, and would have hoped for examination by a jury of my peers.

As if that were not enough, this proposal was initially assigned to the AIDS Division of the National Institute on Drug Abuse, although it pertained to neither HIV nor "abuse," and was not re-assigned until I pointed out the inherent contradiction. This indicates that the NIH bureaucracy has been operating as a "split-brain preparation." That is, the right hemisphere has no idea what the left hemisphere is doing.

In summary, I am extremely disappointed with the repudiation of this proposal. It has considerably greater merit and validity than the criticisms would allow. Although I would admit to discouragement, and my doubts as to how to rectify deficiencies that may not in fact exist, my research partners and I intend to re-submit this proposal to NIH for the spring cycle.

Contributions of interested parties to MAPS, earmarked for this purpose, will be most appreciated. •

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The LSD Therapy Career of Jan Bastiaans, M.D.

Stephen Snelders

JAN BASTIAANS WAS 23 YEARS OLD and a medical student at the University of Amsterdam when the German army invaded the Netherlands. The German occupation (1940-1945) had a lasting influence on his life and work. The first aim of Bastiaans' use of LSD and psilocybin in psychotherapy was to help victims of World War II: the survivors of the war who had become extremely traumatized by their experiences in the German and Japanese prisons and concentration camps.

During the occupation Bastiaans had from the beginning been involved in the student resistance. "As a result," he wrote, "I was the first student at the University of Amsterdam who was expelled in the summer of 1941. Because of an accident, I could only participate in the resistance in a limited way from the autumn of 1942 on. Several of my friends died because of the war."

THESE EXPERIENCES had a decisive influence on Bastiaans' work as a psychiatrist after the war. His work was mainly aimed at helping victims of the war who needed psychiatric care. Bastiaans identified with the problems of the former members of the Resistance. Just like them he regarded himself as an idealistic fighter. In the setting of psychiatric treatment, and more specifically in sessions with LSD or psilocybin, he took the position of the father-figure who gave his patients the warmth and understanding they needed. The organisations of the former Resistance would give Bastiaans much support in the 1980s, in his political struggle for the continuation of his LSD therapy.

Almost 140,000 Dutch people were deported during the war to German concentration camps. Only a minority of these people had been active in the Resistance. Among them, 110,000 were Jews. Of the 140,000, only 15,000, of whom 8,000 were Jews, returned to their home country after the war. In the years

after the war it became clear that many of these survivors were no longer capable of an optimal participation in society. For their syndromes the term "KZ-syndrome" was coined: KZ is the German abbreviation for concentration camp.

Theoretical background of Bastiaans' therapy

In the medical literature, a KZ-syndrome is actually not a syndrome, but a process of four phases that contains different conventional syndromes: 1) a shock phase with the feeling of extreme powerlessness; 2) an alarm phase, with alarming emotions and fears that have the function of preparing the drive for solutions; 3) an adaption phase, with flight- or fight-mechanisms; and 4) an exhaustion phase.

In the theoretical analysis of the KZ-syndrome that Bastiaans developed in the 1950s he was heavily influenced by two psychiatric traditions: Freudian psychoanalysis and psychosomatic medicine. Bastiaans was a psychoanalyst of the second generation since Freud. From 1954 till 1961, he was president of the Psychoanalytic Institute in Amsterdam, a major bastion of psychoanalysis in the Netherlands.

Before this time, from 1946 till 1954, Bastiaans had been a collaborator of Groen, then head of the second Department of Internal Medicine at the University of Amsterdam.



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Groen was influenced by American ideas on psychosomatic medicine, in particular the hypothesis of psychosomatic specificity. According to this hypothesis, specific mental problems can lead to specific physical diseases among those people who are vulnerable because of the structure of their personality. Groen and Bastiaans both became convinced advocates of the theory of psychosomatic specificity, although this was (and is) a disputed theory within the medical sciences.

Correlating war and childhood experiences

In his analysis of war victims, Bastiaans correlated their actual traumatizing experiences in the war with their psychosomatic syndromes, as well as with a psychoanalytic interpretation of their childhood. Psychosomatic syndromes seemed to be an aspect of delayed reactions to traumatizing stress, especially found under "highly self-controlled personalities who had expended considerable will-power and energy on trying to control, suppress or repress the painful traumatic consequences of the war." The result was a psychotrauma, "a mental injury marked by the fact that a human being is fixated in a state of "affect lameness," in a state of powerlessness usually associated with intense suppression and repression of anxiety, grief and anger. This state of partial mental isolation makes it impossible for the victim to cope in a healthy manner with the traumatising stress situation." Whether this would develop into a post-traumatic stress disorder was dependent on the inbuilt capacity of the traumatized person for adaptation, and on the severity of the stress situation. It also depended on whether the traumatizing experiences re-actualized traumatizing experiences from childhood. In Bastiaans' psychoanalytic view, these last experiences were the main determinants of the syndrome-formation.

If the person couldn't cope with the stress situation, part of his past became undigested and he couldn't free himself. He became fixated in a state of powerlessness. This affected his relation with the world at large, resulting in loss of mental freedom and a state of mental isolation. "Here the individual consciously or unconsciously locks himself into mental invulnerability-structures of a psychotic, psychoneurotic or psychosomatic nature."

In 1963 Bastiaans became professor of psychiatry at the University of Leiden. In this decade he started to use the term KZ-syndrome not only for war victims, but also for other patients: everyone who had suffered from man-made disasters or wars or who had been kept as hostages. In the 1990s Bastiaans would also use his methods to treat heroin addicts. In a metaphorical sense his work implies that everyone who suffers from traumatizing experiences lives in his own mental concentration camp.

Treatment

How to break out of this camp and achieve mental liberation? After the war it had become already clear that many war victims suffered from alexithymia and were unable to talk about their situation. Traumatizing experiences, like torture by the SS, were suppressed in their memories. Many patients who had been to camps like Auschwitz didn't have any faith in their therapists, who hadn't been there and couldn't know what it really had been like.

To resolve this situation Bastiaans had started to use

chemical means as early as 1946. Narcoanalysis, using barbiturates to put patients in a kind of dream-sleep and to trigger their memories, was a highly acceptable method for exploring the human psyche in the years after the war. Bastiaans used Sodium Pentotal in combination with psychoanalysis and psychodrama. Although he later claimed that in the right climate of safety and security, "an average number of eight sessions is usually sufficient to free the patient," he came to the conclusion that in the most rigid cases, there weren't sufficient results. Besides, people did not always remember actually saying the things they had said under narcosis. Bastiaans began to look for other methods. This search was stimulated by the conclusions of a research program on prognosis and effect of psychoanalysis and psychotherapy at his Psychoanalytic Institute. This program concluded that there was no difference in the changes in neurotic patients after some years, whether or not they had gone through psychotherapy.

In 1961, Bastiaans started to use psychedelics in his treatments: mainly LSD, but also psilocybin. From 1963 till 1985 he was professor of psychiatry at the State University of Leiden. Many patients were helped in the Jelgersma clinic in Oegstgeest, where he worked until 1988. After some experience, he came to the conclusion that for three categories of patients, treatment with LSD was advisable: 1) psychosomatic patients with an intensive rigidity of their defense- and coping mechanisms; 2) patients with survivor- or concentration camp syndromes; and 3) patients who after many years of psychoanalysis did not achieve the prognosticated positive results.

Two examples

Bastiaans has given in his articles several accounts of successful treatments with LSD. One example of this concerns one of the great Dutch Resistance fighters—we shall call him X. In his treatment, X. got eight LSD sessions. Although he relived all the fears of the concentration camp and even started to cry—something he hadn't done in the whole war—there was no real therapeutic progress. This changed with the eighth session. X. remembered a horrifying torture by the SS guards. He had given food to some Jewish prisoners and was caught by the SS. They beat him up. Next, they pulled one of the Jews up with a cable tied to his penis, and then let him fall down on the floor. His skull cracked. One guard pushed X.'s face in the open skull, yelling that, "friends of Jews should drink blood of Jews." After this the guards warned X. never to talk to anyone about it.

X. *did* talk about it, to three fellow prisoners. They were all dead within a few months. Since then X. had become completely traumatized: he felt that he was responsible for their deaths, and hadn't spoken about the experience to anyone since, not even to his wife. After the LSD session X. couldn't sleep for seventeen days. The turning point came when he saw Bastiaans' car in the parking lot of the clinic and realized that he was not dead. X. felt reborn. Unfortunately, however, not all his fears had disappeared, and besides, he had become very afraid of taking LSD again. X. started helping other war victims too strenuously and died of heart failure a year after his last session.

Another example of Bastiaans' treatments has been published in English by a patient: the Israeli writer Yehiel De-Nur, who published his account in 1986 under the name K-Zetnik 135633,

his prisoner number in Auschwitz. This very moving account is not typical of Bastiaans' methods, because in it he does not succeed in getting to the heart of De-Nurs' issues and in analyzing his traumatizing experiences. In the book, De-Nur has come to Bastiaans in 1976, thirty years after his liberation: but mentally he is still a prisoner. In his first three LSD sessions he relives the hell of Auschwitz, but he doesn't



talk to Bastiaans about it. In the fourth session De-Nur breaks through. He dies in the death march of Auschwitz and hovers over the camp. Because he had sworn that he would be (in his books) the voice of the prisoners, he had stayed alive. But now he surrenders and dies. He feels his split personality unite. After this session he discontinues treatment, despite the wish of Bastiaans to the contrary. Bastiaans wants to more deeply analyse De-Nurs' traumatizing experiences. But De-Nur feels cured and is no longer plagued by the Holocaust in his dreams. He has come to realize that it wasn't Satan who created the mushroom clouds above the burning chimneys of Auschwitz, but you and I. Us. In other words, he realized that man—rather than “the Devil”—was responsible for the Holocaust, which made the problem mentally manageable. De-Nur had a death and rebirth-experience that brought him out of his mental concentration camp.

End of the LSD therapy

As professor of psychiatry at Leiden University, Bastiaans treated some 300 patients with LSD and psilocybin. There has been no systematic study into the effects of these treatments. A report on the possibilities of such a study was published in 1987 on behalf of the State Department of Public Health. Its conclusion was that the study was not feasible, because there were too few complete dossiers of patients.

The report was part of a political struggle over the continuation of Bastiaans' LSD therapy that arose with his retirement in 1985. As in other countries LSD therapy had become discredited in the Netherlands as a result of the role of LSD in the Sixties rebellion. Bastiaans was the last Dutch psychiatrist to conduct LSD therapy. He wanted to continue this therapy after his retirement and to train successors. Although he was supported by the former Resistance, his position within psychiatry was completely isolated. Other psychiatrists recognized his therapeutic abilities, but regarded the use of LSD as too dangerous. Some of them disliked Bastiaans' methods because of the mystical implications of the LSD experience. Malcolm Lader, professor of clinical psychopharmacology at the University of London, wrote in a recommendation to the Dutch government in 1985: “The continuation of apparently legitimate therapeutic uses of LSD detracts from the work of people trying to contain the enormous

drug problem... Enthusiastic proponents of LSD stress the transcendental and mystical nature of the experience and maintain that it enables the patient to gain new insight into both *himself* and the cosmos... Unfortunately I find much of the tone of Prof. Bastiaans' claims to be rather in this vein.”

Bastiaans himself concluded that, “It does appear as if medieval fears of insanity or of the confrontation with

psychotics are evoked again, leaving one with the impression that society has a need for eliminating as swiftly as possible that which seems to pose a threat to its own existence.”

After his retirement as professor of psychiatry in 1985 and at the Jelgersma clinic in 1988 Bastiaans did not have the facilities for therapy with psychedelics. This changed in 1992, when he began working with Howard Lotsof and a Dutch self-help organization for heroin addicts. Bastiaans began treating heroin addicts with the use of ibogaine. After an addicted woman died in 1994 from as yet unknown complications during the course of one of these ibogaine sessions, Bastiaans, as supervising medical doctor, was accused of neglect before the *Medische Tuchtraad*, the Dutch supervisory board of the medical profession. He was asked to end his therapeutic practice. By then his health was already failing. He died in October 1997. In his last years he had become bitter over the lack of recognition for his methods in the medical profession.

Note

The work of Bastiaans is analysed in more detail in a chapter of my forthcoming Ph.D. thesis on *LSD and Psychiatry in the Netherlands*. This study has been made possible by the Dutch Foundation for Historical Research (Stichting Historische Wetenschappen). At the moment possibilities for a publication of the thesis in English are being considered. •

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Tribute to Professor Jan C. Bastiaans, M.D., 1917-1997

Nicole Maalsté

DR. BASTIAANS WILL BE REMEMBERED as a very passionate psychiatrist. At his funeral, his eldest son reminded us that "daddy" was always busy with his patients. He was always there for them and played an important part in the lives of many. Grateful ex-patients tried to keep in touch with him to the very end; many of them came all the way to the ceremony in his hometown to bid him final farewell.

IN his eulogy, the Director of Centrum '45 (the national center for medical and psychological treatment of survivors of World War II and members of the Resistance) explained that Bastiaans played an important role in the establishment of broad social recognition of the long-term effects of the evils of the war.¹

Unfortunately, Bastiaans did not evaluate the effects of his therapeutic work in a scientific way. He realised this at the end of his career, and tried in 1986 to interest the Ministry of Health in a study to assess his treatment methods. That is why he donated his archives to scientific research. Finally, it was decided that a pilot study should be conducted, to determine if the material lent itself to evaluation. Researchers concluded that a quantitative retrospective study was not possible, but a qualitative retrospective study on the other hand would be desirable, useful and sensible. In this way it would be possible to collect and document important data about LSD psychotherapy treatment for severely traumatized war victims in the Netherlands. Moreover, these hard-to-get data should be protected against loss.²

Until now, no such study has been undertaken, although many people think it would be very interesting and worthwhile. Therefore, the cVo-Addiction Research Institute of Utrecht University prepared a proposal and has sought funding for it. The central question is to find out how the Bastiaans' method can be characterized as constructed from the different data sources available (records, documents, files, notes, audiovisual recordings, letters, reports, etc.). This can be done by several methods, such as research into the records and files, interviews

with key figures (experts, colleagues and maybe ex-patients) and analysis of audiovisual material.

The aim of the study is to contribute to scientific research into the clinical use of hallucinogens and to prevent the loss of important data collected by Bastiaans and his staff members. Several organizations and institutes in the Netherlands are supporting the proposal. A study into LSD-assisted psychotherapy conducted by Bastiaans is considered relevant to the treatment of people who struggle with post-traumatic stress disorder.

At present, the application of this research proposal³ is under examination by a research foundation at Utrecht University. Additional funding will be necessary in the future. Readers who may be interested in contribution to this important study may contact the undersigned or make donations to MAPS, earmarked for our study. Posthumous respect for Prof. Bastiaans' scientific insights may then be added to the already existing respect for his human qualities. •

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Scenario Planning: Investing in **Consciousness**



David T. Pfenninger, Ph.D.

SCENARIO PLANNING is a process aimed at anticipation of possible futures, and is of great utility in organizations and businesses. An array of exercises or knowledge-elicitation procedures help organizations tap into the implicit constructs governing current behavior, and assist in the development of contingency plans for meeting future opportunities and challenges.

I HAVE RECENTLY been developing some scenario planning strategies for mental health systems, pharmaceutical companies, and businesses, and have observed trends-in-progress which seem to point to some very interesting convergences and future scenarios. The following is a brief review of some of these elements and an emergent scenario (estimated course: 15 years) I have called "Investing in Consciousness."

Holistic health

The most significant trend in contemporary health care is the mass movement toward *holistic health* (aka, *wellness*, *primary prevention*, *integrative care*). This multi-billion dollar industry continues to grow rapidly, and many conventional allopathic-oriented health care systems are scrambling to develop alliances and services to meet this demand. Interestingly, the most salient personality in this movement, Andrew Weil, M.D., is an internationally recognized expert on organic psychedelics.

The serotonin story

The staggering success of Prozac and other selective serotonin reuptake inhibitors (SSRIs) as a treatment strategy for some emotional disorders, and especially as an economic force for pharmaceutical companies, has ignited interest in more refined neurotransmitter applications for both basic and clinical sciences. Advances in neuroimaging, psychopharmacokinetics, and cognitive science are accelerating, and new applications are on the horizon integrating virtual reality technology, holography, and fractal modeling with basic mind-brain research strategies.

Emerging metatheory

A new philosophical and epistemic metatheory is permeating the classical and social sciences. Reflected in constructivist psychology (Kelly, 1991; Mahoney, 1988), chaos theory (Masterpasqua & Perna, 1997), complex dynamical systems (Capra, 1996),

dissipative structures (Prigogine, 1980), Gaia (Lovelock, 1979) and holotropic theory (Grof, 1994), this emerging paradigm holds the promise of reconciling the Cartesian split between consciousness and matter. Brain will be seen as a critical but not exclusive structure embodying the *autopoietic* (self-creating) organization of *mind*, in an ongoing developmental process of knowing, or *cognition* (Maturana & Varela, 1980).

Reconceptualizing consciousness

Fritjof Capra and Stanislav Grof in their respective writings are particularly clear that this development entails a radical reconceptualization of consciousness. No longer is mind viewed as encapsulated by or restricted to brain, but is understood as a feature of all open, living systems, regardless of the presence of a nervous system. Reality is not knowable except as created by cognitive representation ("construction"). Anticipation occurs at all levels of life, and is predicated upon the abstraction of themes or patterns. All knowledge is thus invented, and reflective of the cognitive or meaning-making activities of the knowing organism.

Human ecosystem concepts

Gregory Bateson's "group mind" and similar human ecosystem concepts will assume new relevance as Western society struggles with violence, pollution, and political and moral corruption. Deep ecology will continue its nascent moves as an antidote to material authoritarianism. This ecological "web of life" perspective offers a humane and comprehensive conceptual system for approaching societal reform, one remarkably consistent with tenets of many mystical and spiritual traditions (Capra, 1975).

Psychedelic research

Related to the nascent whole system thinking is a renewed appreciation for all things psychedelic. Capra (1996) has cogently

observed: "The fact that fractal geometry and LSD appeared on the scene at roughly the same time is one of those amazing coincidences—or synchronicities?—that have occurred so often in the history of ideas" (1996, p. 150). The very impressive revitalization of basic and clinical research using psychedelic, empathogenic, and entheogenic compounds and situations attests to this renaissance. MAPS members have been instrumental in this movement, which seems to be steadily making its presence known in a variety of basic and applied programs.

Set and setting

The whole system and psychedelic views of consciousness and matter imply a refreshed sensitivity to the issue of contextual embeddedness, or as more often tagged in consciousness research, *set and setting*. Clinical psychiatry and other branches of medicine and health care will eventually come around to this awareness, stimulated by the holistic health movement, renewed respect for ethnobotany, and cross-cultural exchanges of traditional healing practices.

Economic pressures

Persistent mental health care economic pressures will continue to drive the search for greater therapeutic power (stronger therapeutic impact in a briefer period with less side effects and less cost) and will continue to stimulate a new generation of therapy models. Psychedelics have well-known mental amplification effects and are safer than most of the drugs currently employed in prescriptive psychiatry, and will get a "new look" accordingly as therapeutic agents. These will be based on a strategically integrated model in which psychoactive drugs (including psychedelics) are combined with specific therapist, environmental, and psychotherapeutic techniques to achieve a marked increase in therapeutic power. This process is actually an anamnesis or recovery of memory for psychology and psychiatry and no doubt will stimulate great interest in the very rich psychedelic research corpus from the 1950s and 1960s. Many established research programs are gaining increasing funding and governmental cooperation, and the quality of the research designs is top level.

Drugs for healing experiences

Pharmaceutical companies, still buzzing from the serotonin story and increasingly interested in dopamine and neurodynamics, will take notice of these trends and will begin stepping up basic research, the development of new psychoactive compounds, and reviews of their dormant patents on existing compounds. However, the new drugs will increasingly be "context release." The old model of giving psychiatric clients pills indefinitely in a mostly trial-and-error fashion will be abandoned in favor of a more focalized model in which the goal is to catalyze specific psychotropic healing experiences. The biological reductionism of the past thirty years in psychiatry will finally yield to the new constructivist metatheory. The "psycho" and "pharmaco" will no longer be uncomfortable bedfellows, but will be com-

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pletely unified in the psychedelic therapy methods. The ability of MDMA and LSD to assist in integration of COEX systems (condensed construct systems of memories and emotions; Grof, 1994), for example, make them excellent candidates for inclusion in treatments aimed at psychological integration of traumatic stress complexes. Applications of psychedelic treatments for narcotic, cocaine, and alcohol dependency disorders, pain, terminal illness, and the full spectrum of neurotic disorders will demonstrate great promise in controlled clinical trials, and eventually will become part of standardized practice.

Shifts in professions

Psychiatry as a profession continues to contract, with many top medical school programs struggling to fill residencies. Meanwhile, the profession of psychology has exploded. According to the American Psychological Association, there are currently about 14,000 students enrolled in clinical, counseling, and health psychology doctoral programs in the U.S. alone, most of whom will become licensed health care providers. Roughly 2,300 new clinical psychologists will enter the field in 1998. Psychologists are extensively trained in diagnostic and psychotherapy methods, as well as in psychopharmacology and neurobehavioral models. Several programs are underway in which psychologists are prescribing from a "traditional" psychoactive medication formulary. Given that nurse practitioners, podiatrists, dentists, and other non-physician health care providers have secured prescription privileges, it is almost a certainty that psychologists will be legally prescribing psychoactive medications within ten years. The influx of rigorously trained psychotherapists eager to add prescription privileges to their skill sets will accelerate the synthesis of the new holistic treatment models. Due to overcrowding in the health care field, many of these practitioners will relocate to private industry.

Focus on reform

The political war on drugs will be conceded as a dismal failure, and harm reduction and other reform approaches will be given much more emphasis. There will be renewed focus on rehabilitation of chemically dependent individuals and inmates based upon the fact that current incarceration practices serve mostly to exacerbate the psychopathy and dangerousness of offenders, and wreck the lives of normal citizens busted on drug possession charges. A hero will eventually confront the political scene armed with data on offender recidivism, enforcement ineffectiveness and expense, and the sustaining of the criminal drug culture as by-products of thirty years of insane prohibition policy. Forensic and rehabilitation professionals will rediscover the early studies on the use of psychedelic reformatory treatments for prisoners, helping them achieve corrective emotional, ethical, and behavioral experiences.

Reformation of religion

The Western hunger for an authentic, direct experience of

the divine (mysticism) will fuel the demand for large scale reformation of religion. The didactics that currently represent many religious orthodoxies, failing to offer any substantive relation to God and *holos* for a skeptical public, will continue their erosion. It is no accident that the only religious groups currently attracting large numbers of new members are those with a charismatic tradition (e.g., Pentecostal), inherent transcendentalism (Buddhism) or innovation (cults). Off-shoots will follow the leads of many of the psychedelic churches of the 60s and the current practices of the Native American Church in reclaiming the use of psychedelic substances as a mystical sacrament for Everyman. The spiritual healing figure Deepak Chopra talks openly about his psychedelic experiences as helpful in extending consciousness, and they don't seem to have harmed his business sense, either.

Value of innovation

Business increasingly demands "knowledge workers" who can add economic value by innovation. Creativity and innovation will be the key drivers of business activity in the next several decades. I am familiar with numerous business enterprises and highly skilled individuals reliant upon the use of psychedelic or other consciousness-expansion techniques for the development of new concepts, ideas and practices. Of course, many of the seminal thinkers in our century have used psychedelics to catalyze their creativity. The new premium on innovation will prompt a fresh look at the voluminous data on the psychedelic impact upon creativity for scientists, artists, designers, and other groups. Strategic psychedelic-based creativity sessions will stimulate business practice within two decades. The demand for psychedelics for creativity application will be a prime factor in changing drug access laws.

Emergent Scenario

These trends converge in my scenario to an emergent property, in which the whole is greater than the sum of the parts. If the identified trends are valid, it seems reasonable to predict that we are well on our way to a *new societal relationship to altered states of consciousness*, including those invoked with the assistance of psychedelic substances. The synergy of the trends in business, religion, and therapeutics will power the transition.

Interestingly, the religious yearning and therapeutic interest were both present in the 1960s psychedelic movement, but they were insufficient to weather the repressive backlash. The movement was crushed for mostly political and economic reasons, as establishment leaders saw it as a threat to the status quo. But with the "establishment" now composed of visionaries like Andrew Weil, Bill Gates, Steve Jobs, and Ted Turner (not to mention the pharmaceutical industry) attitudes are changing. Business leaders will see potential profits in the psychedelic resurgence and its promise of enhanced innovation, and this will be the key driver of its legitimization to the mainstream. This in turn will contribute to innovation and progressive humanization of business practices.

This multidimensionality of trend elements serves to increase confidence in the scenario, as the developmental thrust will be boosted from many different societal sectors, therefore "buttressing" stagnation or regression in any one or two domains (and there are doubtless other domains of relevance here that we have not considered).

Conclusion

In a full scenario planning process, this would be but one of the many scenarios generated. Additional elements would be abstracted, operationalized, and tracked, with new combinations, weightings, and patterns sifted and re-sifted. All scenarios would be subjected to strenuous challenge. The outcome of this iterative analysis is an array of robust scenarios that are highly developed. They are typically rendered in multiple formats and schematics, important because the mode of representation can affect what one perceives in the scenario.

The scenarios are then used to guide strategy and deployment of resources. For example, the reader may wish to act "as if" the above scenario were to develop. What would be the impact on your activity? How might you modify current practices or allocate resources differently? By tracing out such implications, we sharpen our anticipatory abilities and are better prepared to roll with—not against—the changes.

The United States is nearing the end of the dubious era of state-sponsored repression of mind, and it is to be hoped that it can play a leadership role in a new global consciousness ecosystem, one in which principles of deep ecology, social reform, and liberation of activity and imagination take precedence. Like the proverbial spore on the wind, there is change in the air. Everyone breathe deeply. •

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A Psychospiritual Context for the Therapeutic Use of Psychedelics



Richard Spurgeon, M.A.

This article is an adaptation of the thesis I wrote for my M.A. in Psychosynthesis Psychotherapy at the Institute of Psychosynthesis in London in conjunction with Middlesex University.¹ It describes the potential therapeutic benefits of working with psychedelics within a psychospiritual context, and highlights other factors which help to ground and integrate the contents of these experiences.

THE THESIS I WROTE for my M.A. in psychosynthesis psychotherapy arose from my experiences during my five year journey as a trainee psychotherapist. Its title was "In the Footsteps of Prometheus—integrating deep experiential techniques with psychosynthesis psychotherapy." The thesis explored the potentials and pitfalls of Holotropic Breathwork and the therapeutic use of the psychedelics (particularly MDMA and psilocybin). It attempted to build a psychospiritual framework for their integration with the more traditional approaches to psychotherapy, using the maps and models of psychosynthesis. I had found that my own psychological and spiritual development had been profoundly catalysed and deepened through the combination of these deep experiential techniques with the ongoing psychotherapy that I was receiving. From my own experience it seemed clear to me that these tools held tremendous psychotherapeutic and spiritual value. Inspired, I began to read all I could on the subject (and was particularly influenced by the work of Stan Grof), joined MAPS, and continued my own self-exploration with these tools.

The psychospiritual context

At the core of my thesis and of this article is the belief that a psychospiritual context is of enormous benefit to any therapeutic work with psychedelics. The psychospiritual perspective holds that our essence is spiritual in nature, and that life is a process of development and unfolding in which psychological and spiritual aspects are deeply entwined. Thus, while holding this context, therapeutic work at the psychological level of egoic-self identity or personality can be as important as (and is often far more appropriate than) work at any "higher" or spiritual level of being and identity. There are various useful psychospiritual models, of particular value are Ken Wilber's spectrum of consciousness and the egg diagram and the triphasic model² of psychosynthesis.

Work with psychedelics, at whatever level of dose, needs to be contained within safe forms and structures, including a firm context and clear intention. These are fundamental in terms of creating the "set" which will enhance the positive outcomes of the experience. A clear

context makes the experience more manageable, while clear intention makes a valuable and insightful experience more likely. Holding the context of self-discovery within an ongoing psychospiritual journey gives meaning to whatever experiences an individual has to face in terms of their own history, their present life situation, and their potentials and future development. The contents of the experience are understood as primarily a reflection of the individual's own psyche (though there may well be other, wider implications too). A dark, painful and difficult experience is therefore seen to be as valuable as any other sort of experience—and perhaps more so, as it may help the individual face the unconscious material that he or she most needs to work with. Holding this psychospiritual context is the key to the integration and grounding of the unconscious material which is brought into consciousness.

What is also of great value is an ability to surrender to a Greater Power, God, Spirit, etc., and to trust this fully. This helps anchor one's own experience and context in a much wider and more embracing spiritual context, and enables a much deeper commitment to, and faith in, the process itself.

The therapeutic use of psychedelics

My thesis describes six main benefits of using psychedelics within a psychospiritual therapeutic context. Different substances have different effects—so I can only speak in generalities here. These benefits are also dose dependent. My own experience has helped me to understand the validity of the differentiation between work with low ("psycholytic" or soul-loosening) doses and high (or "psychedelic") doses. Both are valuable, yet each is very different in its therapeutic effects. The actual dosage needed to create the required effect will differ from individual to individual. Work with smaller doses is gentler on the body and mind, and the unconscious material accessed is more easily integrated. This is because the psychological material that comes into consciousness is nearer the surface, and it is therefore easier to accept and to work with psychologically. It is mostly of a biographical, psychodynamic nature, though the actual content may often be unexpected.

The three main benefits at the psycholytic level

To enable deeper insight into present psychological issues and give a preview of the next steps in psychological work. When the context for the experience is to further one's psychospiritual development, then these psychological benefits seem assured. Each time I have taken psychedelics within this context, I have gained important insights into my own process and psychological make-up and have been given a foretaste of the next stages of therapeutic work. The power of these insights is that they are not just intellectual; they are normally experienced as realisations which include the body, feelings and mind, and thus cannot easily be ignored.

To allow a temporary disidentification from mindsets, maintaining cycles, and self-identifications, leading to a greater awareness of patterns of behavior, and the experience of deep-level psychological freedom and "I" consciousness. The experience of stepping out of identifications and habitual ways of seeing ourselves and the world can be tremendously liberating. It is true that we will soon return to our old ways as the influence of the psychedelic wears off, but once we have had the experience of being more than that aspect with which we are identified, we can see ourselves and our lives from a different perspective. We become more able to free ourselves from those aspects as we begin to disidentify from them. As we do this, we are increasingly able to connect with our "I"—a locus of identity that is not identified with any particular content of consciousness, and which is a center of awareness and Will.

To loosen up or release blocks in entrenched, deeper level psychological "infrastructure," thus facilitating and catalysing therapeutic work. Within an intentional therapeutic context, psychological defenses and structures are loosened and psycho-energetic blocks can be released. This catalyses ongoing development by enabling previously inaccessible unconscious material to enter into consciousness and be worked upon. The amount of dose is directly related to the degree of loosening up of psychological "infrastructure." This loosening is the reason that experimentation with psychedelics can be psychologically destructive for individuals whose sense of self is poor and fragmentary and who actually need to maintain or build up their ego structure in order to function adequately.

In comparison, the more powerful "psychedelic" doses can open individuals up to transpersonal and collective experiences—from the depths of suffering and darkness to the heights of Love and Light. Occasionally, intense spiritual experiences can be life-changing, in and of themselves, due to the sheer power and authenticity of their numinosity. These experiences can give the "big picture," indicating a much wider or deeper "spiritual" context for the life events and personality structure of the experiencing individual. However, the enormity of the experience can also be a drawback. The content of an experience may be so far removed from the everyday reality of the individual that it is next to impossible for them to integrate and ground it in their ordinary life. This may result in the experience being repressed or split off, or in the individual making a rash decision to follow a seemingly "spiritual" path, while splitting off from other more worldly aspects of their psyche. Either way, the result is not integration, but splitting.

Potential benefits of psychedelic doses

To allow the bringing to consciousness and working through of deeply unconscious psychological material held at bodily, bioenergetic or "soul" levels. Powerful doses of psychedelics facilitate the release of bodily-held tensions and energies, which can be worked through in the experience itself when the setting is well-structured, safe and holding. Any energetic or bodily tensions that do not work themselves through in the course of the experience can be worked with and released with the aid of focused bodywork techniques. This level of bioenergetic work is both powerful and effective, but needs to be complemented with ongoing emotional, mental and spiritual therapeutic work to integrate and deepen any releases or insights. Work with powerful doses also opens us to "soul" knowledge and perspectives (like "past life" experiences), in which we can access understanding and experiences which do not come from this particular lifetime and which are held at much deeper and ordinarily inaccessible levels of consciousness.

To facilitate the experience of other realities apart from everyday "consensus reality," thus experientially validating the realities of the realms of psyche and Spirit and their importance. With the appropriate set and setting, the use of psychedelics as "sacraments" can be extremely effective (hence the use of the term *entheogen*). Psychedelics enable individuals to enter altered or non-ordinary states of consciousness which transcend our everyday, consensual reality. For many individuals, the experience of these states may be literally life-changing. The depth of experience that one can access in altered states can alter forever one's cognitive maps and worldview. This can be a profoundly important experience, validating what may have previously only been theoretical concepts.

To connect with inner wisdom, the Inner Teacher, the voice of the Self, and beyond this, the Divine Itself. One of the most profound elements of this form of inner work is the connection we can make with a source of inner wisdom and knowing—far beyond that of our ordinary everyday awareness and knowledge. This experience can validate our theoretical and conceptual beliefs about a deep inner self, soul, Inner Teacher or Self, and, in some of the most profound experiences, can give us a direct experience of the Universal Self, of the unmanifest face of God Itself, or of the pregnant fullness of the Void. In this connection with the inner wisdom, we get a sense of a co-operative venture between ourselves (in our ordinary consciousness) and these "other," deeper inner aspects of our essential being. There are times in psychedelic experiences when the different roles of this partnership become clear. We experience our place in the scheme of things. We see quite clearly how there is a profound purpose to all that happens to us in our life, and that the source of this is deep in the realms of Spirit. This results in an extraordinary inner trust in the process of our life in general, and of the often intense and difficult process of the psychedelic experience in particular.

Despite these important experiences, and the benefits and insights they can bring, working with "psychedelic" doses is not about finding an easy answer or a short-cut to enlightenment. They take us deep into ourselves and throw light on our life journey. They show us what we most need to see—whether our conscious everyday self wants to see it or not. The experiences can

be intensely painful and full of suffering, as often as joyful and ecstatic. So those who are not willing or able to confront their inner darkness should not be tempted to explore this route to self knowledge. The truth can be a painful and difficult burden with which to live.

The value of support networks

Anyone consciously undertaking work on themselves with psychedelics needs a strong enough sense of self to psychologically handle the depth and power of the realms into which they are journeying. In the states of consciousness accessible through psychedelics we can experience much that is collective, rather than personal, and it is the nature of the process that we temporarily identify with and take literally these aspects during the experience. What is important, after the event, is to psychologise the symbolic meaning of the experience. Whatever experiences we encounter will always be relevant to us personally, no matter how cosmic or collective the experience. "Objective" reality is always seen through the tinted lens of our own subjective nature and conditioning.

An individual taking psychedelics may face extraordinary encounters and identify with powerful energies, beings and images. This is why it is so useful to have people around—like a therapist, partner, men/women's group, spiritual guide or community—who can act as external points of reference in relation to what can seem like overwhelming experiences. An attitude of discrimination is important both during and after these powerful inner experiences, lest we are swept away by their intensity and seeming veracity. Participants may also return with what seem like valuable insights and vital knowledge. However, the proof of the pudding, as they say, is in the eating. What value do these experiences really have? How are they integrated into the individual's life? This is the purpose of integration and the role of Will.

Will, integration and action

Psychedelic experiences can result in a great increase in awareness—we open ourselves up to receive from the unconscious—but this needs to be balanced with some form of outer expression in terms of action. Too much awareness can become a block to true self-expression and actually becomes counter-productive. What does an individual do with all their insight and awareness? How does it inform their actions in the world? In psychosynthesis, this is the function of the Will. The Will is about creating boundaries, accepting limitations and making choices—central tasks in the process of actualising potentials and self expression. One of the problems with psychedelics, though, is that they are so attractive to some because they seem to offer everything, the All, without much effort. But this attraction is illusory. A lifetime of experience, whether psychedelic or not, does not necessarily lead to wisdom. It is what we do with the experience that counts. For with increased consciousness comes the responsibility for its expression. No matter how profound the insight, or how numinous the experience, it needs to be lived in the context of our own life journey.

It is easy to get caught up in the glorious pyrotechnics of psychedelic experience, when the real work is in the grounding of these in the interpersonal, relational task of living our lives—

within our own community of relationships and culture at this particular historical moment. This is the role of praxis—putting into practice in our everyday lives the insights and discoveries we gain through inner work—and this calls for us to engage our Will in relation to our growth in consciousness. In this process, a psychospiritual psychotherapist can be of tremendous assistance. To have our process held, mirrored, challenged, and witnessed by someone we can deeply trust can be an immeasurably valuable part of the process of change and transformation.

Conclusion

The psychospiritual context challenges the view that life is some sort of cosmic error or samsaric illusion, seeing instead that the complex and multi-dimensional nature of reality is the vehicle via which we develop and evolve through self-discovery and self-expression. Working therapeutically within this context with psychedelics temporarily allows us to go beyond the restrictions of everyday consciousness. In trusting and letting go to this process, we connect with the natural and innate healing mechanisms of the psyche, under the aegis of the Self. But fundamental to this process is the Return. We must integrate and ground the insights and consciousness we gain through these experiences in the ongoing challenge of self-development and action in the world. This is where work with psycholytic doses of psychedelics is of particular value. Smaller doses bring to the surface psychological material that is more easily integrated, and the step between where an individual is (in terms of their psychospiritual development) and what arises is not so great. Thus from a psychospiritual therapeutic context, work with regular psycholytic doses, punctuated by an occasional psychedelic dose, seems likely to offer the best outcome. •

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Notes

¹ Psychosynthesis is an approach to understanding psychological and spiritual development originally formulated by the Italian psychiatrist Roberto Assagioli (1888-1974).

² The Triphasic Model has been developed by Joan Evans and Jarlath Benson at the Institute of Psychosynthesis in London. This model articulates the developmental journey from the viewpoint of psychosynthesis—with three stages (autistic/fusion, symbiotic and separation) at three major levels (ego development, "I" emergence, and Self realisation).

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The **Psychedelic Vision** at the Turn of the Millennium: Discussion with **Andrew Weil, M.D.**

The following is excerpted
from the pre-conference of the

1997 Association for Transpersonal Psychology Conference

held at Asilomar Conference Center

—Monterey, California;

August 1-3, 1997.

The pre-conference was entitled

The **Psychedelic Vision** at the Turn of the Millennium.

The featured speakers were

Charles **Grob, M.D.**,

Laura **Huxley**,

Dennis **McKenna, Ph.D.**,

Terence **McKenna**,

Ralph **Metzner, Ph.D.**

and Andrew **Weil, M.D.**

C. Grob: It is my pleasure to welcome you to the morning session of *The Psychedelic Vision at the Turn of the Millennium*.

I would like to introduce our first speaker of the morning, Dr. Andrew Weil, well known to many of you. He has become an extremely successful and well-known speaker on the topic of alternative medicine. He has had a number of books recently achieve best-selling status, including *Spontaneous Healing* and *Eight Weeks to Optimum Health*. His message that modern medicine needs to avail itself of resources previously ignored, including the medicines from the plant kingdom and alternative models to understanding healing and prevention, have now achieved far greater visibility and respect not only within the population in general but within the mainstream profession itself.

Andy has recently developed a new and innovative program at the University of Arizona School of Medicine; a training program, training physicians in alternative medicine, theory and practice. The center there is called the Program for Integrative Medicine and it is really a pioneering program in the training of physicians in alternative models for healing. Andy is a clinical professor of Internal Medicine at Arizona. In addition to his recent activities being very visible in the alternative medicine movement, Andy also has a rich history, going back some years, looking at the phenomena of altered states of consciousness and particularly substances that might induce such altered states. In addition to his very important early works, *The Natural Mind* and *The Marriage of the Sun and the Moon*, written some twenty-five years ago on these phenomena, Andy also was present in the early days at Harvard University, where psychedelics first became an issue in the public domain and in fact, was a reporter then, I believe an editor for the *Harvard Crimson*, breaking the story to the Harvard community and the world.

So, Andy is with us today, having gone through a tremendous odyssey over the years, and is still quite willing and quite happy to talk about his early interest, which I believe is still an active interest. I give you Andy Weil.

A. Weil: Good morning. Laura [Huxley] has offered to sit next to me for moral support. I will tell her—I told her this once—I will remind you again of my indebtedness to Aldous for my early experiments. I read *The Doors of Perception* in the summer of 1960 and then in that fall I entered Harvard as a freshman and was very eager to try mescaline as a result of reading that book. I had no idea, I had never heard of these substances, I had no experiences of any psychoactive substance other than alcohol, and in my naïveté, the first thing I did was go to my corner druggist and ask if he knew where I could get mescaline. He said that he had heard that there were experiments going on of trying to reproduce schizophrenia in the laboratory but he had no idea where you could get it. And I remember, I talked to several people, I asked my family doctor. I made the mistake of talking about it at the dinner table one night, and I saw the reactions it produced in my parents so I said nothing further. And then by coincidence that Fall, Aldous was at MIT as a visiting professor and gave a series of lectures, I think four lectures on visionary experience, which were broadcast on the Harvard radio station on Saturday afternoons. I listened to them entranced, those lectures that later became, I believe, *Heaven and Hell*, is that correct?

L. Huxley: No, I think that those lectures are part of a book called, *The Human Situation*.

A. Weil: Well, they were very inspiring so I wrote a letter to Aldous Huxley. I think I sent it to him in care of MIT and he sent a handwritten letter back, giving me the name of a chemical company that he thought would sell mescaline. This was called Delta Chemical in New York. I wrote them a letter, this was in the pre-Thalidomide days when there was not very much checking about who got what and they would indeed sell mescaline, but at about five times the price that it should be selling for, with no questions asked. I then heard that there was a professor named Leary who was interested in these substances. So I went over to see him and he said that he was sorry that I couldn't be in their experiments because he couldn't use undergraduates, but he said I should just keep checking and I could probably find it. I think I wrote back to Delta Chemicals and said, did

they know anyone else who manufactured mescaline, and they gave me the names of three companies and they sent out these forms that were fairly simple to fill out for using the drugs for investigational use. I mean this was in the innocent days and I found one of these companies that was willing to sell mescaline and developed a nice relationship with them. It would arrive by UPS outside my dormitory, twenty-four hours after I ordered it. So, I am very indebted to Aldous for the lead.

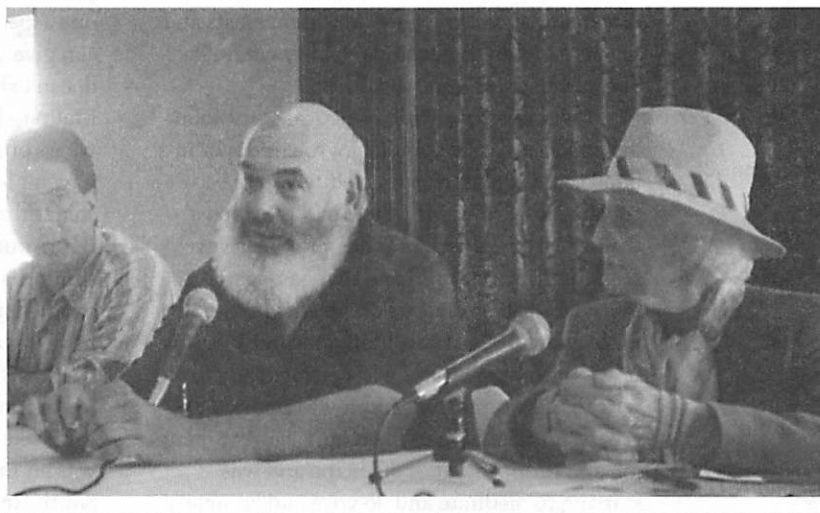
The first time I tried it, I tried it with one other friend of mine, and there was a group of people in my freshman dorm who were interested in it, but everybody was quite scared. I and this other fellow had volunteered to try it first. It was not an ideal setting, with the two of us taking it with a whole group of people sitting around, waiting to see what would happen. It was on a Saturday afternoon and my set was so filled with anxiety that it was about three or four hours before I felt anything at all. When I did feel something, at the beginning it felt like alcohol intoxication;

that was really the only model I had for what an altered state was like. At the moment I started to feel something the phone rang, and it was my mother calling from Philadelphia, who never called on Saturdays. I mean it was an awkward conversation. She asked me about the weather and I said it was nice and she said, "Why aren't you outside," and, "What are you doing?" and I said I was just sitting around with some friends. She said, "I hope you are not doing anything foolish like taking mescaline." I had mentioned the word once about two months before. Mothers...

I SAID THAT I would talk to you about practicalities and my interest is, "Okay, you have seen the psychedelic vision and you know, now—what do you do with it?" You can see it over and over if you like, but it seems to me the challenge is how do you translate it and what do you do with it. There are a lot of people in our culture who have had this vision now, and our concern is how is this going to be implemented. What can we do about it.

So again, I will talk very personally about this. Let me begin by just giving you some of the

key elements of the particular vision that I experienced as a result of psychedelic experimentation. The first, I think, is a sense of wonder, of just wonder and awe at the universe, at life, at consciousness. While that may seem simple, one of the things that has been very disappointing to me and striking in my career in medicine and the sciences, is the absence of that feeling on the part of many, if not most of my colleagues and I find that very dismaying. In fact, I even detect a strong feeling among some



from the left: Charles Grob, M.D., Andrew Weil, M.D. and Laura Huxley

of the hard core scientists that I went up against, that it is the business of science to do away with wonder. That science is seen as being able to roll back the mystery. I remember hearing Terence once say, he used an image which is terrific, that the bigger you build a fire and the more illumination it gives off, the more it makes you aware of the extent of the darkness beyond. I think that is very true, that fits with my experience and I think that is very much at odds with the scientific view, that the business of science is to do away with mystery. It seems to me that mystery is at the heart of existence and it is something that one experiences very profoundly as part of the psychedelic vision, whether it is the heavenly vision or the hellish vision. That has always been a very motivating force in my life. I think it has also kept alive my sense of curiosity. I am a very curious person and I check things out and I do it with this sense of wonder and it seems to me that is a very healthy attitude to have. Especially very healthy as a scientist and as a physician. So, I have always tried to inspire that in people that I come into contact with, and in medical students, but I am very aware that I am up against a tremen-

dous force in the opposite direction. It seems to me that is one thing that I try always to counter in my teaching, that comes directly from that psychedelic vision.

Another aspect of the psychedelic vision, for me, was the sense that anything is possible. That although there may be relative limits in the here and now, in some higher sense, there are no limits, that we live in a universe and that infinity and endless possibility are there. And again, I emphasize that this is a contrast because I think we live simultaneously in the three dimensional world where limitation exists and in some higher dimensional reality where it doesn't, so there is paradox there.

I will give you a very practical story about my experience of no limits. I wrote it down in a book that Lester Grinspoon edited on the psychedelic experience, but I will just repeat this for you because it has been for me a very meaningful model and one that has, again, motivated me in my work. This incident took place about 1970. I was living in rural Virginia, it was at the time that I was getting ready to write *The Natural Mind* and it was a period of great transition, when I had quit a government job and dropped out of medicine and was starting to meditate and do yoga and became a vegetarian. It was a time of great change in my life. Also, the political times in those days were both scary and very optimistic. One day in the spring of that year I took LSD with a group of friends, it was a perfect spring day and I was just in a wonderful state. I had been trying to start Hatha Yoga, as of a couple of months, and I had a lot of difficulty with some of the postures. The posture that I had the most difficulty with was the Plow, where you lie on your back and try to bend your feet down behind your head and touch the ground. I could get them down to about a foot from the ground and I would feel an excruciating pain in my neck. There was no progress at this, I had worked at it for about two months and I was on the point of giving up. I was twenty-eight, I decided I was too old and that my body was just out of shape and wasn't made for this. Well, in this LSD state I was just feeling so happy. I observed that my body felt completely elastic and springing and I thought, "Well gee, while I'm this way I ought to try doing the Plow." So I lay down and I was lowering my feet behind my head and I thought I had about a foot to go and they touched the ground. I couldn't believe it! And I kept raising them and lowering them and it was just, it was fabulous. The next day I tried to do it and I could

get my toes to within a foot of the ground and there was excruciating pain in my neck, but there was a difference now. The difference was that I had seen that it was possible. And I don't think I would have believed that, I was on the point of giving up.

That experience of seeing that it was possible, even though it had now disappeared, motivated me to keep trying, and in the space of about three weeks I was able to do it. I think if I hadn't had that experience, I would have given up trying to do it. And to me that is a model for one aspect of what psychedelics can give you. It can give you a vision of possibility, but then it doesn't show you anything about maintaining that possibility. When the vision goes, the drug wears off, you are back where you were, you haven't learned anything but you have seen that something is possible. It is then up to you to figure out how to manifest the possibility. I think that sense of anything is possible has enabled me to accomplish a lot of things that I have done.

I will tell one story that I relate to that. I am in Arizona by the weirdest of circumstances, my car broke down there twenty-five years ago. It was an English Land Rover that I had driven to South America without incident; I shipped it back. The moment I got it back in this country, it was a liability. I couldn't get parts for it, I had had it overhauled at that Land Rover Agency in Laguna Beach and got stuck there for five weeks waiting for rings, and then I drove to Tucson. I was trying to get to Oaxaca to deliver a baby of a friend of mine. The Land Rover Agency had forgotten to pack one of the wheel bearings, which shattered, and it took six weeks to get a wheel bearing. It was a February. A very warm, wet winter, the desert was in full bloom; I never left. The baby got delivered by itself, as they usually do. But anyway, I would have never, in my wildest imagination, thought I would be living in the desert in Tucson, Arizona.

ABOUT THREE YEARS AGO my best friend from medical school was named Chief of Medicine at the University of Arizona by again, total stroke of fate. He and our dean were a team at the University of Massachusetts, the two of them had been instrumental in getting Jon Kabat-Zinn's program set up at the University of Massachusetts. So when he arrived out in Arizona, he said, "Well now that you have friends in high places, what do you want to do?" I said, "Well, I would like to change all of

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medicine." And he said, "Well, how do you want to do that," and I said, "here is what I would like to do," and I outlined the basis of this program in Integrative Medicine, which has now started and is in full swing. Our first doctor trainees are on board and —this is big stuff—the whole school is behind it. It is, I think, a model for medical education for the future and it is going to happen all over the country. And by the way, when people hear about it, I think the most common piece of feedback I get is people saying, "It's about time." It is long overdue, you know, and it is about time, but, I think if I didn't have that sense that anything is possible, I wouldn't have attempted anything of that sort. But I always do, I just have this sense of, "Why not?" and I think that comes directly from the psychedelic vision.

Another aspect of the psychedelic vision for me that has been very profound, is the sense that everything is alive or that at least, there is no distinction between what we call living and non-living. That there is some level on which everything is patterns of energy and that I have perceived that energy. I remember being in a canyon in Arizona in a psychedelic state and really being aware and able to see energy circulating in my hand, which was resting on a rock and to see that the energy in my hand was the same as the energy in the rock. That this was the same stuff, that everything is composed of basically the same stuff, which is in active movement. I think that sense has also led me to be very open to techniques and ideas in medicine that many of my colleagues find unable to fit in with their world views.

For instance, I have always been extremely interested in energy healing and all of the touch techniques. You look at my friend who is Chief of Medicine, Joe Alpert, a cardiologist; and he is a remarkably open person to be in the position of Chief of Medicine. As I said, he was a good friend of Jon Kabat-Zinn's and as a result of his association with our Program, his horizons have been greatly widened. But he said to me the other day, "You know you can talk to me about herbal medicine, I have no problem with osteopathic manipulation or acupuncture, but don't talk to me about homeopathy." He said, "I don't want to hear it," and this is the attitude of many. I think of all of the alternatives out there, homeopathy is probably the one that most pushes the buttons of the scientists, because it is the one that really challenges the materialistic paradigm. Here is a system of medicine based on giving people remedies that are so dilute that

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there is little chance that the molecules are present and Hahnemann, who invented this system said that he was liberating the spiritual essence of the drug in this way. He wasn't interested in a drug as a material substance, he was interested in it on the non-material level. Whether you want to call that the energy of the drug or the vibrational aspect of the drug or the spiritual aspect of the drug, you can not use that language in talking to medical doctors and scientist. It just enrages them.

FOR THAT REASON I have deliberately made homeopathy one of the required subjects that we are teaching in the Program for Integrative Medicine. I have done that very deliberately because I think it is interesting to see what happens when you push all those buttons in an academic medical center. But my reason for doing that is exactly from my direct experience—from the psychedelic vision—of energy being the basis of everything, that it is possible to approach the human body on an energetic level and that may be a very valuable way of doing things. I want to see what happens there, if you try to look at this in a scientific way or try or are forced to develop a new conceptual paradigm to explain how therapies can interact with the human body. I want to push that envelope and see what happens.

I could go on in this vein but the main thing I want to leave you with is that for me, the challenge has been to translate these experiences that I've had in psychedelic states. I don't use psychedelics very frequently anymore. It is really a period of experimentation that was in my past, but my work is very actively derived from those experiences. It seems to me that the challenge in our culture is not to have this vision over and over again, it is really to see how the vision can be put into practice. How can you implement it into this sphere of life in which you are involved and produce change in that sphere, whatever it is. Mine happens to be medicine and that has been a big one to take on, as you can imagine, but for a variety of reasons it is very susceptible at the moment to being moved in a big way. The reasons, by the way, on a material level, are primarily economic.

Medicine is in enormous economic crisis today, it is really of its own making. It set out on a course of being very uncritically involved with technology and the dependence on technology is too expensive. At the same time it is up against this enormous worldwide, social,

psychological shift among consumers who for a variety of reasons are moving toward natural things. These combined economic forces are irresistible. Medical institutions suddenly really have no choice but to move in this direction, but it is amazing to watch it all happen so fast. At any rate, I am very optimistic about the possibility for change there.

That reminds me of one other thing. I was interviewed very extensively in the past few months by a *New York Times* reporter, who was publishing some long feature, she is a woman in her mid-thirties who is a Harvard graduate, the daughter of two Harvard psychiatrists, I liked her very much and she is very thoughtful, very interesting and she wanted to read my whole body of work and asked lots of questions. She started asking me about the drug stuff and I said, "You really should read *The Natural Mind* first and then come back and talk to me." So she started *The Natural Mind* and she called up and said that she found it such a curious book; she said it seems so dated. I said, "What do you mean by dated?" and she said, "Well, it just seems like it is a product of another time." I said that, well, it was, but I said, "What do you mean by that?" She said, "Well, it is so optimistic." As I began talking to her about that actually I felt quite sad. She said that in her peers, her generation, going through college... the sense that you could change the world, is completely foreign to her, that it is so strange to read. In a sense, this makes me feel very sad and yet again I think that that optimism is something that for me derived from the psychedelic vision. I don't know whether her generation has not had that, but if younger people find that a dated view of reality, I feel very sorry for them. I think my sense of optimism is very much confirmed by what I see actually happening out there.

YOU KNOW, I really do think the world is changeable and that all this can move quickly and astonishingly. I think also, even though change probably builds on slow incremental movements, that when it becomes perceptible sometimes the shifts are sudden. This is a popular view with Chaos Theorists. To point out an example that I have seen used; if you have a fish tank with fish and each day you are putting slightly more food in than the fish can eat, without knowing that one day you come in and the water is opaque and the fish are dead and floating on the surface. You wonder how could that be, what happened, but what happened was the result of very slow

increments in which the flora was changed, the oxygen content of the water was changed. When it reaches a flip point, then there is this gross obvious change that seems to happen instantaneously. I think that is the way social change happens and world change happens as well. So, I think that doesn't spare you from doing the work day to day and putting it into action but then I think the movements can be very dramatic and sudden and amazing, so I remain extremely optimistic. And it just makes me very sad if that is true of the generation younger than me. So, I will stop there and let you comment.

C. Grob: Thank you, Andy. It's certainly good to have you here at a meeting like this, talking about these issues. Clearly you are in the public eye, as a spokesperson for the whole field of alternative medicine, which is really having an enormous impact on how people are viewing health and are viewing what they need to do to insure their own health. You are certainly having an impact being right out there, center stage. What is also quite extraordinary is looking at your own history and in a sense, where your early vision was acquired. I think this is one of the attributes of the psychedelics which often goes unacknowledged; the power with which they endow individuals with a vision that often takes them forward in their lives. Even individuals who haven't taken psychedelics in years or in decades will often trace back pivotal decisions they have made to those early experiences. I think it is really gratifying to see you, particularly now in your position of prominence, very willing to speak of such early experiences.

It is also quite fascinating to examine the medical profession in flux. One of our institutions that seems to be so impervious to even the slightest change, is now moving at a rapid rate. I wonder at what point might our professions start to open up to the potentials that psychedelics might have in terms of helping us understand health, understand illness and understand new methods to intervene. Sometimes I, in my wildest of optimistic visions, imagine a whole field of psychedelic medicine devoted really to studying this phenomenon, a phenomenon that has gone virtually ignored by Western medicine. But if you look back on the roots of our healing structures, that which we inherited from our ancestors, we see that much of early, very early so-called primitive medicine was on the Shamanic healing model, which often used altered states acquired through one

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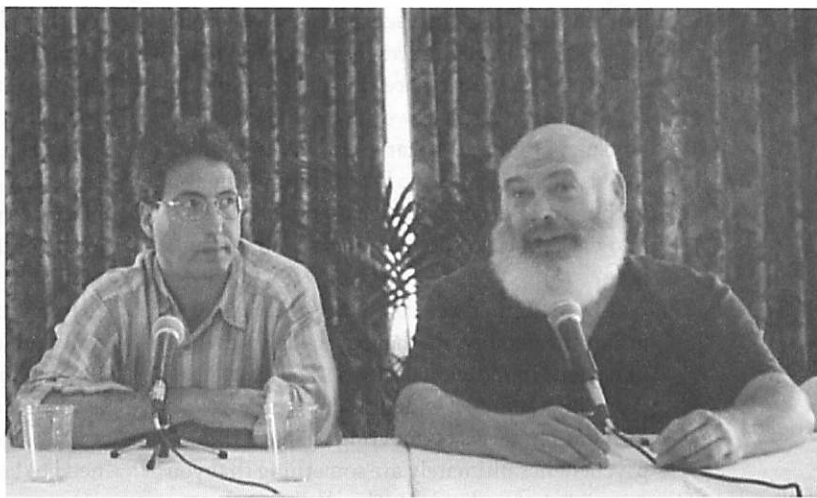
method or another to facilitate healing; either through the healer getting inside into the malady of the person and implementing energetic changes, or the patient him or herself entering an altered space to facilitate a process of healing. If we look to the future and anticipate an evolution of our medical systems, might it be possible even to imagine a role that psychedelics might play? Even a role that is accepted and valued?

A. Weil: Actually that reminds me, I left out one very important component of the psychedelic vision, which for me was the real experience that external reality can be changed by changing internal reality. That is, that by doing something in here, everything out there changes and I think that has enormous relevance for medicine. I will give you another personal experience. I think this was on a different occasion than that one I told you about with the yoga experience, but it was again with LSD. I had had a lifelong allergy to cats and didn't like cats. If I touched a cat and then touched my face my eyes would itch and swell, and if a cat licked me I got hives where they licked, so I always stayed away from cats. One day in an LSD state, when I was feeling very centered, a cat jumped in my lap and I just decided, well, I was going to enjoy the cat. So I played with the cat extensively, I had no allergic reaction and I have never had one since. That to me was a very powerful experience, how something that I thought was a lifelong pattern could change in an instant as a result of a change in internal reality.

I have one other to contribute, this one I have not written about but it is even more impressive. I had very fair skin as a child and was always told I couldn't get tan. We used to go down to the Jersey beaches in the summer and I remember endless sunburns with sheets of skin peeling off, this was in the days by the way, when what we used for suntan lotion were products that probably magnified the sun reaching your skin. But this is something I just accepted about myself; that I couldn't get tan, that my skin would peel and that was always my experience. At this same period in 1970 when I was making all these changes in my life; I decided that this is something that has got to

change. I remember, again with psychedelics, for the first time I lay naked in the sun and exposed my whole body to sun, and lo and behold, my skin got tan for the first time in my life and it has ever since.

Those three have been very remarkable experiences: the sense of anything is possible, that there are no limits, at least in the ideal world, and that the key to changing external reality and reactions to the environment lies in internal transformations. When I work with



Charles Grob, M.D. and Andrew Weil, M.D.

patients, especially patients who have chronic pain or chronic illnesses, even though I may not know how to do it, I think it is important to give them a sense that this is changeable and that they should keep experimenting. My general sense is that the real change is at the level of consciousness. If these tools were available to us as practitioners, I could see a lot of potential uses there and not just in psychiatric medicine, which is where it has been talked about the most, but especially in physical medicine.

I think you could take people with severe allergies, for example, and give them a series of experiences with decreasing doses of the drug to teach them how to unlearn an allergy and maybe in similar ways you could teach people how to unlearn chronic pain or to unlearn musculoskeletal problems or digestive problems. I could see great potential use for it.

C. Grob: I think it's good to hold this concept that anything is possible, a sense that even structures that we feel are too resistant to change, can change. To hold an optimistic vision of what may be possible. I think we are beginning to see examples that the realization may be more accessible than we had thought.

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For example, no one really anticipated the collapse of Eastern Europe, the way it happened with such rapidity and in such an overwhelming manner. I think we are going to see in medicine simply more receptivity. The public at large wants alternative perspectives, alternative approaches, the very notion of putting forward a program for training practitioners in alternative medicine at a prestigious medical school, ten years ago, would have been unheard of. That would have been a pipe dream of the widest magnitude and here it's already starting to happen. So, I think in a sense what we need are visions such as this and a sense of surety that with time and persistence change is feasible. I think this is really a powerful example for us to hold and also for us to carry with us as we take the visions that we have for the future, but also with realization that change is possible. I don't know, Dennis, do you have some comments here?

D. McKenna: Yes I do, I think that Andy makes the good point, that psychedelics can be important in individuals' lives in terms of orienting them to a wider vision or be an influence in terms of directing people. I think psychedelics ultimately are something that you come to as an individual. The challenge that we face is trying to relate our own individual experience and its influence in our own lives to the greater society, and ultimately beyond society to our species' fate. This is where the challenge lies, trying to reconcile these two, because the way that at least our western society is structured, there are no paradigms for joining these two. In fact, societies seem mostly set up to discourage this kind of self discovery and to repress it by legislative means if necessary, but by whatever means. It is not something that is encouraged. I think that one of the biggest challenges for the next millennium is, how are we going to take our own individualistic psychedelic visions or inspirations and try to diffuse those into a larger society. This is always the problem.

As Andy has said earlier, now that you have the vision, what do you do with it and how do you somehow give expression to it in the way you live and the way that society operates. I think that is really the challenge. I am optimistic too, it must be that optimism is infectious because I think there are a lot of discouraging things going on but overall I think that trends are in the right direction.

C. Grob: We have time for questions or comments for Andy.

L. Huxley: I would like to say one thing. Andy has given me, I think all of us, a great hope that one of these visionary common sense ideas might become true one of these days. I think that in a conscious society, a great doctor would say to his patient, look here, I am going to try to do my best for you but I can do very little. But I have one little bit of news, you can do a lot for yourself. Maybe that is going to happen because of you.

Audience question: Dr. Weil, here is another element of how psychedelics might be helpful in our health; I know there are a lot of things going on in my body I am not aware of, and perhaps some things which need attention. Perhaps there is cholesterol building up, or perhaps I am keeping muscle tension in certain places, or perhaps my insulin is off, so I am not aware of these things. We have these marvelous plants that help to increase our awareness, are there particular techniques or particular plants that might help us become more aware of what is going on in our bodies and where our attention may need to be focused?

A. Weil: Well first of all, I don't think you need to become aware of too much of what is going on in your body. I think it is good to assume that your unconscious mind is running things just fine. I think you could make yourself very crazy by becoming too aware of what is going on. Think if you had to consciously run all the things in your body, that would be a nightmare. However, it is clear that in some people that come for medical attention, the problem has been that they have ignored things that they should have paid attention to. In most cases, that is not even visionary common sense, it is just basic old common sense. Runners that run in spite increasing pain in their knees, for example, are just ignoring simple common sense. So I think in the general public there is a kind of basic body awareness that people should know about. I am committed to bringing that kind of information to kids because I think we don't do a very good job about giving children preventive health information and I think the principles are very simple and I am not so sure we need psychedelic tools to do that. I think that is just basic common sense.

I have a wonderful collection of anecdotes of people who, using psychedelics, have become aware of information from their body that was very useful to them. Absolutely, I have seen that over and over, that has helped guide them in choices that they have made in knowing that

there was something wrong with their body or something was not wrong with their body. So I think they certainly can function that way and again I can see a potential use for them.

D. McKenna: I would like to ask Andy, coming off your question, do you see psychedelics as a potential diagnostic tool for physicians, being used much in the same way that ayahuasca for instance, would be in tradition settings?

A. Weil: That's a very interesting question. We have twelve core subjects in the Integrative Medicine Program that the physicians are learning and we have recruited faculty of the whole University of Arizona as well as outside to develop these courses. One of the courses is called *The Art of Medicine* and this is all material that is not usually taught in medical schools; one aspect of this is intuition. I have always maintained that all diagnosis was based on intuition and that all of the great diagnosticians that I have met have been highly intuitive, although they may not have recognized that themselves. I think that the diagnostic tests that we do can be used to confirm or discard hunches that you form intuitively.

But a problem in our educational system is that not only is intuition not rewarded, actually students are actively penalized for using intuition and not relying on objective data. And that has gotten even worse with the whole medical malpractice situation because now, with the great fear of litigation, there is more and more emphasis on not doing anything unless you have objective numerical data to support what you do. So, I am very much interested in how you train intuition in people and I could imagine a future world in which psychedelics were available for that, they could be used in a way to become more aware. Everybody is intuitive, but most of us aren't trained to pay attention to it or to act on it and I think that is the challenge. I could definitely see drugs being used in that way.

Audience question: Your talk made me think about three different kinds of people or three different kinds of situations, I am not quite sure how to say it but, there are people who have taken psychedelics early in their lives or careers and kicked the visions into their lives, there are people who are involved in spiritual

practices in which the use of psychedelics is an ongoing thing and there are people who take psychedelics over and over again and don't seem to do very much into bringing it into their lives. Have you thought about what accounts for the differences among those three kinds of people?

A. Weil: I haven't. I will add, by the way, a fourth category, which is people who have had the vision without ever using psychedelics. And they can either take it into their lives or not, as well. No, I haven't thought about that, I don't know. I don't know what accounts for that.



Dennis McKenna, Ph.D. and Charles Grob, M.D.

Audience question: My comment might be a good follow up to that. My experience started with spontaneous visions as a teenager and then into meditation and then occasional use of psychedelics and then a lot more meditation, long retreats which seemed to duplicate the psychedelic experience through natural meditative practices. And then, going into medicine and psychiatry and now six years of psychoanalytic training. I think the basic ego strength of the user before the psychedelic experience or the spontaneous ego experience is a big factor in whether you bring this vision into the world or not. We are getting into the realm of psychiatry and a lot of these issues may have to be dealt with, with a dialogue between internal medicine and psychiatry as well as alternative medicine. In many ways psychiatry may be behind the boat, but it may be the future of how we integrate. How do we bring forth the natural healing abilities of the unconscious mind into our personal lives and bring out those visions that are within us into manifestation in helping the world with its problems?

A. Weil: That makes me think of several things; first is that the first time that I took mescaline in my freshman year, I really had minimal experience because I think I had so much anxiety about it. I took it again about a month later and had what certainly felt to me like a mystical experience and it was very overwhelming. But I think when I came out of it, some part of me knew that if I followed through with the implications of it I was not going to go through college and medical school. I kind of shut

that all off and it wasn't until I was probably out of medical school, beginning to do an internship, that I began to experiment with psychedelics again and recover that. I think if at that point I would have pursued a psychedelic career I would have not gotten my medical degree and not done what I now do. So that makes me somewhat cautious about young people and that is one thing that I might tell young people; there may be an appropriate time in life to do this and that maybe it is worth waiting a certain period.

I CAN'T IMAGINE WHAT would have happened to me if I would have discovered these drugs when I was in high school, for example. Another thought that I have is to what you said about psychiatry and medicine; I think this is one of the great tragedies of modern medicine and is really part of the legacy of Descartes. There are people who say that if western civilization took one wrong turn, it was with Descartes; certainly the split between psychiatry and medicine is in that Cartesian tradition. I think it is very unfortunate. I am doing what I can to repair that. I was asked to give psychiatry grand rounds at the University of Arizona a few months ago and to my delight, they were very unhappy that they had been left out of the Integrative Medicine Program and wanted to know how they could participate. So, I have definitely opened a dialogue with the psychiatry department. Even if they just want to get in on a level of doing research, that is fine. I would like to involve them much more. The concept behind psychiatry—the word means soul doctoring—I can't imagine anything more important, especially if you feel as I do, that much if not all of disease originates on the nonphysical level and then eventually manifests on the physical level. And yet, it is so ironic that of all of the medical specialties, psychiatry is the one that is most mired in materialism and sees all disorders of consciousness as being the result of brain biochemistry, when it could just as well be the other way around. And that all therapy is giving people drugs and if a psychiatrist is treating a person who develops a physical problem they are referred to an internist and if an internist has a patient who is believed to have an emotional problem, they are referred to a psychiatrist and there is no conversation there. That is a big problem, it is something very wrong with medicine today, and something that we are trying to fix.

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Audience question: I would like to follow up on that, being a psychiatrist. I really like your thing about, "Anything is possible." Another dichotomy that I see, that worries me, and that it is often expressed in a psychedelic group, is the dichotomy between western medicine and alternative medicine. I liked your concept of Integrative Medicine rather than the idea that "If you take Prozac you are bad; if you take St. John's Wort—which is a herb but it is medication—you are good."

A. Weil: I get concerned about that kind of dichotomy, so the whole thing of, "Anything is possible and everything should be integrated," is another area that I don't see very many people addressing. Let me expand that even more. To generalize, the basic problem is the either/or model. And again, this is something that I relate to a psychedelic experience. I remember an even earlier acid experience in Death Valley. It was one night on a full moon in June, so it was blazing hot in the day, but during the hours that I was on LSD I couldn't tell whether I was warm or cold at night. I felt both sensations simultaneously, and to me that experience of ambivalence, of paradox is something that has been very much alive for me in psychedelic experience. It has always led me to approach things from a both/and formulation rather than either/or formulation. And I think that whenever you run up against either/or formulations, you should try to replace it with both/and.

Audience question: I first read *The Natural Mind* when I was in my first year of medical school and that was my first exposure that there was something called alternative medicine, which you discussed as a sort of natural outcome of a psychedelic world view. I find that book to still be perhaps the most cogent, conducive, intelligent discussion of drugs and their role in society that I have ever read. At the time that you wrote that you were fairly unknown and I don't think very many people have read it. Now that you have found a large audience, I would like that book to find a large audience and would like to see a revised version, written to reach out to the public. At the same time, I see that might really jeopardize what you are trying to do—bringing alternative medicine into the fold—so that is a paradox but I just wanted to put out that I would like to see more people find that book without it somehow endangering your status of bringing alternative medicine into the mainstream.

C. Grob: We can take one more question or statement before the break.

Audience question: I would like you to elaborate a little bit more on an either/or, both/and issue that I face. I am a psychiatrist and I work with oncology patients and the question is, on the one hand there are a lots of alternatives and things that people can do to get better, but on the other hand you speak very cogently about the dangers of guilt and responsibility for getting better. The biological power of illness is so great that sometimes patients come to me and they are overwhelmed with possibilities. They shout, "What should I do? I am not meditating well enough, I am not doing enough imagery, etc." How do I help them to get to a both/and model?

A. Weil: In *Spontaneous Healing* I have a chapter called Cancer as a Special Case, and I really find it useful for a lot of reasons to separate cancer out from other sorts of diseases. It is the one in which the polarization between conventional and alternative medicine is most intense. I think cancer is different in that, by the time we diagnose it, it is a condition of very long standing, in which the body's healing mechanisms have failed. So you are up against a different order of magnitude of difficulty than in moving other kinds of diseases. There have been so many New Age books about cancer, talking about the mind-body connection. Frankly, I am very skeptical of a lot of that. My sense is that cancer mostly results from very complex interactions between genes and environment, in which the role of emotions and belief is obscure. I can see how states of grief or depression could suppress immunity and allow a preexisting cancerous tumor to grow faster, but I personally don't think that mental factors have a great deal to do with the origin of cancer. That is my own belief. I think in working with cancer patients, it is very appropriate to tell them that their mental states have a role in their general health and can specifically affect immunity, and to give them techniques like visualization that can help with that, but I think one has to be very careful about feeding into that idea, "You gave yourself cancer." I told a story in *Spontaneous Healing*, that I will just repeat that I think is very revealing.

I have always liked asking patients why they think they got sick, and I am interested in how people formulate that to themselves. When I was a medical student, this was in the late Sixties, I asked a lot of women who had breast cancer—and these were women of my grandmother's generation—why they thought they got breast cancer. Everyone, one hundred

percent, said that they got it because they had a past injury. The typical formulation was, "Thirty years ago, I fell against the kitchen table and hit my breast," or "I was in a car accident and my breast got hurt." We know of no connection of trauma and breast cancer, but that was how women in that generation explained breast cancer to themselves.

WHEN I ASK WOMEN TODAY with breast cancer why they got breast cancer, nobody ever mentions injury. Now all I hear is formulations like, "For all those years I bottled up my feelings," or "I never expressed the rage I felt towards my husband." Now, I don't think we have any greater evidence that breast cancer results from bottled up feelings than from past trauma, but this represents an enormous social shift in this culture in how women explain breast cancer. And there is a big difference here, because if you think you got breast cancer because you fell against the kitchen table, that is an act of God, it is an accident. If you think you got breast cancer because you bottled up your feelings, it is your fault. It is failure on your part. That has very different implications for how you think about yourself. And personally, I am very uneasy about the amount of popular literature that feeds into those formulations today, about cancer. That is all I can tell you. I think it is a very careful line that you have to walk, and I think the thing that you want to focus on is telling people that their states of mind probably influence their immunity and their level of general health, so it is worth trying to work on that through whatever techniques we can offer them, but that there is no point in looking for how that fed into the origin of the illness. •

Multidisciplinary Approaches to Psychedelic Scholarship (MAPS)



Thomas B. Roberts, Ph.D.

IN ADDITION TO THE PROFESSIONAL CAREER OPPORTUNITIES in the biological sciences that Dave Nichols, Ph.D. described in the *MAPS Bulletin* of Autumn 1997, students who want to study psychedelics as part of their ongoing undergraduate and graduate programs have many other non-career possibilities open to them. For seventeen years I have taught "Psychedelic Mindview" at Northern Illinois University as a special topics course in educational psychology (Riedlinger, 1988; Roberts, 1988a, 1988b), have supervised independent studies, and consulted for students' term papers and in-class presentations for other classes.

A dissertation I chaired year before last in Educational Psychology exemplifies nonbiological studies of psychedelics (Hruby, *The Varieties of Mystical Experience, Spiritual Practices, and Psychedelic Drug Use Among College Students*.) Complete citations of most resources in this article (as well as brief excerpts from them) can be found in *Religion and Psychoactive Sacraments: An Entheogen Chrestomathy* online at www.csp.org/chrestomathy. References which are not in the *Chrestomathy* are at the end of this article. A scan through the *Chrestomathy* reveals about two dozen dissertations on psychedelics which have something to say about their entheogenic uses; these portray the wide range of scholarly and scientific interest in psychedelics from philosophy and psychology through anthropology and literature. As a specialized scholarly resource, the *Chrestomathy* lists only items that have to do with the religious uses of psychoactive plants and chemicals—*entheogens*, so it's selective in its listing, omitting nonentheogenic psychedelic items.

Wide range of opportunities

Since psychedelic experiences are also important for the ideas they generate, there is an immense amount of scholarly work that is possible other than the design and testing of psychoactive drugs. To me, one of the most fascinating things about psychedelics is the fact that their influences range from art to zoology, from archeology to futures studies, from the neurosciences to religion. Because the human mind is used in all human intellectual activity—the arts, sciences, scholarship, and day-to-day living—a new understanding of our minds has implications for all these, and psychedelics offer a new (or renewed) view of our minds and new ways of using them (Grof, 1975, 1994). While independent studies, term papers and in-class presentations are not lifetime professional commitments, sometimes they do flavor a future career, and sometimes they develop into an area of specialization within other disciplines; the study of shamanism in anthropology and ethnobotany are examples.

You can obtain advanced degrees in a number of different fields and consider the implications of psychedelics for that field; for example, I am an educational psychologist who considers the implications of psychedelics in my professional activities on the development of

the human mind. Similarly, professors in other fields may include psychedelics as part of their work, although they aren't their major professional discipline. To students who want to earn advanced degrees with a psychedelic flavor, I recommend they attend the top-ranked graduate schools they can in their prospective fields. It is often the best schools which are most willing to take a flyer on new ideas, and in one's future teaching and research it is helpful to have attended a top graduate program, especially if one has something unusual to say.

Options for undergrads

Undergraduates who are willing to take responsibility for their own education will find many opportunities. Most academic departments offer independent studies, directed reading courses, etc. Although supervising an independent study means extra work for professors, the joy of seeing a student who is excited about a topic usually more than offsets the extra load, and if the professor is also interested in psychedelics, he or she is likely to enjoy mentoring on this topic.

How do you go about finding a professor who might have the time and inclination to direct an independent study of psychedelics? Think of how your specific interest in psychedelics intersects with professors' professional

interests. Psychotherapy, psychology or mental health? Art or music? Anthropology, sociology, or archeology? Philosophy or religion? If your interest is in creativity or the nature of the human mind, professors from several departments may be likely possibilities.

Remember: professors, like their students, have interests beyond their classes. Just because a professor teaches, say, modern French literature, that doesn't automatically mean she or he wouldn't welcome an independent study on psychedelics, and as a student you might be pleasantly surprised to learn about *Le Club des Haschischins* (Stafford, 1992) or Sartre's mescaline experiences (Riedlinger, 1982). If the professor you first ask is unable to direct your independent study, ask her if she knows of someone else who might be interested. Departmental secretaries, especially those who have been on the job for many years, can be helpful in suggesting faculty members.

Preparing for an independent study

Before you ask a professor to direct your independent study, it will help to have a specific idea of exactly what topic you want to study or what question(s) you want the independent study to answer. If you know of books and articles that you'd like to include, it's helpful to have a list of them. Like most professors, my first request for an independent study is to have the students write a short one-page or two-page outline of their goals for the independent study, what they expect to do, and how they will accomplish it. Since you'll run into unexpected publications and new ideas as you go along, it's best to make your plan a working, tentative plan that is revisable if both you and your professor agree.

Some professors will let you attend a conference on psychedelics as part of an independent study, too, provided you work it into your plan for the independent study before you attend it. They'll probably want you to critique some of the sessions, read some speakers' works before or after hearing them, or involve your mind some other way in the conference. They won't, however, be able to give you academic credit for doing anything illegal, so don't even bother mentioning it.

Finding resources

Where should you start to look for information on psychedelics? Readers of this article have already made a good start with the *MAPS Bulletin*. Next try the MAPS website and its links to other web resources. Among books, my favorite starting place is *Psychedelic Drugs Reconsidered* by Lester Grinspoon and James B. Bakalar. Thanks to the Lindesmith Center, the paperback edition of this book was republished in 1997; its annotated bibliography is splendid. To use the book efficiently, look up your

Since psychedelic experiences are also important for the ideas they generate, there is an immense amount of scholarly work that is possible other than the design and testing of psychoactive drugs.

topic in the index, go to the pages indicated, note the chapter number and topical subhead, then go back to the annotated bibliography, which is organized by chapter and topic. The annotations will fill you in on the research and speed up your decision on which sources to read. Peter Stafford's *Psychedelics Encyclopedia* (1992) is another wide-ranging collection of psychedelic gems.

Religion and Psychoactive Sacraments, whose URL was given above, contains bibliographic citations and short excerpts from some 400 books, dissertations, and topical issues of journals (no single articles). Because many books which are primarily on nonentheogenic topics say something of interest about entheogens—psychoactive plants and chemicals *used in a religious context*—you can use it to look up information on related topics besides religion. To use the *Chrestomathy's* internal search program most efficiently, use a "stem" followed by *. For example, *counsel** will pick up *counselor*, *counselors*, *counseling*, etc. *Shaman* locates 21 files, while *shaman** brings up 44 because it picks up files which contain *shamanism*, *shaman's*, etc.

Using the library

Most libraries also have a collection of indexes and abstracts on CDs, such as *Psyclit*, *Sociofile*, *PAIS (Public Affairs Information Service)*, and *MEDLINE*. Because psychedelics cross categories, you'll probably want to use several CDs. University libraries will also subscribe to online research services, varying from library to library. I like *Current Contents*, which indexes over 7500 journals and is published weekly. It's usually handy to search several words, e.g., *psychedelic and hallucinogen*. Don't be shy about asking reference librarians for help; that's what they're there for.

So much for broad scale psychedelic references. Here are some of my personal favorites by discipline. For out-of-print books or books not in your library, ask about interlibrary loan.

Anthropology

There's so much here it's hard to select even a few. Try searching *shaman** in the *Chrestomathy*.

Furst, Peter E. (1990). *Hallucinogens and Culture*.

La Barre, Weston. (1989). *The Peyote Cult*. In each edition La Barre updates the extensive references, so go for the most recent, fifth, edition.

Society for the Anthropology of Consciousness. www.ameranthassn.org/sac.htm.

Wasson, R. Gordon; Kramrisch, Stella; Ott, Jonathan, and Ruck, Carl A. P. (1986). *Persephone's Quest: Entheogens and the Origins of Religion*. There are both paperback and deluxe editions.

Archaeology

Devereux, Paul. (1997). *The Long Trip: The Prehistory of Psychedelia*.

Rudgley, Richard. (1993). *Essential Substances in Society: A Cultural History of Intoxicants in Society*.

Arts

Grey, Alex, with Ken Wilber and Carlo McCormick. (1990). *Sacred Mirrors: The Visionary Art of Alex Grey*.

Grushkin, Paul D. (1987). *The Art of Rock*. New York: Abbeville Press. Pages 498-503 contain a considerable bibliography.

Masters, R. E. L. & Houston, Jean. (1968). *Psychedelic Art*.

Weldon, Michael. (1983). *The Psychotronic Encyclopedia of Film*. New York: Ballentine Books.

Biology, Biochemistry, Botany

Dave Nichols' article covered the possibilities here for a professional career in biochemistry and the neurosciences, and as he suggested, MEDLINE is the primary source.

Ott, Jonathan. (1996). *Pharmactheon: Entheogenic Drugs, Their Plant Sources and History*.

Perrine, Daniel M. (1996). *The Chemistry of Mind-Altering Drugs: History, Pharmacology, and Cultural Context*.

Schultes, Richard Evans, and Hofmann, Albert. (1992). *Plants of the Gods: Their Sacred, Healing and Hallucinogenic Powers*.

History

Gartz, Jochen. (1996). *Magic Mushrooms Around the World: A Scientific Journey Across Cultures and Time: The Case for Challenging Research and Value Systems*.

Hofmann, Albert. (1980). *LSD: My Problem Child: Reflections on Sacred Drugs, Mysticism, and Science*.

Musto, David F. (July 1991). Opium, Cocaine and Marijuana in American History. *Scientific American*, pages 40-47.

Law

Boire, Richard Glen. (1997). *Sacred Mushrooms and the Law*.

Committee on Drugs and the Law, (June 1994). A Wiser Course: Ending Drug Prohibition. *The Record of the Association of the Bar of the City of New York*, Vol. 49, No. 5, pages 521-577. Wider drug policy, not specifically entheogens.

The Entheogen Law Reporter. P.O. Box 73481, Davis, CA. 95617.

Hofstra Law Review. A Symposium on Drug Decriminalization.

Literature and Language

ETC.: A Review of General Semantics. (1965). (Special issue on psychedelics.)

Graves, Robert. Each of his four books listed contains insights into entheogens; although, none of the books is wholly about them.

Mosaic: A Journal for the Interdisciplinary Study of Literature: Parts I and II. (1986). (Two topical issues: Literature and Altered States of Consciousness).

Roberts, T. B. (1981). Consciousness criticism. *C.E.A. Critic* (College English Association) 44(1), 2532.

Politics and public policy

The best way to keep up with this vast and fast-changing field is by the Internet and current journals. Most sources combine all drugs into one category, not distinguishing their entheogenic uses from other uses.

Drug Policy Foundation.
www.dpf.org/html/links.html. (Includes both governmental and nongovernmental links.)

Federation of American Scientists. (1997). *Principles for Practical Drug Policies*.
www.fas.org/drugs/Principles

Lindesmith Center. www.lindesmith.org/

U. S. Government Websites.
www.lindesmith.org/cites_sources/cites.html

Psychology and psychotherapy

Grof, Stanislav. (1994). *LSD Psychotherapy*. A reprint of the 1980 edition.

Grof, Stanislav. (1993). *Realms of the Human Unconscious: Observations from LSD Research*. London: Souvenir Press (Educational and Academic). A reprint of the 1975-6 editions.

Passie, Torsten. (1997). *Psycholytic and Psychedelic Therapy Research 1931-1995: A Complete International Bibliography*.

Religion

Eliade, Mircea. (1987). *The Encyclopedia of Religion*. See topics listed under "Note."

Forté, Robert, ed. (1997). *Entheogens and the Future of Religion*.

Roberts, Thomas B., and Hruby, Paula Jo. (1997). *Religion and Psychoactive Sacraments: An Entheogen Chrestomathy*. www.csp.org/chrestomathy.

Sociology and popular culture

Beck, Jerome, and Rosenbaum, Marsha. (1994). *Pursuit of Ecstasy: The MDMA Experience*.

These writings
and their references,

the websites

and their links,

and the CD's and

their resources
will lead you along

the paths of

psychedelic

scholarship.

Blum, Richard, & Associates. All of his listed works.

Saunders, Nicholas. (1997). *Ecstasy Reconsidered*.

Women's Studies

Palmer, Cynthia, and Horowitz, Michael. (1982). *Shaman Woman, Mainline Lady: Women's Writings on the Drug Experience*.

Focusing on a subject

The writings above and their references, the websites and their links, and the CDs and their resources will lead you along the paths of psychedelic scholarship. I have found, and I expect you will, that some topic will fascinate you and focus your attention. By following this you may find that you become so enamored with your topic, say, Grof's BPMs, that it occupies your mind so that eventually you find yourself habitually interpreting your experiences, the TV and movies you see, or your daily life in a BPM world. Such concentration is necessary for full involvement in an idea, and extreme, dedicated interest is the parent of specialized scholarly progress.

At the same time, addiction to one lens for interpreting the world can distort reality and blind one to other information. Psychedelics are but one group of psychotechnologies for exploring our minds' abilities to produce and use many mindbody states—meditation, the martial arts, sensory overload and sensory deprivation, physical routines, etc.—so psychedelics should be seen in a wider mindbody context.

The larger context

Perhaps the easiest error that grows from any fascinating area is failing to see that one's favorite ideas (Should I call them "addictive ideas"?) exist in a larger context. While the strengths of specialization include following an idea wherever it leads and aiding its full fluorescence, specialization's dangers are losing track of the larger cultural network, omitting the embedding civilization, and forgetting the wider intellectual context.

My own path in studying consists of being fascinated with a specific topic for several years—Maslow's needs hierarchy, Grof's map of the human mind, entheogens—then expanding through those specific doors to larger realms, transpersonal psychology, the multistate mind, and the mystical roots of religion. A question I find handy to ask myself is, "This specific thing is one example of what larger group of similar items?"

Ken Wilber's four-quadrant approach to knowledge (1997) is a good reminder not to become stuck in any specific approach—psychedelic or nonpsychedelic; we need to include both our subjective experience and objective scientific

information, to include broad scale culture and groups, communities, or collectives of similar things. From a more inclusive perspective, Wilber sees the study of nonordinary states of consciousness (including psychedelics but not limited to them) as one of a dozen schools of consciousness research and theory (1997).

Perhaps Jack Kornfield's advice for meditators is both the most common-sensical and the rarest for psychedelicists, too:

Meditation: Reflecting On Your Attitude Toward Altered States

What is your relationship to unusual and altered states in meditation [psychedelics]? As you read about these experiences, notice which ones touch you, notice where you are attracted or what reminds you of past experiences. How do you meet such experiences when they arise? Are you attached and proud of them? Do you keep trying to repeat them as a mark of your progress or success? Have you gotten stuck trying to make them return over and over again? How much wisdom have you brought to them? Are they a source of entanglement or a source of freedom for you? Do you sense them as beneficial and healing, or are they frightening? Just as you can misuse these states through attachment, you can also misuse them by avoiding them and trying to stop them. If this is the case, how could your meditation deepen if you opened to them? Let yourself sense the gifts they can bring, gifts of inspiration, new perspectives, insight, healing, or extraordinary faith. Be aware of what perspective and teaching you follow, for guidance in these matters. If you feel a wise perspective is lacking, where could you find it? How could you best honor these realms and use them for your benefit? (1993, page 134)•

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References

Sources not listed here can be found in *Religion and Psychoactive Sacraments: An Entheogen Chrestomathy*, www.csp.org/chrestomathy.
Grinspoon, L., & Bakalar, J. B. (1979/1997). *Psychedelic Drugs Reconsidered*. Lindesmith Center reprint. www.drugtext.nl/TLC/pdrad.html.
Riedlinger, Thomas J. (1982). Sartre's Rite of Passage. *Journal of Transpersonal Psychology*, Vol. 14, No. 2, pages 105-123.
Riedlinger, T. (1988). Psychedelic Schooling. *Psychedelic Monographs and Essays*, (3), 53-59.
Roberts, T. B. (1988a). Psychedelic Research Class: A Professor's View. *Psychedelic Monographs and Essays*, (3) 62-76.
Roberts, T. B. (1988b). Psychedelics Research: An Annotated Bibliography. *Psychedelic Monographs and Essays*, (3) 77-90.
Wilber, Ken. (1997). An Integral Theory of Consciousness. *Journal of Consciousness Studies*, Vol. 4, No. 1, 71-92.

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UPDATE

Heffter Research Institute

THE HEFFTER RESEARCH INSTITUTE continues to make slow but steady progress. With the donations received last year, we have funded two small research proposals, are reviewing several others, and have requested that the author of one proposal make several revisions. We continue to receive inquiries from individuals who have visited our website (www.heffter.org) about opportunities for graduate training and research and even employment at the Institute itself! Heffter board members have assisted in the preparation of several research proposals and have consulted with qualified investigators at several universities who are planning clinical studies with psychedelic agents. It is certainly clear that we have the opportunity to do a great deal more if we receive additional funding from donors.

We are also in the final production stages of the first *Heffter Review of Psychedelic Research*. By the time you read this, Volume 1 of the review will be back from the printers and in distribution. We shall be soliciting contributions for Volume 2 of the *Review* in the coming months and hope to improve both the quality and quantity of the chapters as publication of the *Review* continues.

Prizes awarded in 1997

The Heffter Institute also awarded the first two prizes for outstanding research in 1997. As part of our efforts to encourage more academic scientists to consider research with these novel substances, we decided to award prizes for outstanding research achievement, both in the preclinical and clinical sciences. The recipients of these awards are selected by the Heffter Board of Directors from among all the active research investigators in the field. Board members are ineligible to receive a prize. The awards consist of a \$2,000 prize that may be used to support research, as well as an inscribed plaque. Such awards



Heffter Research Institute

Research
at the Frontiers
of the Mind

are given by virtually all professional societies and organizations and are meant to recognize outstanding scientific achievement. Not too surprisingly, no such prizes have been available for research with psychedelics, but

the Heffter Institute has just changed that.

Heffter Award for Outstanding Clinical Research

The first Heffter Award for Outstanding Clinical Research was given to Dr. Franz Vollenweider, at the Psychiatric University Hospital, in Zürich, Switzerland. Dr. Vollenweider has been carrying out ground-breaking studies using Positron Emission Tomography (PET) to study brain function while subjects are under the influence of psilocybin and other psychoactive substances (see page 4). His studies are pointing to specific brain structures that are activated or suppressed during altered states of consciousness.

Heffter Award for Outstanding Basic Research

The first Heffter Award for Outstanding Basic Research went to Dr. Elaine Sanders-Bush, in the Pharmacology Department at Vanderbilt University School of Medicine. Dr. Sanders-Bush has spent years studying the biochemical signaling events that occur in brain cells after they are activated by substances such as LSD and mescaline. She continues to be at the forefront, studying signaling mechanisms of brain serotonin 5-HT₂ receptors.

We congratulate both of these outstanding scientists for taking on challenges that others have declined, and for pushing back the frontiers of our knowledge about psychedelics.

As we move into our fifth year of existence, we see many opportunities and challenges. We still seek "angels" who might fully endow the institute, but in the meantime we are making positive things happen now. •

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THE HOFMANN REPORT

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

TO OUR FRIENDS AND SUPPORTERS :

During this past year, a fellow advisor and board director, Myron Stolaroff, together with myself and my close companion Stacey Zee, traveled to Basel, Switzerland to take possession of one of the most important archives in the history of *d*-lysergic acid diethylamide, and to meet with Dr. Albert Hofmann. We made arrangements to acquire 93 volumes of invaluable psychedelic research, consisting of more than 3,500 papers of the published scientific literature for the period 1947-1988. Because of a merger underway at Sandoz, the material was scheduled to be destroyed after the merger was consummated. With the help of Dr. Hofmann, arrangements were made to transfer the entire collection to the Albert Hofmann Foundation.

This acquisition for the Foundation was particularly important as it also represents a cornerstone for our newest endeavor, The Albert Hofmann Museum and Library. The museum concept is to collect and gather all historical psychedelic memorabilia, historical letters, articles and physical items for public viewing and appreciation, and provide permanent housing. If this is not pursued, the works of many important researchers and shamans could be lost and/or scattered amongst private collectors or even destroyed for a lack of proper care. John Beresford, an advisor of the Foundation, is the curator for this new Museum. He has done an excellent job of setting up an exhibit of many museum items that are currently on hand in our present (and temporary) Pasadena facility. John continues to work at identifying other suitable collections, networking with other organizations of similar interests, and evaluating possible donations and collections in hope of acquiring additions that will add richness to the evolution of the psychedelic movement.

We are currently in a free standing, two story historical building in Pasadena in the "Old Town District." We have space for offices, equipment, social gatherings and gallery space for The Albert Hofmann Museum in its present form. Arrangements to see the Museum must be made through John. If you or someone you know has materials you wish to donate, please contact us. We will arrange for a tax donation under our 501 (c)(3) non profit corporation status. In addition, until such time as a building is secured by the Foundation, we can discuss a vehicle whereby your museum donation would be held in trust by the Foundation or third party pursuant to your instructions. John may be reached at (213) 380-5557.

We have competent volunteers (well versed in chemistry and foreign language) reviewing and scanning the Sandoz collection. Summaries are being prepared and put in format so as to add a significant number of references to the current bibliography now available for viewing on the Internet, sponsored cooperatively with MAPS and The Heffter Research Institute. To access the materials now online, please set your browser to www.maps.org/wwwpb/. The Foundation's webpage is under construction and will be ready for public access later this year. These summaries are also being used to support a viable Master Drug File for which additional information is being sought.

Other activities held in Pasadena include a lecture series inviting speakers to share their knowledge and experience and hosting events known as "In Gatherings." These programs encourage networking and provide an opportunity for us to meet volunteers, donors, and potential Board candidates. In addition, a follow up study is in process of Dr. Oscar Janiger's previous psychedelic research to assess the long-term impact of subjects' psychedelic experiences. MAPS, with assistance from our Foundation, has furnished the financing necessary to carry out this study.

Our future rests on our ability to secure a permanent residence. We feel it is imperative that we secure a building to house the Foundation's growing archives and museum quality pieces, so that we may honor the distinguished pioneers and sustain the records and artifacts of their exceptional work. This will free us from the conditions inherent in leasehold properties, fluctuating cash flows and pilferage. We believe the colorful history and extensive studies in this area deserve their rightful place, under one roof, open to the public. We envision a public museum/library with all the same donor acknowledgments, transfer documents and security measures in place as any public library or museum we are accustomed to visiting. We believe the current building in Pasadena is well suited to provide office space, reading rooms and viewing areas, in addition to its being well equipped with security doors and surveillance camera equipment.

To make this institution a reality, a private financial source must be located in order to preserve the Foundation's future. We have developed several real estate purchase, leaseback and joint venture proformas and are prepared to discuss potential investment scenarios with the interested party. In addition, we should point out the museum/library does not have to be the present facility or even in Pasadena. With some exceptions, the likely home would be Pasadena, Santa Monica (L.A.'s West Side) or the San Francisco Bay Area. Naturally the naming or dedication of the building and ultimate geographical location will be agreed upon with the contributing parties. If you have information or know of someone who may be interested in this venture, we would be pleased to discuss these proposals further. We have a limited stay at the Pasadena building, so time is of the essence. Please contact the undersigned via any of the following: Phone: (714) 497 8523. Fax: (714) 497 0463. E-mail: inlaguna@sprynet.com

I am glad to report to you that our namesake, Dr. Albert Hofmann, at 92 years of age is very much alive and doing well. He reports that he continues to receive a great deal of correspondence expressing appreciation of his work and reporting how LSD has changed individual lives. Dr. Hofmann places particular emphasis on having experiences in nature rather than the "deadness" of the city. He suggests that it makes a huge difference to rediscover our connection with living things.

In closing, we thank you for your continued support and the consideration you have shown over the years. As you know, we are an all volunteer organization and rely on people donating their time, energy and funds to keep this endeavor alive. Thank you so much for your help.

Ronald Brettin, President

NEWS FROM A LONGTIME PSYCHEDELIC ELDER

There is an advantage to having published a book, for signals go out in many directions, sometimes overturning stones that have long lain dormant. Thus it was with great delight that news of my endeavors had reached an old friend, with whom I had been out of touch for some thirty odd years. Furthermore, he brought me up to date on his activities. I think this overview of the psychedelic scene by a wise, knowledgeable, well-experienced explorer will be of interest to MAPS readers.

The gentleman is Ted Poole, introduced to the psychedelic world by the person I consider my LSD guru, Al Hubbard of Canada. The following are excerpts from a much more detailed report. Here is what he says about his first experience:

“We both seemed to have discovered the reality of God, and the Oneness of Identity that wonderful day. I imagine, like me, you also discovered that life is eternal. Now, forty years on, after many additional forays into the vastness of submerged consciousness, my little old ego that screamed, “this is insane,” that first time has learned that being jolted off the tracks of conventional life is not only safe but rewarding and is not above joining in the fun of exploration and in the work of applying what is discovered.”

Ted showed all the signs of an ideal sitter, and was employed by Al Hubbard to help sit with clients in a new clinic set up for LSD treatment in Vancouver around 1961. This was at the time that several successful treatment programs employing LSD with alcoholics were underway in Canada, as well as Hubbard’s participation with Dr. Ross Maclean at the latter’s Hollywood Hospital near Vancouver, B.C. The clinic we established in Menlo Park in 1961 was designed very much like the Vancouver place. Ted did an excellent job of performing this work until the clinic closed after two years of operation.

Through this work, a great realization dawned on Ted. He saw his own personal development in perspective. He saw his own climbing out of a shadowy world as “a blessed growth process; a process that I had little to do with consciously, and that in the persistent way of growing things, often persevered and pushed on upward in spite of me. For anything on a growth course, all of nature combines to bring a phenomenal “way of life” to fruition. So many of the things I did randomly at that time—books I read, jobs I quit, nomad moves I made, people I met—I am now able to recognize and give thanks for, as powerful influences that fed and reinforced my growing. And it was by this same ascendant flow that I was finally, and I think unerringly, carried to LSD, the prosaically named sacrament of full incandescence.

“My initial induction into LSD had been a transformative experience. I would never be the same again. I was

radically changed and the world of men was changed not in its practices but in its potential. What made the world of men go 'round was still fear, not love; but now there was light at the end of the tunnel. First prophetic outlines of a vast transition filled me with high elation. Chronic discontent was replaced with great expectations."

Ted reminisces: "Experiences that with hindsight, seem to have been most significant: Of these, of course, my introduction to LSD is foremost. I learned more in the blaze of the few blessed hours than in all of my life until then. And I was to find that the high level of enlightenment was to continue through the next couple of years of sitting for sessions as a member of the Vancouver team and beyond for the remainder of my life. One of the most exciting features of this period of learning was the realization that there WAS a way for anyone with the will, to deliberately choose and have direct and personal experience of divinity. It seemed to me that this was the fabled Elixir of Life, El Dorado and the Holy Grail that the alchemists and other visionaries had been intuitively seeking for centuries all rolled into one.

"To me, the advent of LSD was the long awaited Great Event that would be the saving grace of the human race. It was like being in attendance at the second coming. But gradually, starting with the world of peyote and psilocybe mushrooms, I became aware that the promise implicit in LSD was not unique but had been in the world and actively in use as a sacrament from time beyond memory... I now realized that I had been inducted into a very ancient, sacred Order that I have since come to think of and speak of as the Beloved Brotherhood. I recognized that I would be obliged for the rest of my life to spread the good news and when appropriate, to provide the sacramental experience to candidates for enlightenment."

After the close of the Vancouver Clinic, Ted and his wife visited Mexico, returning in time to America and Canada. He discovered that his exposure to the unlettered, rural people of Mexico inflamed a long time sense of shame and guilt about the unbroken record of dishonor immigrant Europeans have amassed in dealings with resident Americans. This led Ted to calling on Native communities in Canada to offer a personal apology. "The unfailing grace and warmth with which I was received was humbling and very moving." This led to writing articles, which obtained spreading circulation, and brought him into touch with young activist natives. He ultimately became associated as a consultant with the Institute for Indian Studies with an all-Indian approach to education. In 1968 an 18-storey building designed to accommodate Rochdale College, a radical educational venture, opened its doors in downtown Toronto. For office space and limited living accommodations, the Institute rented the entire 17th floor. Below them, a sixteen floor highrise of hippies, including a sprinkling of American draft dodgers, bubbled and boiled with volcanic energy.

This brought him into touch with people venturing into the possibilities of consciousness alteration, but with a very different setting. "My first reaction was one of shock. My notions of responsible use were being violated by the aimless experimentation I saw going on around me and my sense of the sacred was being outraged. There was so much to be critical of: the complete disregard for setting, the devil may care negligence of set, the assumption that the chemical involved was in fact LSD (an assumption shared by dealers, police and medical personnel as well); the jargon of "trips" good and bad, "freaking out," "dropping acid," and "turning on." The popular notion that bad trips could be avoided by staying active, staying on one's feet, keeping busy, led me to the incredulous conclusion that the street definition of a bad trip was synonymous with any work of inward exploration.

“Since my past experience with LSD was no secret, it wasn’t long before I was being called upon, often in an emergency capacity, to sit with people in apparent difficulty... My experience as a sitter stood me in good stead. All that was needed in most cases was a calm, assured presence, a reference point, solid and sure as Gibraltar.”

With the advent of illegalization of psychedelics, Ted was able to make a firm decision: “that for the rest of my life I would continue regardless of legal considerations to sit with people in their quest for enlightenment... Then suddenly, I found myself deeply involved with these kids who, in their groping quest for self actualization had chosen to leave home and go where? They didn’t seem to know or care... It was in the midst of this setting that it finally dawned on me: a major movement was underway. The change I had longed for all my life was under way. The kids were doing it! I was reminded of the 11th century Children’s Crusade, a spontaneous spiritual phenomenon that flared like a brief beacon in a dark Age. It seemed to me that the same, clear, innocent energy was at work here; the same irrational but joyful dedication. But within its aimless appearing thrust it carried the seeds of such liberating changes as black liberation, feminist freedom, respect for homosexuals and responsible use of the environment.

“Throughout the sixties I became a sort of ambassador at large for what I had come to think of as “agents of enlightenment.” The War on Drugs was heating up and salvos of designed misinformation were being fired from bureaucratic redoubts and law enforcement agencies with particular interest in targeting children. I was always only too happy to talk without bias about “drugs” without suggesting that one should use them or leave them alone, but being meticulous about the truth and speaking wherever possible from experience rather than abstract theory.”

Ted kept busy at this work for some time. The problem became one of getting good materials, as good LSD and mescaline became scarce. He was able to locate peyote, and psilocybe mushrooms were abundant in his locality. *Amanita muscaria* was also indigenous to his area. “As a result, my appreciation of the sublimity of these also grew from the sensational discovery of a Swiss research chemist to a world-wide sacrament benevolently provided in great variety by a loving Creator, with no strings attached.

“God, in his mercy, made provision for a liberal entheogenic sprinkling through the natural world of plants that man might wake from the dream of good and evil into the promise of full consciousness. They are as keys to the prison of selfness. And now man, within his own nature, has found the power to synthesize these, and more: the power to create “designer” substitutes. This knowledge fills me with gratitude and optimism.”

Myron Stolaroff, Editor

Non-Anglo Entheography: Mini-Reviews of Non-English Publications, II



Jonathan Ott

WHILE WE CAN BE GRATEFUL that there is again considerable publishing activity on the subject of shamanic inebriants in the United States—severally by academic presses, small presses [with numerous self-publishers], major trade-book houses—many books are being published in languages other than English, scarcely coming to the attention of aficionados in this country. There are welcome signs of the return of the “drug book” section to the bookstores of the land—rudely displaced by a riot of substance abuse [*sic*] self-help manuals in the 1980s—and their ranks would swell, were English editions of Spanish, Italian, German, French and Portuguese books on this subject published. This in turn would stimulate the writing of more such books in other countries, by giving their authors access to the larger and lucrative U.S. market, in which, moreover, direct-marketing allows more opportunities in niche-markets and/or non-mainstream subject areas. Accordingly, so to alert would-be translators, publishers and readers to noteworthy non-English publications, herewith mini-reviews of recent titles I think are especially valuable or interesting [some, alas, for their execrable quality]. Where possible, book prices and all salient ordering information are included, to facilitate direct and expeditious acquisition.

Spanish originals

Tabaco Frío, Coca Dulce [Cool Tobacco, Sweet Coca] Hipólito Candre [Translation and commentary by Juan Álvaro Echeverri], 1993; translation 1996. Themis Books [Council Oak Books; 1350 E. 15th St.; Tulsa, OK 74120; \$19.95]. Sew-and-glue paperback; ISBN 0-9527302-1-9; 296 pp.; 13 pp. index; 10 pp. of notes to 3 pp. bibliography of 32 sources; 45 b/w photographs; 15 b/w drawings; one map. A bilingual English/Witoto [here hispanicized as Uitoto] version of bilingual Spanish/Witoto book *Jírue Diona, Riérue Jíibina*, subtitled *Teachings of an Indian Sage from the Colombian Amazon*, we have here Witoto transliterations and parallel translations of 16 narratives by the shaman Kinera, preceded by a biographical sketch and interspersed with footnoted explanatory commentaries by Echeverri, then followed by 6 pp. of ethnobotanical and ethnozoölogical appendices, a brief bibliography and a useful index. Apart from being a priceless document of

firsthand shamanic lore, in the tradition of Wasson's bilingual *María Sabina and Her Mazatec Mushroom Velada* this is a treasure of ethnobiological data, nicely produced [on paper from “managed plantations”] and sturdily bound—a great value.

Farmacología y Toxicidad de la MDMA [Éxtasis] [Pharmacology and Toxicity of MDMA [Ecstasy]] Jordi Camí, 1995. Ediciones en Neurociencias [Numancia 207, Bajos; 08034 Barcelona, Catalunya, España]. Sew-and-glue paperback; ISBN 84-88648-08-1; 112 pp.; no index; a brief review with 166 references, followed by 47 pp. bibliography divided into 12 sections, with 432 references. A 38 pp. general review of the history, pharmacology, toxicology and clinical use of MDMA or Ecstasy, is followed by an extensive bibliography derived from a Medline literature-search covering 1981–1995. Although written in Spanish, the book will be of use to non-speakers

for its comprehensive bibliography which the author has conveniently subdivided into a dozen categories, including: neurochemistry, pharmacology, pharmacokinetics, epidemiology, adverse reactions, etc.

Teonanacatl: the Food of the Gods. Philip Conover, 1994. The Huautla Press/Prensas Editoras de Huautla [Galeana 25, San Ángel; 01000 México, D.F., México]. Sew-and-glue paperback; ISBN 968-6744-01-0; 132 pp.; no index; 11 pp. of notes with limited bibliographic references. This is a strange but interesting and well-written pæan to the Mesoamerican psilocybian mushrooms, self-published in English in México City, by a British-Mexican poet educated in the United States and Europe. Characterized as "religious writing [which] wishes to communicate a [universal] religious experience," Conover tells the story, two decades hence, of his 1968 pilgrimage to Huautla de Jiménez, Oaxaca, epicenter of shock-waves of the Entheogenic Reformation in the western world, unleashed there by María Sabina and Gordon Wasson in June 1955. In a well-crafted, novelistic style, Conover realistically evokes the exotic—some would say bizarre—ambience in a sequence of three day/chapters, interrupted by "The Dream," following a climactic second-night ecstatic encounter with *teonanácatl* [which does not mean "meat (or food) of the gods' as the author suggests—Conover is surely aware that even today *nanacate* means *mushroom*, not *meat*; Nahuatlots rather construe the word as "wondrous mushroom," and it was Toribio de Benavente [as Friar Motolinia] who had alleged *teunamacatlth* meant "flesh of God," desirous to impress upon his superiors the heretical nature of the Indian communion... nor, as the book concludes, do the Mazatecs use this Náhuatl term]. It is strange that a book titled *teonanácatl* cites none of the three previous books of that title, notably Wasson's monumental the wondrous mushroom, still in print in México as *Teonanácatl: el Hongo Maravilloso*—even though Wasson's much less relevant *The Road to Eleusis* appears [no sign of my 1978 *Teonanácatl: Hallucinogenic Mushrooms of North America*, which was translated into Spanish; nor Dolores Roldán's *Teonanácatl* of 1975]. I was also surprised Conover seemed unaware of the Spanish translation of the Mazatec name for *Psilocybe caerulescens*—*derrumbe* or "landslide"—here twice mangled as *arrumbe*, and by his misspelling of "enteogenic" in a footnote explaining use of an alternate neologism *alburum*, which is unexplained, and perhaps is meant to suggest the mushroom's elfin nature. But these are minor flaws in an interesting and heartfelt chronicle of a young man's quest for the fungal Grail of Huautla.

La Contracultura en México [The Counterculture in México] José Agustín, 1996. Editorial Grijalbo [Calzada San Bartolo Naucalpan, 282; Argentina Poniente 11230; Miguel Hidalgo, México, México; Nuevos Pesos 69]. [Im]Perfect-bound paperback; ISBN 970-05-0722-x; 241 pp.; 8 pp. onomastic index; 3 pp. bibliography with 61 incomplete references; 87 b/w photographs; 3 b/w illustrations. This social history of the Mexican counterculture features one chapter on "hallucinogens"; another on the impact of U.S. *jipis* [the Merry Pranksters and Learyites] on their Mexican counterparts; yet another on *jipitecas*—rustic hangouts for psilocybian mushroom seekers in the Sierra Madre Oriental of Huautla and environs. As such it makes counterpoint to Conover's *Teonanácatl* and the previ-

ously-reviewed *Huautla en Tiempo de Hippies*, by Sabina biographer Álvaro Estrada.

Los Hongos Alucinantes y Antología de Cuentos [The Hallucinatory Mushrooms and Anthology of Stories] Cutberto Hernández Torres, 1995. Instituto Oaxaqueño de las Culturas [Fondo Estatal para la Cultura y las Artes; Oaxaca, Oaxaca, México]. [Im]Perfect-bound paperback; ISBN 968-6951-18-0; 178 pp.; no index; no bibliography; 8 b/w photographs. My expectations for this book were certainly low when I read announced on the *verso* that it "combined two visions: the journalistic and the testimonial" and that it was originally written as articles for the magazine *Impacto*, a sort of combination girlie-magazine and right-wing-political scandal sheet. We must allow for his profession, in having so titled a book, not even a third of which is related to the "hallucinatory" mushrooms of his native Oaxaca. With a great deal less aplomb and skill than Conover, Torres describes his own mushroomic quest in Huautla. I will also spare the reader Torres' ignorant musings on "drugs," but challenge the author to justify his characterization of R. Gordon Wasson as a "lover of cheap thrills" [p. 72]; and shan't spare showcasing his misanthropic racism, as he laments "the perverse inclination of the human genus and particularly the degenerative condition of *yanqui* capitalism" [p. 72]; denouncing "the infra-men and women who live and die the anguish of darkness in search of artificial light" [p. 74], as "detritus of the species" [p. 77]. But I'll not waste any more paper on this trashy, racist philippic—too many trees were already sacrificed to make 1000 copies of a book far better produced than it merits.

Actas II Congreso Internacional para el Estudio de los Estados Modificados de la Consciencia [Proceedings of the Second International Congress for Study of Modified States of Consciousness] Josep Maria Fericgla [Ed.], 1996. Institut de Prospectiva Antropològica [Avenida Gran Via 457, 4^a, 1^a; 08015 Barcelona, Catalunya, España; Ptas. 3050]. [Im]Perfect-bound paperback; no ISBN; 198 pp.; no index; bibliographies to 22 of the 52 contributions. Here we have a glue-bound, photocopied set of papers and abstracts from the Lleida [Lérida] Catalunya conferences [see MAPS V(3): 28–32, 1995, for Stacy Schaefer's report] in October 1994. Whereas most of the contributions are abstracts, some merely short paragraphs, there are nineteen articles included, some half-dozen of which exceed ten pages. The papers are broken down into subcategories: "Anthropology and Archæology," "Art, Philosophy and Religion," "Ethnopharmacology, Pharmacology and Chemistry," "Social Ethics and Law" and "Medicine, Psychiatry and Psychotherapy," accommodating the broad scope of the conference which, for me, suffered from lack of focus, and the uneven quality of the presentations, some of which were closer to religious proselytism than scientific reportage. But there are many valuable and informative papers in this collection, and Fericgla is to be commended for undertaking the considerable effort to assemble and self-publish this wide-ranging material on entheobotany and related fields.

Las Plantas Alucinógenas [Hallucinogenic Plants] Luis Otero Aira, 1997. Editorial Paidotribo [Consejo de Ciento, 245, bis, 1^o, 1^a; 08011 Barcelona, Catalunya, España]. Sew-and-glue paperback;

ISBN 84-8019-316-6; 153 pp.; no index; 5 pp. bibliography with 48 references; 5 b/w photographs; 20 b/w illustrations. This is a popular review of psychopharmaceuticals [despite the title, roughly half of the 40 drugs considered are not "hallucinogenic," indeed, a quarter are not even plants!], extracted from secondary sources. The general bibliography contains as many literary as scientific references, and is strangely lacking in any mention of R.E. Schultes' *Golden Guide to Hallucinogenic Plants* [Golden Press, 1976], from which all but three [which are decidedly the poorest] of the 20 illustrations were lifted and badly copied in black-and-white. More likely, the illustrations were photocopied from the 1982 Spanish translation, which was a pirated edition... nor was my *Pharmactheon*, from which some of the information comes, cited either. This is, to say the least, dishonest. While some 20 non-"hallucinogens" are included, one of the most important categories of visionary plants in Spain, as elsewhere—the psilocybian mushrooms, several species of which can be found within an hour's drive of Barcelona—is conspicuous by its absence. Indeed, one of the author's acquaintances discovered a new species in Huesca, which has been named *Psilocybe hispanica*!

Las Sustancias de los Sueños [The Stuff of Dreams] Simón Brailowsky, 1995. Fondo de Cultura Económica [Carretera Picacho-Ajusco, 227; 14200 México, d.f., México]. Sew-and-glue paperback; ISBN 968-16-4585-5; 355 pp.; 34 pp. index; 3 pp. bibliography of 29 references; 41 b/w and 4 color illustrations; 11 tables. Subtitled *Neuropsychopharmacology*, this is a well-illustrated laypersons' primer on neuroscience and the basic pharmacology of mind-drugs. The mechanisms of the action of the various psychiatric drugs are explained, as well as stimulants, noötropics, "psychotomimetics" [entheogens], anaesthetics, narcotics, tobacco, alcohol, *Cannabis* and more. We could use a good, basic primer on this subject in English; mayhap somebody will venture to translate this one.

Spanish translations and periodicals

LSD: Cómo Descubrí el Ácido y Que Pasó Después en el Mundo [LSD: My Problem Child] Albert Hofmann, 1995. Editorial Gedisa [Muntaner, 460, entlo. 1ª; 08006 Barcelona, Catalunya, España; Ptas. 1950]. [Im]-Perfect-bound paperback; ISBN 84-7432-102-6; 227 pp.; no index; no bibliography. Originally published in a Spanish translation in 1980, now we have a third printing, like the first two lacking the book's illustrations, but featuring at the end a translation of the legends for the chemical-structure formulæ, which are also missing! And some people accuse self-publishers of incompetence! At least the Spanish market has proven more viable than the United States for this book, the second edition of which just lapsed out-of-print [interested parties apply to this reviewer], having taken 13 years to sell 5000 copies after the original 1980 edition was remaindered!

Mundo Interior Mundo Exterior [Insight Outlook], Albert Hofmann, 1997. Los Libros de la Liebre de Marzo [Apartado de Correos 2215; 08080 Barcelona, Catalunya, España; Ptas. 1450]. Sew-and-glue paperback; ISBN 84-87403-29-8; 127 pp.; no index; no bibliography. Hofmann's five philosophical and ecological essays from 1986 [English translation, 1989, Humanics New Age; POB 7447;

Atlanta, GA 30309] has just appeared in a new Spanish translation, replete with a 10 pp. prologue by J.M. Fericgla, editor of the Colección Cogniciones series in which it appears [*vide infra*, *Pharmactheon*] in a similar, but smaller, format.

Pharmactheon: Drogas Enteógenas, sus Fuentes Botánicas y su Historia [Pharmactheon: Entheogenic Drugs, Their Plant Sources and History] Jonathan Ott, 1996. Los Libros de la Liebre de Marzo [*vide supra*; Ptas. 5900]. Sew-and-glue paperback; ISBN 84-87403-23-9; 629 pp.; 43 pp. indices; 122 pp. bibliography of 2520 references. Even as the "second edition densified" appeared in the United States, this complete Spanish translation was published in Barcelona, 5th volume in the Colección Cogniciones series, edited by Josep Maria Fericgla.

El Texto Drogado [Il Testo Drogato/The Drugged Text] Alberto Castoldi, 1997. Anaya & Mario Muchnik [Juan Ignacio Luca de Tena, 15; 28027 Madrid, España; Ptas. 2450]. Sew-and-glue paperback; ISBN 84-7979-394-5; 283 pp.; 7 pp. index; 13 pp. endnotes to 4 pp. bibliography of 91 references; unpaginated insert of 21 b/w illustrations. A new Spanish translation of the 1994 Italian original, this is a fascinating study of the impact of diverse inebriants on world literature. After an eponymous introduction, the text is broken down by drug, with two chapters on opium [basically pre- and post-De Quincey], separated by hashish, morphine and ether; the latter followed by cocaine, mescaline and "LSD and the Beat Generation." With no particular axe to grind, Castoldi treats the reader to a history of literature of and about drugs, and even for one so steeped in this literature as I, there were more than a few surprises.

Notas de un Botánico en el Amazonas y en Los Andes [Notes of a Botanist on the Amazon and Andes] Richard Spruce [Alfred Russel Wallace, Ed.], 1996. Ediciones Abyafiala [Avenida 12 de Octubre, 14-30 y Wilson; Casilla 17-12-719, Quito, Ecuador]. [Im]Perfect-bound paperback; ISBN 9978-04-211-3; 803 pp.; no index; chapter endnotes sans bibliography; 7 pp. glossary of indigenous terms; 7 maps [4 fanfold]; 49 b/w illustrations. This is a welcome recent translation of the 1908 two-volume collection of field notes of the great Amazonian botanist, edited and condensed by his equally stellar colleague. While an index would have been a valuable addition to this seminal work on ayahuasca and other South American "narcotics," Abyafiala is to be commended for making this book available to the Spanish reader—it is No. 21 in their fabulous Tierra Incognita series of books.

Archipiélago 28. Drogas: Sustancia y Accidente [Archipiélago 28. Drugs: Substance and Accident] Miguel Ángel Velasco [Guest Ed.], 1997. Editorial Archipiélago [Apartado de Correos 174; 08860 Castelldefels, Barcelona, Catalunya, España; Ptas. 1100]. [Sew-and-glue paperback; issn 0214-2686; 140 pp.; no index; bibliographies to some articles. Well-known Spanish poet Velasco has here edited the "Carpeta" section of this number of the prestigious Spanish literary quarterly, with 13 articles, including interviews of Albert Hofmann and Antonio Escohotado, classic excerpts from Michaux, Cocteau, Jünger and others, articles by Thomas S. Szasz and

Alexander T. Shulgin, the poem *La Leyenda del Agua* by Velasco and an excerpt from this reviewer's *The Age of Entheogens*.

Pulque, Balché y Pajauru [*Pulque, Balché and Pajauru*] Oswaldo Gonçalves de Lima, 1990. Fondo de Cultura Económica [Carretera Picacho-Ajusco, 227; 14200 México, D.F., México]. Sew-and-glue paperback; ISBN 968-16-3352-0; 483 pp.; no index; 1135 references in individual chapter bibliographies; 4 pp. Náhuatl glossary; 45 b/w drawings. This is a welcome recent translation of this superb 1975 Brazilian-Portuguese worldwide survey of the ethnobiology of fermented beverages and foods, by the author of a classic work on *pulque* or *octli* [wine of *maguény* or *Agave* spp.], and the first to isolate DMT [*nigerina* or *nigerine*] as a natural product, from *jurema preta* [*Mimosa tenuiflora/hostilis*], in 1946. This is the most comprehensive book on fermented drinks and viands, perhaps a little over-broad in scope, insofar as it includes non-fermented [but inebriating] libations like *soma* of the Indo-Aryans, not to mention *vinho da jurema*, despite its name [at least in its primigenial, indigenous form]. It would be most desirable to have an English translation of this pioneering and comprehensive work.

Italian originals

L'Erba di Darlo Erba [*Carlo Erba's Herb*] Giorgio Samorini, 1996[7]. Nautilus [Casella Postale 1311; 10100 Torino, Italia; Lire 16,000]. Sew-and-glue paperback; no ISBN; 171 pp.; no index; 8 pp. bibliography of 111 sources; 16 pp. of appendices of period therapeutic formularies; 8 pp. unpaginated insert with 10 b/w illustrations. Giorgio Samorini, Italy's premier expert on entheogenic ethnopharmacognosy, got into hot water with the estate of famed 19th century Italian physician Carlo Erba, by drawing attention to self- and clinical experimentation by Erba and fellow Milanese *psiconauti cannabinici*, with *Cannabis* formulations. We have sunk so low with the scientific perversions pursuant to prohibition, that what once was *avant garde* medical research is today motive for disgrace and shameful coverups! Employing his best diplomatic skills, Samorini weathered the media storm, which probably would make a good book in itself. Doubtless the English-reading public would also be interested in this intimate look at yesteryear's *cannabitherapeutics*, beautifully and sturdily produced by Nautilus, although the two blank and two advert pages in the back had better been dedicated to a much-needed index!

Italian reprints and periodicals

LSD, Il Mio Bambino Difficile [*LSD: My Problem Child*] Albert Hofmann, 1995. Libri Urra, Apogeo [Via Voghera, 11-a; 20144 Milano, Italia; Lire 21,000]. Sew-and-glue paperback; ISBN 88-7303-126-9; 214 pp.; no index; no bibliography; 13 b/w illustrations in text; appendix with 9 chemical-structure formulæ. This is a well-produced, new Italian translation of the 1979 German classic [English paperback of 1983 now out of print], to complete those 4 chapters devoted to Aldous Huxley, Ernst Jünger, Timothy Leary and Walter Vogt, previously published by translator Roberto Fedeli in 1992 [*LSD i Mieî Incontri con Leary, Jünger, Vogt, Huxley*; Stampa Alternativa, Roma]. It is strange that there seems to be no U.S. market for this book [*vide supra*, Spanish translations: *LSD*], which was just published in Czech [*LSD: Mé Nezvedené Díte*; Profess, Praha]

and Hebrew [don't ask me—but I *did* discern it was translated from my English, as I was listed as co-copyright holder!] translations, and has sold well in Japan. Hofmann remains completely bewildered by lack of interest in the United States, where he thought his memoirs would sell better than anywhere else.

Annali dei Musei Civici di Rovereto. Sezione: Archeologia, Storia, Scienze Naturali [*Annals of the Rovereto Civic Museum. Sessions: Archaeology, History, Natural Sciences*] Franco Finotti, 1985 onward. Musei Civici di Rovereto [Borgo S. Caterina, 43; 38068 Rovereto, Italia]. Sew-and-glue paperback; no issn; 420 pp.; no index; bibliographies to individual papers; well illustrated with some color plates. Italian botanist Francesco Festi, employed at the Rovereto Civic Museum, frequent collaborator of Giorgio Samorini and author of the excellent 1985 *Funghi Allucinogeni* [also published by the Museum], regularly edits a section of their yearbook, devoted to entheobotany. Issue 10 [1994(5)] featured a superb, near-book-length article on mandrake [*Mandragora officinarum*] by Christian Rättsch; an article by Jochen Gartz on cultivation and chemistry of psilocybian mushrooms; and a study of Greek entheomycology by Samorini and SISSC [*vide reviews of Eleusis and Altrove* in previous column] colleague Gilberto Camilla. A 1993 supplementary volume was devoted to proceedings of a 1992 conference on mushroom poisoning held at the museum, with papers by Albert Hofmann, Catalán entheomycologist Josep Maria Fericgla [*vide supra*, Spanish originals: *Actas II Congreso...*], Samorini, Gartz and many others. All volumes are bound well, beautifully produced, in classic Italian palæographic style, on excellent paper.

German originals and non-English translation

Lob des Schauens [*Pæan to Vision*] Albert Hofmann [Photos by Werner Huber], 1996. Privately printed, no imprint; limited edition of 100 copies, none for sale. Smythe-sewn hardcover with d/j; no ISBN; 62 pp. [unpaginated]; no index; no bibliography; 26 color photographs plus one on d/j. It seems strange to be reviewing a book which has not really been published and is not for sale, and of which merely 100 copies exist, but I feel that any work by Albert Hofmann must needs be of interest to MAPS readers. In the tradition of some European countries, where it is the celebrant who gives gifts to birthday guests, Hofmann made this lovely little book for friends, in grateful celebration of his 90th year. Illustrated with photographs of butterflies [identified by common and scientific names] taken on his lovely property atop Mt. Rittimatte in Canton Basel, there is also a view of his "dreamhouse" seen across a flower-bejeweled alpine meadow. A 4 pp. proemium gives way to the 26 pp. eponymous essay, whose title neatly describes the contents, the latter part a sort of afterword to *Insight Outlook* [*vide supra*, Spanish translations: *Mundo Interior*], written for his 80th birthday. The following quotation gives some flavor of this spiritual/scientific pæan to the inexhaustible wonder of life for Blake's ever-youthful Man of Imagination, lavishing "gratitude for the privilege of being able to live in the country; what is more, in such a uniquely beautiful place as the Rittimatte, where the butterflies [*Sommervögel*, "summer birds"] still flutter..."

Stechapfel: Halluzinogenes Nachtschattengewächs [Thornapple: Hallucinogenic Nightshade] Erwin Bauereiß, 1993. Wurzel-Verlag [Markgrafenstraße, 21; 91438 Bad Windsheim, Germany; dm10]. Staple-bound paperback; no ISBN; 44 pp.; no index; 1 pp. bibliography of 20 sources; 37 b/w illustrations; one map. This is one of the earliest in the series of booklets, mostly on visionary nightshades, self-published by Bauereiß, author of *Heimische Pflanzen der Götter* [reviewed in previous column (Raymond Martin Verlag, 1995)] and proprietor of a company selling *Solanaceae* seeds. A brief botanical sketch on *Datura* spp. is followed by ethnomedicinal notes, pharmacology and psychonautic bioassay reports.

Bilsenkraut [Henbane] Erwin Bauereiß, 1994. Wurzel-Verlag [vide supra; dm10]. Staple-bound paperback; no ISBN; 44 pp.; no index; no bibliography; 27 b/w illustrations; one map; one table. Another in Bauereiß' self-published series of booklets on visionary nightshades, here we have botanical notes on *Hyoscyamus* spp., reprints from an "occult history" by Walter Schiering and phytochemical data by H. Wirth, with a concluding extract on *Bilsenkraut* from Christian Rätsch's *The Dictionary of Sacred and Magical Plants* [Prism Press, 1992].

Das Schamanische Universum [The Shamanic Universe] Gerardo Reichel-Dolmatoff [Christian Rätsch and Daniela Baumgartner, Eds.], 1996. Eugen Diederichs Verlag [München, Germany; dm48, sfr48, ös375]. [Im]Perfect-bound paperback; ISBN 3-424-01334-x; 331 pp.; no index; 19 pp. bibliography of 279 sources. Rätsch and Baumgartner have assembled extracts from 6 publications by the late German-Colombian ethnographer—3 on the Kogi Indians, introduced by Baumgartner; 3 on the Desana, presented by Rätsch; who also contributes a 25 pp. appendix on "The most important Colombian shamanic inebriants" and a 6 pp. essay on Reichel-Dolmatoff's contribution to contemporary consciousness research. An excellent bibliography includes 63 publications by the author, to which can be added two superb posthumous publications: *Yuruparí: Studies of an Amazonian Foundation Myth* [Harvard University Press, 1996] and *The Forest Within: The World-View of the Tukano Amazonian Indians* [Themis Books, 1996]. Incredibly, this rich motherlode of information from a prolific shamanic ethnographer has been published sans index, and to add insult to injury, the publishers waste 6 precious pages advertising their books, many of which were cited in the bibliography.

Rauschzeit [Inebriation-Time] Thomas Illmaier, 1997. Verlag für Wissenschaft und Bildung [Markgrafenstraße, 67; D-10969 Berlin, Germany; dm32]. [Im]Perfect-bound paperback; ISBN 3-86135-055-6; 185 pp.; no index; no bibliography. This is a collection of 39 short newspaper and magazine articles—some detailing psychonautic bioassays—of book, conference and music reviews. Subdivided into seven sections with titles like "The Take-Off," "The Substance" and "The Peak" clearly suggestive of a "drug-trip," the publishers rather ambitiously declaim this book as being "in the tradition of Rudolf Gelpke... and Gottfried Benn." But who could deny that the fading twentieth century—like all centuries—is "Inebriation-Time"?

German translations and periodicals

Ayahuasca Analoge: Pangäische Entheogene [Ayahuasca Analogues: Pangæan Entheogens] Jonathan Ott, 1995. MedienXperimente [Alte Schmiede; D-69488 Löhrbach, Germany; dm23, sfr24, ös210]. Sew-and-glue paperback; ISBN 3-930442-08-6; 157 pp.; 10 pp. index; 18 pp. bibliography of 418 sources; 4 b/w illustrations; 9 tables. From Rauschzeit to Rauschkunde [science of inebriation], Werner Pieper's growing list of inebriant books, we now have a German translation of this reviewer's *Ayahuasca Analogues* [Natural Products Co., 1994], intelligently printed by Pieper on lovely 50% hemp fiber/50% recycled paper, apparently still unavailable as book-stock this side of the Atlantic.

Jahrbuch für Transkulturelle Medizin und Psychotherapie [Yearbook of Cross-Cultural Medicine and Psychotherapy] Michael Winkelmann and Walter Andritzky [Eds.], Vol. 6, 1995 [6]. Verlag für Wissenschaft und Bildung [vide supra and Postfach 11 03 68; D-10833 Berlin, Germany; \$44.95 (Mind Books)]. [Im]Perfect-bound paperback; issn 0939-5806; ISBN 3-927408-93-x; 416 pp.; no index; bibliographies to individual papers; b/w illustrations; tables. Produced by the same publisher as Christian Rätsch's bilingual *Yearbook for Ethnomedicine and the Study of Consciousness* [reviewed in a previous column], this is a larger format, annual publication of the International Institute of Cross-Cultural Therapy Research [IIKT]. This "theme issue" on sacred plants, consciousness, and healing: cross-cultural and interdisciplinary perspectives, features 18 papers divided into three sections, "Theoretical Bases" [including papers by Stanislav Grof and Claudio Naranjo] "Clinical Perspectives on Hallucinogens" [Richard Yensen, Torsten Passie and others] and "Ethnographic Approaches and Applications" [Jochen Gartz, Edward F. Anderson, many others]. With a broad range of subjects focusing on the psychotherapeutic and ethnomedicinal aspects of shamanic inebriants, this is a valuable and information-rich volume.

French translation and reprints

La Plante Qui Fait les Yeux Émerveillés: Le Peyotl [The Plant That Makes the Eyes Marvel: Péyotl] Alexandre Rouhier [Guy Trédaniel, Ed.], 1995. Freecyb [28, rue Méditerranée; 34000 Montpellier, France; ff150]. Binding unknown; ISBN unknown; 420 pp.; "numerous" illustrations. I haven't yet seen this apparently new edition [or facsimile] of the interdisciplinary French classic on *péyotl* [Gaston Doin et C^{ie}, Paris, 1924], but have ordered it and will make a fuller report forthwith. •

Jonathan Ott
Natural Products Co.
Apartado Postal 532
Xalapa, Veracruz, México

The Literature of Psychedelics



Bob Wallace, Mind Books

N E W B O O K S

The Secret Chief

Myron Stolaroff

STORY of a pioneering therapist (now deceased) who used psychedelics in his practice. Combines a fascinating look at early excitement in the 50s about the potential of psychedelics for personal development with many practical suggestions about preparation and techniques for individual and group experiences, as well as comparisons of various psychedelic compounds for these purposes. Stan Grof, Albert Hofmann, Ann Shulgin, and Sasha Shulgin also contribute. Includes an excellent resource list. All profits from the book support psychedelic therapy research. (1997, MAPS, 144 pages, 0-9660019-0-7 hardback \$22.95, 0-9660019-1-5 paperback \$10.95)

TIHKAL: The Continuation

Alexander & Ann Shulgin

FIRST, the personal story continues, with adventures from Brazil to Lourdes to a sci-fi dream. Very useful section on personal transformation includes an excellent guide to many "places in the mind" and how to use them, practical psychedelic psychotherapy, and notes on sexuality and terror dreams. Long chapters on DMT-containing plants and ayahuasca follow, then an excursion into drug politics. Part two covers LSD, DMT, psilocybin, and many new tryptamine variations with their synthesis and effects, such as 4-hydroxy-DIPT and 5-methoxy-DIPT, and a couple of nor-LSDs. Ends with comprehensive appendices on drug laws, cactus alkaloids, carbolines, and tryptamines. Truly great! (1997, Transform Press 0-9630096-9-9, 832 page paperback, \$23.95)

Pharmacophilia: or,

The Natural Paradises

Jonathan Ott

OTT'S LITERARY MAGNUM OPUS on the value and benefits of drug experiences. Prose philosophy Blake or Baudelaire would be proud of. Section titles include Phytomphalos, Natural Paradises, Celestial Pharmaceutics, Idiosyncrasy and Pharmacophilia, Psychopharmacological Engineering, Psychonautics and Pharmacohedonology. Also covers drug education, smart drugs and drug smarts. Includes the author's fascinating endnotes (as long as the text) plus an extensive index. (1997, Jonathan Ott Books, 192 pages, 1-888755-00-8 hardback \$35.95, 1-888755-01-6 paperback \$17.95)

Sacred Cacti and Some Selected Succulents: Botany, Chemistry, Cultivation, and Utilization

K. Trout

DEFINITIVE BOOK on mescaline and its plant sources. Covers cultivation of peyote and San Pedro, extensive listing of many mescaline cacti and their alkaloids, the chemistry and pharmacology of mescaline with synthesis, extraction, purification, detection, and analysis. Also notes on some other succulents. Much unique material. Many references. Overall format and organization needs some work; a new edition will address this, but very useful as it stands. (1997, Narayan Publications [no ISBN], 288 page large paperback, \$24.95)

The Long Trip:

A Prehistory of Psychedelia

Paul Devereux

THOROUGH OVERVIEW of ancient use of psychedelic plants for ritual and spiritual purposes. Starts by describing soma/amanita, Eleusis, witching herbs, datura, ayahuasca, peyote, and many other cultural uses of hallucinogens, then compares ancient and modern shamanic art and artifacts, and concludes with musings on what it all means. (1997, Penguin/Arkana 0-14-019540-8, 320 page paperback, \$15.95)

Design for Dying

Timothy Leary & R.U. Sirius

LEARY'S FINAL BOOK, about how to control and benefit from the process of dying. Preparation, death as performance art, ketamine and other drugs that help us understand death, the cryonics/nanotech option. Also how Tim finally died, and his performance as remembered by his friends. (1997, Harper Collins 0-06-018700-X, 246 page hardback, \$23.95)

The White Rabbit: And Other Delights

Alan Bisbort

COLLECTION OF POSTERS and other artwork from East Totem West, 1967-1969. This group helped start the psychedelic art movement; the book contains many fine examples of colorful, intricate images. (Not to be confused with the Chronicle book *White Rabbit: A Psychedelic Reader*.) (1996, Pomegranate Artbooks [Ingram] 0-7649-0011-0, 87 page large paperback, \$26.95)

Plants of Love: The History of Aphrodisiacs and a Guide to Their Identification

Christian Ratsch

INFORMATION on over 100 plants in this class, with intriguing stories and full-color art from a wide variety of cultures. Introduction to these natural sex helpers, overview of 113 such plants, and longer chapters on cannabis, opium, wines, ginseng, spices, mandrake, henbane, yohimbe, damiana, coca, and honey. Plus recipes, chemistry, synthetic drugs; glossary and index. (1997, Ten Speed Press [Ingram] 0-89815-928-8, 208 page paperback, \$19.95)

N E W E D I T I O N S

Psychedelic Drugs Reconsidered

Lester Grinspoon & James Bakalar

CLASSIC on social history and uses of psychedelics. Describes the major psychedelics, pre-historical and post-industrial uses, the nature of the experience, adverse effects and their treatment, and therapeutic and research uses. New introduction and preface describes latest research. Bibliography and index. (1979 [1997 edition], Lindesmith Center [Bookworld] 0-9641568-5-7, 385 page paperback, \$12.95)

Sacred Mushrooms and The Law

Richard Glen Boire

DESCRIBES federal and all state laws on psilocybin mushrooms and compounds. Covers California law against spores; legal difference between mushrooms and their active compounds; and the Religious Freedom Restoration Act as defense for religious use. Cites many relevant cases. Written by noted lawyer and author of the fine *Entheogen Law Reporter*. (1997, Spectral Mindustries 1-890425-00-1, 69 page small booklet, \$9.95)

A Primer of Drug Action: Concise, Nontechnical Guide to Actions, Uses, and Side Effects of Psychoactive Drugs

Robert Julien

COMPREHENSIVE but readable description of how various psychoactive drugs work, both recreational and psychotherapeutic, as well as associated neurotransmitters and receptors. Nice chapter on psychedelics, and section on MAO inhibition. (1997 [8th edition], W. H. Freeman, 528 pages, 0-7167-3112-6 hardback \$32.95, 0-7167-3113-4 paperback \$21.95)

Biochemical Basis of Neuropharmacology

Jack R. Cooper, Floyd E. Bloom, & Robert H. Roth

WELL-KNOWN graduate level textbook. Much more detailed than books above; not written for laymen. Chapters on each major neurotransmitter, including metabolism and various receptors; the one on serotonin describes the known workings of LSD. Best book for the serious student. Chapter references and index. (1996 [7th edition]; Oxford University Press 0-19-510399-8, 465 page paperback, \$29.95)

Peyote and Other Psychoactive Cacti

Adam Gottlieb

PRACTICAL GUIDE to peyote, San Pedro, and other mescaline cacti: their legality, effects, methods of use, botany, cultivation (from seed, cuttings, and grafting), and extraction techniques. Many photographs. (1997 [2nd edition]; Ronin Publishing 0-914171-95-X, 94 page paperback, \$9.95)

N E W P E R I O D I C A L S

TRP: The Resonance Project

James Kent (editor)

NEW QUARTERLY magazine focused on popular psychedelic use and other topics related to the mind and its many connections. Issue 1 includes *Pioneers of the Virtual Underground*, *Vine of the Souls*, *Santo Daime*, *Salvia Divinorum* Cultivation Tips, *Galactic Harmonic Primer*, *Neuro-inversion*, *In Memory of D.M. Turner*, and other articles as well as news, book and music reviews. Issue 2 includes *Copswatch*, *Microspeakeasy*, *Ripping the Net*, *Howard Rheingold* interview, *Virtual Neural Networks*, *Future Hype*, a theory of ketamine use for metaprogramming, the *Borametz Scam*, *Entheogenetics*, a guide to North American psychoactive fungi, *Ayahuasca Cookbook*, *Dennis McKenna* interview, and more, plus news, book and music reviews. (Resonant Media, 64-68 page large booklet, \$4.95 each)

Psychedelic Island Views

Bruce Eisner (editor)

VOLUME 3 ISSUE 1 includes fascinating Terence McKenna and Owsley "Bear" Stanley interviews, the Shulgins, beat poets, Elizabeth Gips, Douglas Rushkoff, *Digital Be-In*, *Human Be-In*. (Island Group, 52 page large booklet, \$4.95)

The Peyote Awareness Journal

VOLUME 2 ISSUE 1 is an expanded newsletter of the Peyote Foundation, devoted to this ancient plant and its sacramental and healing uses, and also covers cultivation techniques and legal issues. Good people and good information. (The Peyote Foundation, 42 page large booklet, \$9.95)

Eleusis: Bulletin of the Italian Society for the Study of the States of Consciousness

Giorgio Samorini (editor)

ISSUE 7 includes articles in English on an annotated bibliography of Bwiti religion (with some great photos); *Tribulus terrestris*; *Hallucinogenic Boletes* in China; and book reviews. (SISSC, 44 page large booklet, \$8.95) •

W H E R E T O G E T T H E S E B O O K S

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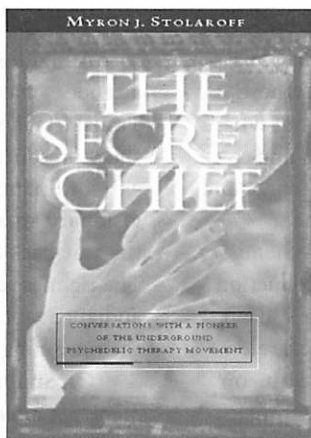
Marketing **The Secret Chief**

Carla Higdon

THE COMPLETION of the publication of MAPS' first book, *The Secret Chief: Conversations with a Pioneer of the Underground Psychedelic Psychotherapy Movement*, has been only the first of many steps toward the success of the project as a whole. The next crucial step has been marketing the book in a way that is both diligent and cost effective. Since MAPS has allocated a limited advertising budget of \$5,000, it has been necessary to consider carefully how the money is spent.

In addition to placing numerous magazine and Internet advertisements and finding distributors for *The Secret Chief*, I have been exploring ways to take advantage of the many opportunities for free publicity. One of the best ways to do this is to find occasions for lectures, interviews, and media appearances. So, with this in mind, with the help of a few key individuals, I organized a publicity tour to New York City for Myron Stolaroff, who is, as most of you already know, the author of *The Secret Chief*.

On the first of his three day visit Mr. Stolaroff was interviewed for two New York cable access television shows: "New Realities" and "A Better World," where he discussed his own experiences with psychedelics, their psychotherapeutic applications, and the work of the



much revered therapist, "Jacob," whose methodology is detailed in *The Secret Chief*. In the remainder of his time in New York, Mr. Stolaroff was interviewed for a feature article by *High Times* magazine and by *The Village Voice*, and gave an informal talk to two different groups of MAPS members. Mr. Stolaroff also presented with Richard Yensen, Ph.D., at the Lindesmith Center on the topic of Psychedelic Psychotherapy. Dr. Yensen was a psychedelics researcher at the Maryland Psychiatric Research Center from 1972-1976, currently directs the Orenda Institute, and is working with Dr. Donna Dryer to obtain permission to conduct research on the use of LSD in psychotherapy.

It was especially appropriate for the two to appear together because MAPS has pledged the first \$10,000 from the sale of the signed limited edition of *The Secret Chief* to Dr. Yensen's LSD/cancer patient study. These one hundred books have been

autographed by Albert Hofmann, Stanislav Grof, Alexander and Ann Shulgin, and Myron Stolaroff, and copies are still available for \$250. Sale of the limited edition has already generated \$10,000 for the LSD study. As a fundraising instrument they have proven to be very effective. As a collector's item, they will no doubt be cherished by generations to come and can only increase in value.

Financially, the New York tour was a success for MAPS because book sales were sufficient to cover the majority of the expenses and future sales as a result of the interviews are anticipated. Educationally, it was successful due to the variety of media outlets that will report on *The Secret Chief*. It was also an occasion for MAPS members in the area and myself to meet one another, Myron Stolaroff, and some of the scientists who are striving to conduct psychedelic research.

I would like to take this opportunity to acknowledge those MAPS members who volunteered their time and services to work with me in making each event possible: special thanks to Neal Goldsmith and Deb Boulanger, Andrew Tatarsky, John Niernberger, and Ethan Nadelmann and the staff at the Lindesmith Center. Also, thanks to all the people who showed up in support of our efforts, attendance could not have been better. •

Mind States: Current Perspectives on Visionary Plants & Drugs

Sylvia Thyssen

IN NOVEMBER 1997, the Berkeley International House hosted an intensive two-day event where very little mention of research was made, but where audience members were regaled with facts and musings on the interplay of psychoactive plants and drugs with society, the law, art, the Internet, therapy, spirituality, personal growth and chemistry.

Mind States commenced with an introduction by author and philosopher Peter Lamborn Wilson, a.k.a. Hakim Bey. Elizabeth Gips, psychedelic elder and activist (see www.changes.org) joined him on the stage and lead the audience in an exuberant short guided meditation on the relevance of such a gathering.

The first speaker was Andrew Edmond, founder and director of The Lycaenum (www.lycaenum.org), "the world's largest online database for information about entheogens." In a talk entitled "Entheogens and the Internet: A New Dimension in Alternate Realities," Edmond discussed the forums where knowledge about entheogens is shared online, and about the impact the Internet has had on the evolution of entheogenic information.

The second speaker was Richard Glen Boire, Esq., editor of *The Entheogen Law Reporter* and author of *Marijuana Law* and *Sacred Mushrooms and the Law*. (see <http://home.cwnet.com/specmind/page2.html>) In "Mind States in Police States," Boire took the audience on a guided tour of the legal landscape underlying entheogen use.

During the lunch break, conference attendees visited the crowded vendor's hall where plants, artwork, t-shirts and books were on sale.

In the afternoon, Myron Stolaroff spoke on "The Trained User: Deepening Meditation Practice and Forestalling Aging." Stolaroff's book, *The Secret Chief*, was available for the first time at Mind States, and was the best-selling book on the speakers' table.

After an interim slide show by Lordnose!, Ann Shulgin talked about psychedelic psychotherapy, sharing insights gathered from the brief time that she did lay-therapy with MDMA before 1985. A version of her talk is the chapter in *TIHKAL* entitled "The Intensive."

Dale Pendell waxed poetic on "Plant Teachers and Spiritual Practice," and Jim DeKorne followed the next day, getting a bit more personal about his own explorations in "Shamanism—Psychedelic and Otherwise: Using Entheogens for Inner Work."

A highlight of Mind States for many conference attendees was "How Psychedelic Mysticism has Transformed my Life and Art," the talk and slide show presentation by Alex Grey, psychedelic artist extraordinaire. Grey presented a retrospective of his visionary art and the impact of psychedelics on it, all the way back to his first dose of LSD 23 years ago. The richness of his imagery and anecdotes kept the audience rapt for several hours. Keep an eye out for the upcoming www.alexgrey.com.

On Sunday, Dan Joy, author of *The Healing Magic of Cannabis* and editor of *PIHKAL* and *TIHKAL*, spoke on the future of marijuana therapeutics. He examined the advantages and disadvantages of the medical paradigm for cannabis and presented details on the therapeutic properties of individual cannabinoids. Joy also spoke about the rarely mentioned yet important therapeutic value of the psychoactivity of cannabis.

One of the more surprising presentations of Mind States was James Kent's "Ketamine: Metaprogramming and Karmic Cleansing from within the Eye of the Storm." Kent, editor of *The Resonance Project* (TRP), a quarterly dedicated to psychedelics, technology and the science of perception, gave an intensive tour of the ketamine mindspace and what can be derived from it. Portions of this talk appear in an article by the same name in the current TRP. (to contact TRP: Resonant Media, 323 Broadway Ave. East, #318, Seattle, WA 98102, trp@resproject.com, www.resproject.com).

The last two speakers of the conference were Alexander Shulgin and Terence McKenna. McKenna was not in Berkeley for Mind States but he had prepared a short video presentation exclusively for the conference. After it was shown, he was brought online real-time in an excellent audio/low-res video Question and Answer session. Shulgin's current research with psychoactive cacti was a point of departure for his talk "The Process of Discovery."

Congratulations to the conference organizers, Will Beifuss (author, *Psychedelic Sourcebook*), Richard Glen Boire (editor, *The Entheogen Law Reporter*) and Jon Hanna (author, *Psychedelic Resource List*). This was an extremely smooth-running and topical conference, and the care that went into picking not only psychedelic elders as speakers but also younger generation representatives of the "third wave" of psychedelic leaders is to be commended. •

Dear MAPS,

Just received the new issue of MAPS. Very pleased about the NIDA grant. I must be a rather odd subscriber to MAPS. It's been more than 25 years since rather brief experiments back in the 60s. I'm just an ordinary householder. Yet I continue to be fascinated by the research. It makes no sense that serious study into the nature of certain substances be constantly proscribed, despite circumstantial evidence to suggest there's probable merit in looking further. Keep going.
Morley Chalmers

Dear MAPS,

Congratulations on the NIDA funding [to Dr. Abrams' marijuana study].

I look forward to the information provided by your publication. Especially any dialogue relative to "amateur" research. We have got to find a more respectable term than amateur if contributions are to carry any degree of validity. This is especially important as the political climate of the past 20 years has caused near extinction of most of the professional researchers in the mind drugs field. Very truly yours,
G.

Dear MAPS,

I just got back from a week's vacation at my parents house and I'd like to share something that happened that I think will be encouraging to MAPS members. I have spent the last few years trying unsuccessfully to show the value of psychedelics to my parents. Few of these attempts have made any forward strides as they are firmly entrenched in the mindset that decades of negative media and centuries of puritanical thought have created.

But this time, I brought along the last two issues of the MAPS Bulletin and put them on the table and suggested that they read this in order for them to better understand what my post-graduation plans were. To my incredible delight and surprise they told me that they were very impressed with the quality of the publication. They said that seeing everything expressed in a rational, scientific, objective manner brought validity to the endeavor, and they dropped their defensive tone about the whole issue. If MAPS can have this effect on my parents, then I think it's safe to assume that many others would also hear our voice through this medium, at least those like my parents who do respond to rational scientific inquiry. Hope this brings some holiday cheer to some of you. Happy new year!
Mark Olson
Neuroscience Program
University of Illinois
www.students.uiuc.edu/
~m-olson/

mapsforum

Editor's Note:

Just before his death, Nicholas Saunders established a webpage on the topic of Amateur Research into Psychedelics at <http://hyperreal.org/research/>. In his words:

"This site aims to provide a platform for amateur research into the effects of psychedelic drugs on humans.

I fully acknowledge that the quality of research by amateurs cannot expect to match that done by qualified scientists in well equipped institutions. But, in spite of the limitations, I believe that amateurs can make valuable contributions in this neglected area of science.

Academic research into psychedelics is severely restricted, both by the law and by the attitudes of many orthodox scientists who are unable to contemplate the existence of other levels of consciousness. Government permission, funding, ethical approval and acceptance

of papers by respected journals form greater obstacles, and successful researchers earn less respect for their work than in other areas of science. As a result, very few studies are being conducted in this important area of science.

How this site develops depends on the input received. At the start, it will be a place to suggest subjects for amateur research, suitable methodology, to report results and to suggest ways of checking these by further trials. If enough well-constructed trials are reported, this could eventually lead to an online journal of amateur scientific research...

I am happy to accept the role of moderator and editor and will strive to present a wide range of ideas and observations on the site. I intend to be extremely cautious about reporting unsubstantiated claims or assumptions resulting from amateur trials in case they bring further disrepute to this field of research."

Nicholas Saunders, January 1998.

Sounds of the Chief

I just read *The Secret Chief*, and was impressed that music played an important role in Jacob's work. I would be most interested to know exactly what music he found most effective over the years, but I realize that information may not be available. Perhaps others who have used music regularly in a therapeutic or ritual context could share their experience in this regard.

Thank you,
Jim Schliestett

Editor's Note:

Although we don't have specifics on the music used by Jacob in his therapy, an often recommended book is *Music & Your Mind: Listening With a New Consciousness* by Helen L. Bonny and Louis M. Savary, 2nd Edition, Paperback, 192 pages, Talman Company, 1990, ISBN: 0882680943. Helen Bonny was the music therapist for the LSD research at Maryland Psychiatric Research Institute, Spring Grove, Maryland. She developed the Bonny Method of Guided Imagery and Music in the 1970s. This method combines relaxation techniques with selected classical music to evoke altered states of consciousness in clients. This method is widely recognized by music therapists, psychotherapists, educators, and other helping professions. The Bonny Foundation requires therapists to complete structured course work and supervised sessions before becoming a fellow in the Association for Music and Imagery.

An article that also appeared on the topic: Bonny, Helen L.; Walter N. Pahnke. The Use of Music in Psychedelic (LSD) Psychotherapy. *Journal of Music Therapy*, 9(2):65-87, Summer 1972.

A footnote on the history of MDMA

Maybe this is of interest to people interested in the history of MDMA and especially MDMA research. Furthermore, it is a telling illustration of the mindless copy-paste syndrome to which most of us are prone. Maybe you could spread this little anecdote to the many contacts MAPS has.

In virtually every book and article on MDMA I've come across so far it can be read that MDMA was originally synthesized and patented by Merck (Germany) as an appetite suppressant, but that it was never marketed. Countless times this information has been copied from text to text—I am guilty of having spread this little bit of history in numerous talks. Still, it is simply wrong. Pascale, a thesis candidate in our group, wanted to be sure and contacted Merck, Germany, for the true story. She found out that:

1) Merck stumbled across MDMA when they tried to synthesize Hydrastinin, a vasoconstrictive and styptic medicine. MDMA was merely an unplanned by-product of this synthesis. As usual, the process of its synthesis was patented.

2) It can not be reconstructed to what extent Merck tested MDMA and what the results of such testing were, but it can be excluded with certainty that MDMA was ever considered as an appetite suppressant (and, as Merck adds, this indication was not relevant in 1912, something which could have certainly occurred earlier to the more clever minds among us...)

3) It is also certain that MDMA was never considered for marketing by Merck.

So, thinking of Public Enemy who said, "Don't believe the hype," I would even go further and say: "Don't believe *anything* unless you've checked it for yourself!"

Alex Gamma

announcements...

Teluride Mushroom Festival

August 27-30, 1998. Telluride, CO. Contact Fungophile, Inc., P.O. Box 480503, Denver, CO 80248-0503, (303) 296-9359

The Cosmic Game

The English version of Stanislav Grof's new book, *The Cosmic Game: Explorations of the Frontiers of Human Consciousness*, has been published by State University New York (SUNY) Press.

The German translation is called *Kosmos und Psyche: An den Grenzen menschlichen Bewusstseins* and was published by Wolfgang Krueger Verlag in Frankfurt am Main, 1997.

The German edition can be ordered from:
Wolfgang Krueger Verlag
Hedderichstrasse 114
D-60553 Frankfurt am Main Germany
Fax: +49 - 69 - 6062 414
Phone: +49 - 69 - 6062 386

Psychoactivity Conference

October 1-4, 1998, Amsterdam

A conference on the topic of entheogens and psychedelics is being planned for the Fall in Amsterdam. For more information about this event, contact Conscious Dreams, Schinkelkade 59-61, 1075VL Amsterdam, The Netherlands. Tel. +31(0)20-470774, FAX +31(0)20-4707616
<http://neturl.nl/codreams>,
E-mail: codreams@xs4all.nl

Online resources in transpersonal studies

The Fall 1997 *Association for Transpersonal Psychology Newsletter* included a Guide to the Transpersonal Internet and a 1997-98 Listing of Schools and Programs. The Guide is available online at www.virtualcs.com/tpi.html. The ATP can be contacted at P.O. Box 3049, Stanford CA 94309, 650/327-2066.

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3. THE GOOD FRIDAY EXPERIMENT FOLLOW-UP, *article on psychedelics & experimental mysticism*, Rick Doblin, originally published in August '91 Journal of Transpersonal Psychology: \$8/\$11*
4. JOURNAL OF NERVOUS & MENTAL DISEASE PAPER: 20 PSYCHIATRISTS ABOUT THEIR OWN MDMA EXPERIENCES & REVISION MAGAZINE ARTICLE ON MDMA: \$8/\$11*
5. COMPLETE SET OF MAPS BULLETIN BACK ISSUES: 1988-1997 - 750 pp: \$75/\$90*
6. PSYCHOLYTIC AND PSYCHEDELIC RESEARCH 1931-1995: A COMPLETE INTERNATIONAL BIBLIOGRAPHY, Torsten Passie - 102 pp: \$24/\$29*
7. THE SECRET CHIEF: CONVERSATIONS WITH A PIONEER OF THE UNDERGROUND PSYCHEDELIC THERAPY MOVEMENT, Myron Stolaroff - 144 pp: \$10/\$14* special price for current & new MAPS members. \$13.95/\$19.95* for regular non-member orders. Signed edition: \$250.00

* Indicates price for orders from outside the U.S. Please do not send checks on foreign banks.



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MAPS MEMBERSHIP INFORMATION

MAPS IS A MEMBERSHIP-BASED organization working to assist psychedelic researchers around the world design, obtain governmental approval, fund, conduct and report on psychedelic research in humans.

Founded in 1986, MAPS is an IRS approved 501 (c)(3) non-profit corporation funded by tax-deductible donations from about 1,500 members.

MAPS' founder and current president, Rick Doblin, is currently in the Ph.D. program in Public Policy at Harvard's Kennedy School of Government and has previously graduated from Stan and Christina Grof's Holotropic Breathwork 3-year training program.

Sylvia Thyssen is responsible for editing the Bulletin and oversees MAPS' website and outreach efforts. She is a graduate of the University of North Carolina at Chapel Hill, where she majored in Art History and French.

Carla Higdon coordinates MAPS member services and the marketing and distribution of the *MAPS Bulletin* and *The Secret Chief*. She is a graduate of Western Carolina University and certified art educator with a Bachelor of Science in Education.

MAPS has previously funded basic scientific research in both humans and animals into the safety of MDMA (3,4-methylenedioxyamphetamine, *Ecstasy*) and has opened a Drug Master File for MDMA at the U.S. Food and Drug Administration. MAPS is now focused primarily on assisting scientists to conduct human studies to generate essential information about the risks and psychotherapeutic benefits of MDMA, other psychedelics, and marijuana, with the goal of eventually gaining governmental approval for their medical uses.

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

The MAPS 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* can 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 usage.

General Members: \$35

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

General members will receive the *MAPS Bulletin*, which appears on a quarterly basis.

Supporting Members: \$100

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

Supporting members will receive the *MAPS Bulletin* plus a copy of the MAPS-published book *The Secret Chief: conversations with a pioneer of the underground psychedelic therapy movement*, by Myron Stolaroff.

Patron: \$250 or more.

Patrons members will receive the *MAPS Bulletin* plus a copy of *The Secret Chief*, by Myron Stolaroff. Patrons may also request a complete set of MAPS back issues (25 issues, over 750 pages) and research updates on matters of personal interest.



Rick Doblin,
MAPS President



Sylvia Thyssen,
Director of Communications



Carla Higdon,
Projects Coordinator

*wrap me up in a big pink bow
and send me up to fathers land
for I have not yet stood at the gate
and been let in by the mighty hand
for then I shall know the reason
and when I think of loved ones lost
I know not to cry
we need the room on mothers land
to let the little ones in*

—by Beatrice Banks, age 10, written on Nicholas Saunders' coffin

**From the Obituary for
Nicholas Saunders**

by Nicholas Albery for the *London Guardian*,
February 5th 1998

NICHOLAS SAUNDERS, who died in a car accident in South Africa, aged 60, was an alternative entrepreneur of genius, who wrote the first *Alternative London* guides, transformed Neal's Yard in Covent Garden into an oasis of greenery and alternative businesses and became renowned in the media as the guru for the drug Ecstasy, running the www.ecstasy.org research site on the Internet which receives about 3 million accesses a year. Saunders—whose father Sir Alexander Carr-Saunders was director of the LSE—was always himself a rebel. He tried to blow up his school chapel at Ampleforth—although he was quite relieved when the bomb failed to go off; and he dropped out from his engineering course at Imperial College—his insistence on working everything out from first principles did not fit the system.

He was a squatter before the seventies fashion for this. For three years in the sixties he squatted a disused house in Chelsea, hidden behind hoardings, along with five geese and a fairyland garden, part of which he flooded. His mother gave him money for a mortgage to encourage him away from this life-style, but he stayed put and used the money to start developing and selling a series of flats. This provided the capital, in 1970, for printing 50,000 copies of his first and very successful *Alternative London* guidebook, which he distributed himself, for instance using sellers in the park buying carrier bags of books from him at half price. Saunders believed that he was the first to use the phrase "alternative society" and the book distilled his tips on everything from drain repair in squats to hitching to the East.

He moved into an old warehouse in the very derelict Neal's Yard in Covent Garden and opened downstairs the first wholefood warehouse in London that sold medium bulk to the public. He was proud that their turnover per square foot exceeded Sainsbury's. The most popular items sold there led him to found a series of other shops in the Yard, ranging from the Neal's Yard Coffee House and Neal's Yard Bakery to the Neal's Yard Dairy and the Neal's Yard Apothecary. He created over 100 jobs without government aid of any kind and without any of the businesses failing. He

had a belief derived from a Gurdjieff group he once belonged to, that fulfillment comes from work which is demanding, so long as it gives opportunity for variety, learning and responsibility. So rather than have a machine hoist, workers hoisted bags of grains and beans up to the first floor packing room by jumping out of the window holding the pulley rope. There was only one minor accident in 10,000 jumps.

With the computer revolution Saunders went high tech, opening the first "laundrette" for desktop publishing, the Neal's Yard DTP Studio.

Taking the drug MDMA (Ecstasy) in 1988 made Saunders realise that he had been mildly depressed for ten years, and he set about uncover-

ing every piece of research on this drug; believing that adults, if sufficiently informed, should be free to make their own decisions about drugtaking, whilst hoping that ravers

would realise through his work that the drug was more than a dance drug and had potential as a tool in therapy, marriage guidance, painting and spiritual exploration.

He organised group experiments, such as one where artists drew portraits in a group without the drug and then again under the influence of MDMA—with the drug drawings gaining in emotional intensity at the expense of disciplined polish. He self-published his findings in the book *E for Ecstasy* (1993), which sold 20,000 copies a year, and followed this up with *Ecstasy Reconsidered* (1997), for which he commissioned a survey of the research on the drug's potential neurotoxicity. On his website www.ecstasy.org he published regular photos of the various Ecstasy pills on the market, with warnings as to their actual constituents.

At the time of his death, he was finalising research for a book on drugs and spirituality, having visited a number of tribes around the world who use natural drugs ranging from ibogaine to ayahuasca as their communion ritual. He leaves behind not only his co-researcher and partner, Anja Dashwood, and Kristoffer, his 19 year old son, but a host of grieving friends around the world who have set up a web site for stories of his life at www.stain.org/nicholas/. Nicholas Saunders, alternative entrepreneur, born January 25th 1938; died February 3rd 1998. •

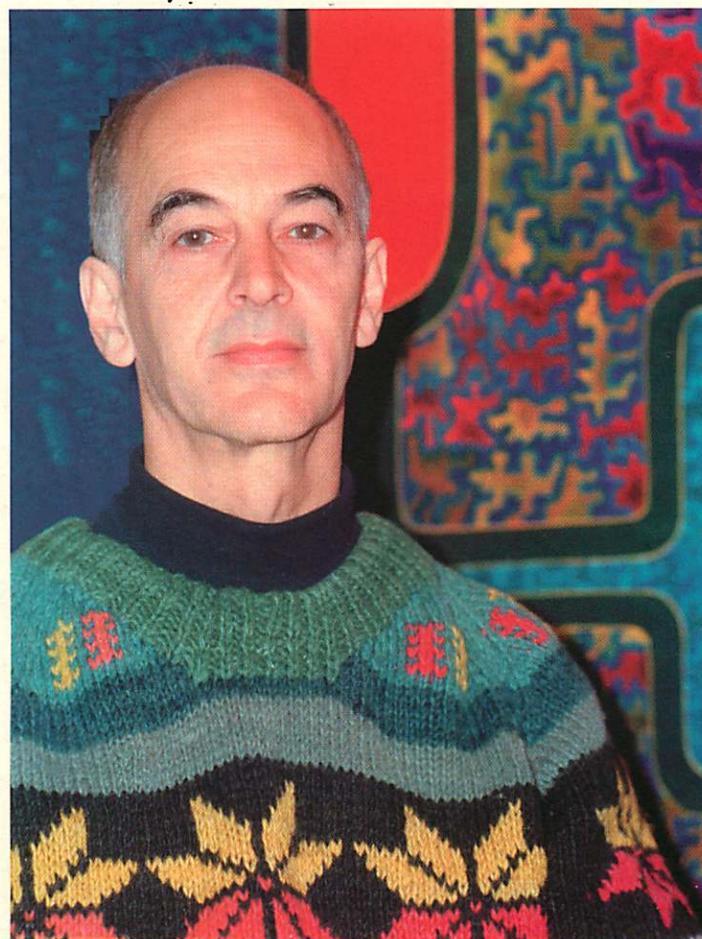
**Message from Anja,
Nicholas Saunders'
partner**

posted at www.stain.org/nicholas/

ON THE 3RD of February 1998, Nicholas Saunders, my true love died near Kroonstad, in Free State in South Afrika. I was told he was engaged in an inspiring conversation at the time the car accident took place. The car skidded off the road and tumbled down at a beautiful place with trees and water. He died quickly and at peace. Free State has a lot of big farmland areas, mainly wheat. The predominant colouring of the flowers is yellow and mauve and there are many sunflowers. The skies are huge. Nelson Mandela wrote about it: "When I visit there, nothing can shut me in. My heart can roam as far as the horizons."

I would like to think that his spirit soared out there in the vastness of space. Last year we had an LSD trip together which he described as a "peak" experience. A spiritual experience in which he felt: "I was able to let go completely, like never before and the result was to allow my "essence" to flow out and rejoin its source. It was like "coming home," but far more so. It was incredibly "right" and joyful, and I wept for joy." I trust that his last trip was the greatest of all!

May our love flow forever.
Anja



NICHOLAS SAUNDERS
January 25, 1938–February 3, 1998

In life, a crucial ally and friend in the struggle to legitimize
the beneficial use of MDMA and other psychedelics.
In death, an inspiration, a heartache and a gentle call to action.

Nicholas Saunders died in a car accident while conducting research
for a book on the religious use of psychedelics.

(See Obituary inside back cover)