

MULTIDISCIPLINARY ASSOCIATION FOR PSYCHEDELIC STUDIES

# MAPS



## **Special Issue: Technology and Psychedelics**

Edited by David Jay Brown, M.A.

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"Xenolinguistics: Intense Play."  
Still from LiveGlide performance.  
By Diana Reed Slattery  
See article by Diana Slattery on page 9



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## Letter from Rick Doblin, Ph.D.

# On The Other Side

I INITIALLY COMPLETED THIS LETTER on April 16, 2008—exactly four years after Michael and Annie Mithoefer conducted their first MDMA-assisted psychotherapy session on April 16, 2004. Coincidentally, sixty-five years before, on April 16, 1943, the world's first LSD experience took place when Dr. Albert Hofmann accidentally ingested some LSD he was synthesizing. I'm now rewriting this on May 1, to note with sadness, and in celebration of a life gloriously lived, that Albert died on April 29, at the age of 102. All MAPS members can take great satisfaction in knowing that Albert lived long enough to see with his own eyes the recent approval of Dr. Peter Gasser's MAPS-sponsored Swiss LSD/end-of-life anxiety protocol—to become the first study of LSD-assisted psychotherapy in over thirty-six years. Albert felt that the renewal of LSD-assisted psychotherapy research was the “fulfillment of my heart's desire.” It was a pleasure to tell Albert several weeks ago that I looked forward to discussing the final results with him in about a year and a half.

He laughed and said that he'd help anyway he could, either from this side or the other side. Now, he's on the other side, as it falls to us to shepherd LSD back into medical use.

Although MAPS' primary focus is on sponsoring research into the therapeutic uses of psychedelics and marijuana—in order to develop them into legal prescription medicines—we believe that these substances are multipurpose tools. They can be used beneficially in contexts other than just medical use such as in religious/spiritual settings, to enhance intellectual and artistic creativity, for scientific studies of consciousness and the mind, for celebratory/recreational purposes, to deepen emotional relationships, or for practical problem-solving tasks.

This special issue of the *MAPS Bulletin* is primarily about psychedelics and technology. It focuses on the use of psychedelics for intellectual and artistic problem-solving and creativity. This issue also features an article about psychedelic pioneer Laura Huxley, who passed away recently, by activist Valerie Corral. (Valerie was a member of a support team that assisted 96-year old Laura in her dying process). It also includes a painting and photos of Laura. Laura's book, *This Timeless Moment*, about how she assisted Aldous Huxley in his dying process in 1962, has been a profound inspiration to many psychedelic activists. Aldous' classic book, *Brave New World*, has also been an inspiration, since it highlights the need for technological advancement to be matched by growth of the human spirit. Psychedelics can help facilitate this growth.

In August of 1966 the last paper in the scientific literature exploring the use of psychedelics for creativity


was published, “Psychedelic agents in creative problem-solving: a pilot study.” This paper, by Harman, McKim, Mogar, Fadiman and Stolaroff—which appeared in *Psychological Reports*—concluded “Tentative findings based on tests of creativity, on subjective reports and self ratings, and on the utility of problem solutions suggested that, if given according to this carefully structured regimen, psychedelic agents seem to facilitate creative problem-solving, particularly in the ‘illumination phase.’” Doses administered were 200 milligrams of mescaline sulfate (the approximate equivalent of 100 mcg. of LSD).

Psychedelic research at Harvard also ended in 1966. After almost forty-two years it resumed on February 23, 2008, in a MAPS-catalyzed study that administered MDMA-assisted psychotherapy to a patient with anxiety associated with advanced-stage cancer. Perhaps the renewal of research into psychedelics and creativity isn't all that far off.

Close at hand is the completion of MAPS' U.S. MDMA/PTSD pilot study, conducted by Dr. Michael Mithoefer and Annie Mithoefer, BSN. This is MAPS' first FDA-approved psychedelic psychotherapy protocol and top priority project. The final experimental session in the study is scheduled for July, 2008, when the 21st subject will receive his third MDMA-assisted psychotherapy session. The study will have taken more than four years to complete. It will end up having cost MAPS about \$1 million to design, obtain permission for, conduct, monitor, analyze, and write a paper for publication in a peer-reviewed scientific journal. Most importantly, the study is generating remarkably promising results. We are attempting to replicate these results in MAPS-sponsored MDMA/PTSD pilot studies in Switzerland and Israel. We're also in the development stage for additional MDMA/PTSD pilot studies in Canada, Spain, and France.

The next breakthrough we're working toward is to obtain FDA permission to administer MDMA to therapists who are in training to conduct MDMA/PTSD research. It is our view that therapists administering MDMA to their patients will be more effective if they have experienced MDMA themselves. In order to prove safety and efficacy—and to obtain approval for prescription use—we need to train about twenty to thirty new male/female co-therapist teams to conduct the two multisite Phase 3 studies required by the FDA and the European Medicines Agency.

On behalf of MAPS staff and researchers, our deepest thanks to all MAPS members for your generous support over the years. Together, we have amazing opportunities ahead, on this side, with help from the other side.

 — Rick Doblin, Ph.D., MAPS President



## Letter from the Editor:

### David Jay Brown, M.A.

MORE THAN A FEW PEOPLE have pointed out how closely timed the discovery of LSD (April 16, 1943) was with the first controlled atomic reaction (December 2, 1942). Others point out the close timing of the discovery of mescaline (1897) and the development of X-ray photography (1895). Because of these near historical coincidences, it has been suggested that there might be some sort of relationship between the timing of these discoveries and the development of these inventions, as these powerful technologies seem to mirror the discovery of the psychedelics in an interesting way.

An LSD experience can be subjectively viewed as an “atomic explosion” or “nuclear meltdown” of the mind.

Likewise, the penetrating perspective gleaned from a mescaline experience seems strangely similar to the see-through point of view provided by X-ray photography, as both have the ability to make normally invisible aspects of the world visible. A number of people—including Swiss chemist Albert Hofmann, who discovered LSD—have suggested that LSD might have been discovered in 1943 as a spiritual antidote to the apocalyptic dangers of nuclear weapons that now threaten the survival of our species.

Whether these speculations are true or not, Western science’s discovery of psychedelic chemicals lead to an intimate and unusually creative relationship with technology. Since psychedelics affect all aspects of the human mind, they affect every aspect of human culture. Science, art, medicine, politics, philosophy, and spirituality have all been transformed by individuals experienced with the psychedelic mind state, as has the major hallmark of our species’ success—our ability to design tools. The interplay between technological innovation and psychedelic mind states has substantially influenced many aspects of electronic media and biotechnology—including the development of new film techniques and cinematic special effects, personal computers, the internet, and genetic engineering.

For example, the biotechnology revolution was largely

started by two Nobel Prize biochemists—Francis Crick and Kary Mullis—who both reportedly attributed part of their insights to their use of LSD. Francis Crick, along with James Watson, discovered the double helix structure of the DNA molecule—the genetic code—and, according to a BBC report, sources close to Crick say that he was regularly using low-doses of LSD at the time of the discovery. Kary Mullis—who developed PCR (the polymerase chain reaction), which revolutionized the study of genetics and made genetic engineering possible—said, “I think I might have been stupid in some respects, if it weren’t for my psychedelic experiences.”

#### Psychedelic Technology Begins

In the Sixties and Seventies, the use of psychedelics by creative people in the music industry helped to spawn technologies that combined new forms of music with laser light shows, and magic mushroom-munching film makers were inspired to develop new cinematic techniques that used special effects to mimic the perceptual effects of hallucinogens. For example, Stanley Kubrick, who directed *2001: A Space Odyssey*, was turned on to LSD by Los Angeles psychiatrist Oscar Janiger when the drug was still legal. Many science fiction writers—such as Philip K. Dick, Robert Anton Wilson, Rudy Rucker, Norman Spinrad, and me—have been inspired by psychedelics in

their thinking about the future of technology.

In the early Eighties the late psychologist Timothy Leary began promoting the idea that personal computers and Virtual Reality were the “new LSD,” and this association between psychedelics and technology was embraced by what became known as the “cyberculture” of the Eighties and Nineties—largely fueled by a San Francisco-based magazine called *Mondo 2000* (which was an inspiration for Kevin Kelly to launch *Wired*). The editor-in-chief of that magazine—Ken Goffman (a.k.a. R.U. Sirius)—joins us in this Bulletin to share with us his thoughts about the future of technology.

The cyberculture of the Eighties and Nineties has mushroomed into the global internet culture that per-



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vades virtually everyone's lives today. This history was covered in John Markoff's book *What The Dormouse Said*, and Fred Turner's *From Counterculture to Cyberculture*, which are about how the sixties counterculture directly spawned the personal computer revolution. According to Ph.D. candidate Diana Reed Slattery—who also joins us in this Bulletin—the Web-based search engine Google has become the world's first “psychedelically-informed superpower.” The influence of psychedelics on the mass media has become so pervasive that it's hard to even find a television commercial or a computer game that doesn't bear an obvious psychedelic signature. Hollywood and Silicon Valley both appear to have been highly influenced by creative individuals who have experimented with mind-altering substances.

### **Psychedelics and Computers**

The internet and the personal computer revolution are especially intimately intertwined with psychedelics. Many of the most influential people involved in developing personal computers, and the software that runs on them, admit to having munched on the forbidden fruit. Bill Gates, founder of Microsoft, as well as Steve Jobs and Steve Wozniak, who founded Apple Computer, all admit to having used LSD during their formative years in the 1960s. Jobs in particular has talked openly about the benefits of his experiences with LSD. He told a reporter from the *New York Times* that taking LSD was “one of the two or three most important things I have done in my life.”

As an early developer for Cisco Systems, MAPS supporter Kevin Herbert developed software that now runs on millions of Internet routers worldwide, and he was largely inspired by his use of psychedelics. Kevin joins us in this issue to share some of his insights into how technological innovation can be fueled by psychedelic mind states. Another computer revolutionary who considers psychedelics in a positive light is MAPS Board of Director John Gilmore, who was the fifth employee at Sun Microsystems, and who has also contributed substantial funding to psychedelic research—in addition to promoting free software, increasing the availability of data encryption programs to protect personal privacy, encouraging freedom of information, creating internet security, and reforming drug policy.

Other computer pioneers, programmers and software developers who were positively influenced by psychedelics include Mitch Kapor, one of the founders of

the software companies Lotus and On Technology, Mark Pesce, a computer programmer who claims to have been inspired by an LSD trip to produce Virtual Reality Modeling Language, and Bob Wallace, the ninth Microsoft employee who coined the term “shareware,” created the word processing program PC-Write, and founded the software company Quicksoft. Wallace contributed substantial funding to psychedelic research organizations—including MAPS—before his untimely death in 2003. Reliable sources have informed me that there are many more highly influential software designers who—due to the current political climate—don't want their use of psychedelics to become public knowledge.

Mathematician Ralph Abraham—who wrote the article in this issue about computers, mathematics, and psychedelics—tells a great story about a computer columnist from the *San Francisco Chronicle* who didn't believe the claim made by a writer for *G.Q.* magazine that much of the computer industry was inspired and designed by people who have been influenced by psychedelics. So this reporter attended a Siggraph convention—an annual conference for computer graphic artists—and polled important professionals of the computer graphic field—180

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of whom answered yes to the question, “Do you take psychedelics, and is this important to your work?”

However, to people who have used psychedelics this connection appears obvious. Anyone who has ever had an experience with LSD will instantly recognize that computer graphic morphing techniques, for example, were obviously inspired by the way that people's faces appear to someone under the influence of the psychedelic. Trippy computer software graphics appeal to many young people who use psychedelics, and this encourages an intimate relationship between technology and their psychedelic experiences. For example, a college student in Texas wrote me saying, “The MAC visualizer on iTunes makes music a whole other experience, even not on acid. But when you're tripping, it takes you inside it. We think—this software was made for trippin' college kids!”

However, not everyone agrees that psychedelics enhance technical design abilities. When I asked robotics expert Hans Moravec (whose mind-expanding books about the future of technology tend to appeal to readers who have experimented with psychedelics) if psychedelics played any role in the development of his ideas about technology, he replied, “No! I was college age



in the 1960s (and grad school in the 1970s), and quite aware of the fads. I found the idea of mind-altering drugs about as attractive as the idea of using woodshop tools to mechanically alter my brain...I thought, my brain is a complicated, intricate piece of machinery, and there are big things I hope to do with it. No way I want it scrambled! Fine machinery: handle very cautiously. For those reasons, I never took up coffee, alcohol or anything stronger."

Although not everyone agrees about the reputed abilities of psychedelics to enhance technological creativity (although there is scientific evidence that psychedelics enhance creativity in general), it might be noteworthy to this discussion to point out that around a hundred years ago the physicist Lord Kelvin declared that "X-rays are a fraud," and in Galileo's time the Pope refused to look through his telescope. It seems that more than a few people have difficulty accepting aspects of reality that don't fit into their belief systems, and this affects their ability to be objective. There appears to be a sharp division among people as to whether or not psychedelics enhance creativity, and this division often seems to correlate with whether or not these same people have actually tried psychedelics themselves.

To explore these questions further, and to contemplate the fascinating interplay between technology and psychedelics, we gathered together an exceptional group of contributors for this special edition of the MAPS Bulletin. Penn State Science Technology and Society professor, and author of *Ecodeletics*, *LSDNA*, and *Technoscience*, Richard Doyle, Ph.D. joins us to share his insights and ideas about psychedelics and the evolution of information technologies.

Educational psychologist Thomas Roberts, Ph.D.—who has been teaching a class on the psychedelic mindview at Northern Illinois University since 1982—shares with us his ideas about the evolution of "psycho-technologies." Computer graphic artist Brummbaer writes about how different acoustic technologies were developed by musicians and sound engineers using psychedelics, and how his own experience with ketamine inspired new computer graphic techniques.

#### **The Future of Psychedelics & Technology**

A few of the contributors in the *Bulletin* point out that psychedelics are a form of technology; a tool for tuning into different states of consciousness in the brain—and like all forms of technology, they may eventually become obsolete.

According to technology theorist and inventor Ray Kurzweil, our developments in technological design are increasing exponentially, and that advances in artificial intelligence, nanotechnology, quantum computing, virtual reality, and robotics will soon lead to a rapid explosion of technological growth and a future of unprecedented marvels—where computers exceed human intelligence, and biology and technology merge indistinguishably from one another. All of our present-day psychedelics may appear crude, overly general, and too unpredictable and nonspecific for this superior race of super-beings. It will certainly be interesting to see what sort of chemical keys they will develop in these far-flung futures, and what sort of technological wonders they will in turn inspire.

Already, technologies have been built that induce altered states of consciousness through electrical stimulation, light and sound brainwave entrainment, and magnetic fields. These new technologies, although still in their early development, may someday lead to devices that reliably and safely bestow a full-blown psychedelic experience upon the user, and perhaps different factors could be modulated to create very specific types of experiences.

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#### **A Tribute to Laura Huxley**

Also featured in this special edition of the *MAPS Bulletin* are tributes to writer and psychedelic investigator Laura Archera Huxley, who died of cancer at the age of 96 on December 13th, 2007. Laura is best known for her memoir, *This Timeless Moment*, about her husband Aldous Huxley's final struggles with cancer, and how she assisted him during his dying process by administering LSD at his request. Laura's work was a big inspiration to many of us in the psychedelic community and we will miss her wise, noble, and graceful spirit.

Wo/Men's Alliance for Medical Marijuana (WAMM) cofounder Valerie Leveroni Corral joins us to write about Laura's life, and her experiences with Laura as she was dying. Big Sur poet and painter Carolyn Mary Kleefeld (who did the spectacular cover art for this *Bulletin*, "Dionysian Splendor"), shares a farewell message and poem for Laura, and she also did the painting of "Laura Huxley's Departure" on the inside back cover. The back cover photo of Laura Huxley was done by Dean Chamberlain, and the other mind-expanding art in the *Bulletin* was done by Brummbaer and Sara Huntley. •

Ralph Abraham, Ph.D.

## Mathematics and the Psychedelic Revolution

Recollections of the impact of the psychedelic revolution on the history of mathematics and my personal story.



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### 1. Introduction

In 1972 I met Terence McKenna and we became close friends. Ten years later we were joined by Rupert Sheldrake in a special triadic bond. We developed a habit of conversing on common interests in a style that evolved into a form we called a “trialogue,” and eventually we performed public trialogues. These occurred sporadically from 1989 until 1996. The Esalen Institute was very hospitable and helped us organize and record these triologue events, which led to our two volumes of published trialogues. In a typical triologue, one of us would lead off with a trigger monologue of fifteen minutes or so. My conversation starter for one of our trialogues in 1996 is the basis of the next section, on my supposed revolutionary role in the psychedelic history of mathematics in the 1960s, and the origin of chaos theory.

### 2. Math in the 1960s

One day I was sitting in my office with my secretary, Nina, when there was a knock on the door. Nina said, “This is a friend of a friend of mine, who wants to interview you.” I was very busy with the telephone and the correspondence, so he came inside and I answered his questions without thinking. After a month or so, when a photographer arrived, I began to realize that I had given an interview for *Gentleman's Quarterly* (GQ) magazine. I called my children and asked them what was GQ magazine. They live in Hollywood and know about such things. I was in Italy when the magazine finally arrived on the stands. I was very proud, in spite of my style of dress, that I had been the first one in our circle of family and friends to actually be photographed for GQ.

But I was shocked in Firenze to open the first page of the magazine, and see my picture occupying a large part of the first page, with the table of contents, with the heading: “Abraham sells drugs to mathematicians.” There were some other

insulting things in the interview, that as far as I can remember, were largely fiction. I didn't mention it to anybody when I came back to California, and was very pleased that nobody mentioned it. Nobody had noticed. There were one or two phone calls, and I realized that nobody after all reads GQ. If they do look at the pictures, they overlooked mine. I was safe after all at this dangerous pass.

Suddenly, my peace was disturbed once again by a hundred phone calls in a single day asking what did I think of the article about me in the *San Francisco Examiner*, or the *San Jose Mercury News*, and so on. All the embers in the fire left by GQ had flamed up again in the pen of a journalist. A woman who writes a computer column for the *San Francisco Examiner* had received in her mail box a copy of the *Gentleman's Quarterly* article, in which Timothy Leary was quoted as saying, “The Japanese go to Burma for teak, and they go to California for novelty and creativity. Everybody knows that California has this resource thanks to

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psychedelics.” Then the article quoted me as the supplier for the scientific renaissance in the 1960s.

This columnist didn’t believe what was asserted by Timothy Leary and others in the *GQ* article, that the computer revolution and the computer graphic innovations of California had been built upon a psychedelic foundation. She set out to prove this story false. She went to Siggraph, the largest gathering of computer graphic professionals in the world, where annually somewhere in the United States 30,000 who are vitally involved in the computer revolution gather. She thought she would set this heresy to rest by conducting a sample survey, beginning her interviews at the airport the minute she stepped off the plane. By the time she got back to her desk in San Francisco she’d talked to 180 important professionals of the computer graphic field, all of whom answered yes to the question, “Do you take psychedelics, and is this important in your work?” Her column, finally syndicated in a number of newspapers again, unfortunately, or kindly, remembered me.

Shortly after this second incident in my story, I was in Hollyhock, the Esalen of the far north, on Cortes Island in British Columbia, with Rupert and other friends, and I had a kind of psychotic break in the night. I couldn’t sleep and was consumed with a paranoid fantasy about this outage and what it would mean in my future career, the police at my door and so on. I knew that my fears had blown up unnecessarily, but I needed someone to talk to. The person I knew best there was Rupert. And he was very busy in counsel with various friends, but eventually I took Rupert aside and confided to him this secret, and all my fears. His response, within a day or two, was to repeat the story to everybody in Canada, assuring me that it’s good to be outed. I tried thinking positively about this episode, but when I came home still felt nervous about it and said “no” to many interviews from ABC News, and the United Nations, and other people who called to check out this significant story. I did not then rise to the occasion, and so I’ve decided today, by popular request, to tell the truth.

It all began in 1967 when I was a professor of mathematics at Princeton, and

one of my students turned me on to LSD. That led to my moving to California a year later, and meeting at UC Santa Cruz a chemistry graduate student who was doing his Ph.D. thesis on the synthesis of DMT. He and I smoked up a large bottle of DMT in 1969, and that resulted in a kind of secret resolve, which swerved my career toward a search for the connections between mathematics and the experience of the logos, or what Terence calls “the transcendent other.” This is a hyper-dimensional space full of meaning and wisdom and beauty, which feels more real than ordinary reality, and to which we have returned many times over the years, for instruction and pleasure. In the course of the next twenty years there were various steps I took to explore the connection between mathematics and the logos.

About the time that chaos theory was discovered by the scientific community, and the chaos revolution began in 1978, I apprenticed myself to a neurophysiologist and tried to construct brain models made out of the basic objects of chaos theory. I built a vibrating fluid machine to visualize vibrations in transparent media, because I felt on the basis of direct experience that the Hindu metaphor of vibrations was important and valuable. I felt that we could learn more about consciousness, communication, resonance, and the emergence of form and pattern in the physical, biological, social and intellectual worlds, through actually watching vibrations in transparent media ordinarily invisible, and making them visible. I was inspired by Hans Jenny, an amateur scientist in Switzerland, a follower of Rudolf Steiner, who had built an ingenious gadget for rendering patterns in transparent fluids visible.

About this time we discovered computer graphics in Santa Cruz, when the first affordable computer graphic terminals had appeared on the market. I started a project of teaching mathematics with computer graphics, and eventually tried to simulate the mathematical models for neurophysiology and for vibrating fluids, in computer programs with computer graphic displays. In this way evolved a new class of mathematical models called CDs, cellular dynamata. They are an especially appropriate mathematical object

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for modeling and trying to understand the brain, the mind, the visionary experience and so on. At the same time other mathematicians, some of whom may have been recipients of my gifts in the 1960s, began their own experiments with computer graphics in different places, and began to make films.

Eventually, we were able to construct machines in Santa Cruz which could simulate these mathematical models I call CDs at a reasonable speed, first slowly, and then faster and faster. And in 1989, I had a fantastic experience at the NASA Goddard Space Flight Center in Maryland, where I was given access to, at that time, the world's fastest super computer, the MPP, the Massively Parallel Processor. My CD model for the visual cortex had been programmed into this machine by the only person able to program it, and I was invited to come and view the result. Looking at the color screen of this super computer was like looking through the window at the future, and seeing an excellent memory of a DMT vision, not only proceeding apace on the screen, but also going about 100 times faster than a human experience. Under the control of knobs which I could turn at the terminal, we immediately recorded a video, which lasts for 10 minutes. It was in 1989 that I took my first look through this window.

To sum up my story, there is first of all, a 20-year evolution from my first DMT vision in 1969, to my experience with the Massively Parallel Processor vision in 1989. Following this 20-year evolution, and the recording of the video, came the story with GQ and the interviews at Siggraph in the *San Francisco Examiner* that essentially pose the question, "Have

psychedelics had an influence in the evolution of science, mathematics, the computer revolution, computer graphics, and so on?"

Another event, in 1990, followed the publication of a paper in the *International Journal of Bifurcations and Chaos*, when an interesting article appeared in the monthly notices of the American Mathematical Society, the largest union of research mathematicians in the world. The article totally redefined mathematics, dropping numbers and geometrical spaces as relics of history, and adopting a new definition of mathematics as the study of space/time patterns. Mathematics has been reborn, and this rebirth is an outcome of both the computer revolution and the psychedelic revolution which took place concurrently, concomitantly, cooperatively, in the 1960s. Redefining this material as an art medium, I gave a concert, played in real time with a genuine super computer, in October, 1992, in the Cathedral of Saint John the Divine, the largest Gothic cathedral in the world, in New York City.

### 3. Conclusion

There is no doubt that the psychedelic revolution in the 1960s had a profound effect on the history of computers and computer graphics, and of mathematics, especially the birth of post-modern maths such as chaos theory and fractal geometry. This I witnessed personally. The effect on my own history, viewed now in four decades of retrospect, was a catastrophic shift from abstract pure math to a more experimental and applied study of vibrations and forms, which continues to this day. •



# How I Became a Xenolinguist

Diana Reed Slattery

THE GRAND CONVERGENCE of psychedelics and technology came in the summer of 1998. I was a grad student at RPI in communication and rhetoric, fully indoctrinated in (mostly French) critical theory, semiotics, new media theory, and the history of communication technology. My task was to clarify my topic—the idea of a visual language—for a Ph.D. proposal. Instead of starting my bibliography, or some other sensible activity that would contribute to my academic progress, I began writing a novel, *The Maze Game*.

The fictional world had established itself well enough that I could enter it, look around, and ask questions of the characters. I asked for the details of how the game that is central to the novel was played. The answer arrived as a high-speed “download”—a blast of information concerning a visual language, Glide. I got the whole thing in a timeless instant: game, rules, architecture of the playing field, the 27 glyphs, how they behave as a visual language, and the myth of origin of the language. The game was played in mazes made of the visual language, Glide, taught to the characters by the hallucinogenic blue waterlily.

Glide presented itself in the story-world as an alien language. The glyphs of the language formed the patterns and physical structures on which the game was played. As the plot unfolded, it became evident that the Glide language was intricately involved at every level of the story: as the game maze architecture; as a secret code; as a literature. The forms of the language, especially that the signs moved and morphed, enabled new modalities of cognition.

When summer of 1998 was over, I did not have a visual language topic framed in terms of a semiotic or new media theory. I had instead a model of a gesturing, transforming linguistic system, suggesting, in its grammar and syntax, that new forms of writing, of psychedelic origin, enabled by the capability of the computer to animate signs and symbols, could offer novel ways of expressing meaning. The glyphs, laid out statically, on a two-dimensional surface (like all our natural language written forms) formed webby mazes. Animated, the glyphs transform, linking and unlinking with each other. A Glide maze seemed like a new kind of circuit operating

with many points of change and connection, an abstraction of the organic, constantly shifting circuitry of the brain through which electrical and chemical signals pulse, where myriads of connections are formed and broken in complex patterns, constructing and projecting a world around and inside us.

In the *The Maze Game*, the characters undergo an initiation, where they find their focus, their unique purpose in life, by ingesting the sacrament of the psychedelic Lily, invoking its guidance, and making their way

through a Glide maze. Taking a cue from the Glides, who, in the narrative, were taught the Glide language while under the influence of the Lily, I made a consequential decision—to explore the language more deeply, I would follow the Glide’s path into the maze, ingesting a psychedelic sacrament in search of knowledge about the maze itself. At this point, I became a character in my own story, while in a reciprocal (or self-reflexive) move, Glide lifted itself out of the story world to be considered and developed in “real life.” I had written a story, and the story was now writing me. I became a scribe and a xenolinguist, deciphering a language from the ancient future.

A series of software applications emerged from this process of psychedelic self-exploration. First, the glyphs were animated. The Collabyrinth, an interactive glyph editor, was programmed for combining, animating, and translating glyph formations.

Next was the Glide Oracle [[www.academy.rpi.edu/glide](http://www.academy.rpi.edu/glide)], which involved the translation of approximately 1100 glyph pairs, and 729 glyph transformations. These translations were useful in exposing the archetypal and poetic dimensions of the language. It also taught me that future efforts to understanding Glide needed to move away from natural language which provided too constricted a reducing valve on “language at large,” to re-tool Huxley’s metaphor.

The language asked to be confronted on its own terms. What needed to be translated was not the language, but the brain/mind, to adapt to language constructed on different sensory ratios. Whether such rewiring of our plastic neurons is possible by exposure to new forms of



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language, is purely speculative, but would make an interesting scientific investigation.

The next application, LiveGlide, involved the ability to write in three dimensions interactively with continuously moving forms.

#### **LiveGlide interface.**

States of extended perception were used in the conception, design, and implementation of LiveGlide software, in practice and performance, and in learning how to read what I was writing. Primarily, psychedelics provided the means to emerge from the cocoon of natural language into what could be understood as both a pre-linguistic state of direct apperception of the world around and inside us, and as a post-linguistic (post-natural language) realm of evolutionary forms of language, concomitant with the sense of consciousness expanded into a novel, if temporary, evolutionary state.

Glide language became, with practice, a direct readout of the process of the communication with the Other. The fluidly shifting state of the relationship, the moods, the qualities of perception and attention, the steadiness of awareness is palpable when I read the writing. As a deliberate experiment in neural plasticity, trying to rewire the brain-mind from the inside out, across multiple states of reality, I launched into ontological engineering.

Psychedelics can transport one beyond the veil of natural language, into the unspeakable. This unspeakability is often described as a communication deficit, where natural language is viewed as insufficient to convey the realities of the psychedelic sphere. I view this “bug” as a “feature,” an opportunity to become aware of the other channels of communication, both those available at baseline, such as body language, and those opened or enhanced in the psychedelic experience.

When I have folded the maps of natural language, the mindbogglingly novel territory of the psychedelic sphere shines forth, nameless, but not unknowable. LiveGlide becomes for me a kind of biomechanical living language, algorithmic in its means, but moved and changed entirely by my own human gestures on the interface, playing over one hundred parameters of expressive possibilities, a vast combinatorial phase space to play in. And in turn, I’m played by... This sense of the vastness of possibility, when experienced under conditions of extended perception and cognition, parallels the vastness and complexity of receptor space, the chemical architecture of consciousness, as studied by Tom Ray [<http://life.ou.edu/pubs/Tucson04/>]

In the psychedelic sphere, epistemology’s an extreme

sport. I use LiveGlide as a noetic practice. I am learning about knowing, but the categories of Knower and Known, Self and Other, taken for granted in our baseline (natural language) grammar of first and third persons, can radically reconfigure themselves in extended, merged, or blended states of being. Knowing can be re-formed to include not only linguistic knowledge, and gut-level feelings of certainty, but knowing by doing, and knowing by being where I know you and you know me because we have in an experiential sense become each other. At all mind-states, the questions arise: Who writes? Who reads?

Who understands? What, for that matter, is a who? Then come the magical moments when communication shades into communion, when Self and Other, and reading and writing become one, in a fluid dance of transformation.

The question of the Other’s ontological status—is this truly an Other, outside of myself, or is the Other an unrecognized portion of myself, so strange, so much more than what I think of as my Self at baseline, so wholly unexpected and so endowed with novelty that I perceive it as alien—is moot. Either interpretation leads to conclusions that require considerable re-drawing of the maps of human nature and experience. With these combined technologies—LiveGlide, a language whose writing is made possible by the CPU, and psychopharmacology that brings both the Other and new linguistic phenomena into view—a call is placed, across the chasm between realities; a response comes with considerable joy that contact has been made. I dance toward an unspeakable edge, willing to be

transformed by the unknowable into the unknown.

As to my own research agenda with LiveGlide, I would like to collaborate with a neuroscientist in building a device that would take a subset of my own brain signals, and map them to various parameters of LiveGlide. I believe this could provide a more aesthetic visualization with which to monitor and record the changes occurring in brain states, link them to internal states, and, in a biofeedback loop, potentially develop the ability to move in and out of different brain states. This would be particularly interesting in studying changes throughout the trajectory of a psychedelic experience, from onset, through peak, and back to baseline. The LiveGlide software is built to take generic MIDI signals from any source. The display technology and control mapping interface is already built; what is needed is a partnership with neuroscientific expertise. •

More on Glide, LiveGlide, and Xenolinguistics can be found at: <http://mazerunner.wordpress.com> and <http://www.academy.rpi.edu/glide>

At this point,

I became

a character

in my own story...

I had written a

story, and the story

was now

writing me.”

## Networking with the Psychedelic Community

Sara Huntley



Sara Huntley  
Visual artist

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Not long ago,  
vital information  
regarding psychedelics  
was scarce...  
Now that we have  
a digital medium,  
this knowledge  
can be pooled  
into massive  
virtual archives.

THE INTERNET has been the single most significant connection I have to the psychedelic culture at large. From my inception as a naive, recreational psychonaut, the resources of the Web have cultivated a refined experience of synchronicity and expansion of consciousness. From social networking with other like-minded individuals, and researching the scientific and cultural histories of various chemical compounds, to more philosophical endeavors, my understanding of the psychedelic phenomenon would not be so enriched without the aid of technology. Though where I live is a more condensed sample of the psychedelic community at large, nationally and worldwide we are a spread out group, and the current social climate doesn't allow for open communication regarding obscure and taboo subjects—such as the use of psychedelics.

The computer revolution has truly created an extension of external reality (much as psychedelics do for inner reality). File sharing networks have spawned viewer-created content as an alternative source of culture, available outside the mass media. This has become a catalyst through which we have been able to more openly network as a community. The Internet is a vast, highly specialized, and intangible venue that allows freedom of speech and information to flow more easily because it bypasses limitations such as location, social creed, race and religion. It would only make sense that this invaluable virtual terrain would be the grounds for broadening the psychedelic community. All areas of expression—visionary art, experimental music, films, pod-casts, interactive forums, blogs, event organization, chemistry, history, archival literature, and philosophy—are all tied together into this single network available to those who seek it.

There are several types of social networking and online communities—such as Erowid.org, Deviantart.com, Deoxy.org, Tribe.net, and

Matrixmasters.com—that provide a place for individuals to cross-reference experiences, opinions, knowledge, and creative commons. Not long ago, vital information regarding psychedelics was scarce, often transmuted from person to person. Now that we have a digital medium, this knowledge can be pooled into massive virtual archives. Under the scrutiny of peer-editing, people can make more educated decisions for themselves regarding their interactions with psychedelics.

Electronic music has played a significant role in my personal psychedelic experiences. It has acted as a guide through that often bewildering landscape, reinforcing the intent of the trip; opened vistas of inspiration and awakened my auditory senses to new realms of discovery. Modern electronic music was largely inspired by the use of psychedelics and newly created synthetic compounds. With its repetitive drumming and ambient soundscapes, it is akin to the ancient tool of shamanism, its rhythm echoing the primal heartbeat. This drumming is also used now to induce trance and ecstatic states of consciousness. The resurgence of this archaic character is largely due to the creation of electronic music. Being that Western culture had long been separated from the use of entheogenic plants, it is fitting that these plants and newly created compounds would inspire the return of these timeless qualities in music.

Computer animated visual imagery further propels and enhances the trance-like psychedelic state. Myriads of fantastic fractals, and digital mandalas envelop the mind in a cocoon of mirrors reflecting inner worlds. Along with cascading melodies, they blend the boundaries of perceived frequencies, slipping the psyche into synaesthesia. Once while I was at such an electronic music event, the video display included a montage of golden spirals in nature. Nautilus shells, hurricanes, and galaxies all swirled in unison. Its juxtaposition of imagery shot at rapid-fire succession into the audience's visual





"Event Horizon"  
by Sara Huntley & Jordan Price

cortex and it was one most powerful moments of cinema I've ever experienced. It hypnotized my mind with the beauty of geometry. It was brilliantly timed with the music and propelled my brain into the Milky Way.

For me, personally, this nonlinear mode of thought has brought together fragments of information to paint an incredibly visceral portrait of our world, of what our technologies have done to the environment. Technology was once hailed as the savior of humanity, a means of

attaining a better life, yet in the hands of greedy corrupt people technology has sown the seeds of our own destruction.

To paraphrase Einstein, our technologies were created at a limited level of awareness. The disharmonies of that technology in the environment will be proportional to the lack of awareness. It will take a new level of awareness to recognize this disharmony and to create more efficient means of achieving equilibrium. I think that this idea is typically too large to be processed on a personal level by most people. Though I thought I had been relatively aware before, after the wake of this experience the stark reality of the situation became inescapably urgent. This realization in itself is just one step in redefining the individual in relationship to the collective and the environment.

Leaps of human understanding have completely changed the way we see ourselves in the cosmos. Our minds now peer into realms of micro and macro perception, and exchange information and culture at a dizzying rate all across the world. This experience is unique to our position in human history. Growing up in such a technological culture, alternatively navigating one's existence between authentic and virtual realities, is a novel and strange path for our and future generations to take on. Humans have for millennia used technology in the service of social identity. For me, personally, psychedelics have opened a deeper understanding of this new multifaceted techno/spiritual/natural relationship we have with the global network.

Technology serves a human desire of fulfilling the imagination, of creating magic by controlling science. Psychedelics also serve a human desire of exploring dreams and musing over the mystery that is the nature of reality. These two facets reflect dualism and a commonality; they both promise us new worlds. •

Modern electronic music... With its repetitive drumming and ambient soundscapes... is akin to the ancient tool of shamanism, it's rhythm echoing the primal heartbeat.

# Technology and the **Entheogenic Revolution**

Jeff Pappas

PRACTITIONERS of indigenous medicine have been persecuted throughout the entirety of our written history. This has particularly been the case for Europe and her former colonies. Europe, however, is not unique in its persecution of indigenous practices, like the use of entheogens. Even as early as the Song dynasty in China, 960 to 1279 AD, imperial edicts were printed and distributed condemning certain Buddhist sects, such as the White Lotus and her many incarnations, for “gathering at night, dispersing at dawn, wherein men and women intermingled freely, ate vegetables and served devils.” The punishments even then were severe and included fines, banishment and even death.

Prior to prohibition in the United States it was quite easy and socially acceptable to obtain a vast array of natural psychoactive substances. For the past sixty to seventy years, however, it has been quite difficult to obtain natural plant psychoactive chemicals without a prescription. Even on the ‘street’ it is easier to obtain heroin than opium which is virtually nonexistent in this country.

The internet has changed this status dramatically. By taking advantage of legal loopholes, Americans are now able to purchase virtually any natural psychoactive or at least the means for production and preparation. Examples include: the cannabis seed trade, psilocybin spores and syringes, coca leaf tea and extracts, poppy pods and seeds, mescaline containing cacti, ayahuasca analogues, seeds containing ergot alkaloids, absinthe kits, etc. The list goes on and on. The only exceptions that I could find were peyote and iboga.

This market is a potentially valuable resource for a country which has fifty million uninsured citizens. With some guts, a credit card, a mailbox and a little education from sites like erowid.org, one is empowered to the same degree if not higher than those medical physicians still choosing to practice amidst this social medical crisis. Natural online products can also serve as a very potent alternative to the toxic FDA-approved pharmaceuticals, whose adverse effects account for the third to fourth leading cause of death in this country.

Another technological innovation which cannot be ignored is that of using glass and ceramic heating elements for vaporization of plant products instead of smoking. Vaporization is an important way of ingesting potentially toxic compounds without the severity and

danger of direct gastrointestinal ingestion. Research in this area may be the floodgates which can be released to wash away the social stigma associated with smoking by providing a safer more effective alternative.

## **Personal Reflection**

I have been researching entheogens online since 1996, but my genuine intimate experience occurred in January of 2005. I had purchased lotus and water-lily extracts upon learning that their flavonoid content and circulatory stimulating properties even rivaled ginkgo. As a result of my purchase being over fifty dollars, I was able to choose a free sample of some of their products. I chose the salvia divinorum enhanced leaf extract. I was familiar with salvia, had read about it, and had even tried smoking the leaf. I was rather skeptical of the effects reported online claiming that it had to be done in a dark environment and that the slightest distraction would end the experience. I abruptly found out that this was not the case at all.

Salvia has given me and continues to give me the most introspective experiences of my life and has sparked a renewed sense of wonder and amazement of the mystical intricacy of this existence. Not even my ‘heroic’ doses of indole alkaloids can compare to the intense humility which this plant specifically initiates. As a result, salvia has become my key ally and is most definitely a child of this technological age. It has gone unnoticed by the world, with the exception of the Mazatec of Mexico. But, even the Mazatec do not

utilize the power of pyrolizing or vaporizing this plant. This technique for consuming salvia would not have been popularized had it not been for the online community, in particular, Daniel Siebert of [sagewisdom.org](http://sagewisdom.org).

I would personally like to see MAPS take more of an interest in salvia and take advantage of this precious time in which it is still legal to conduct more research with less restrictions than researching schedule one drugs like marijuana, psilocybin, and LSD. Outside of its meditative properties there exist specific pain-relieving, psychotherapeutic, and probable antimicrobial and antiviral properties, which have been reported but not adequately researched. If salvia gets further restricted or placed in schedule one, Great Spirit forbid, this research may be delayed for years. The opportunity to research and utilize this most powerful plant, the most potent naturally occurring substance in the known world, exists now and must be taken advantage of. •



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# Just Say Yes to the Noösphere!

## Psychedelics and the Evolution of Information Technologies

Richard Doyle, Ph.D.

*“Instructions emphasized that the experience could be directed as desired. Subjects were told that they would not experience difficulty with such distractions as visions, involvement with personal problems, and so on.” “Psychedelic Agents in Creative Problem Solving”, Willis Harman et al., 1966 —*

BEFORE ITS POSSESSION became a criminal offense in the United States, the psychedelic compound LSD-25 was given to engineers and designers to help break “creative logjams” and promote innovation in the Cold War United States. In the late 1950’s and early 1960’s, for example, Stanford engineer Myron Stolaroff of the Ampex Corporation (inventor of the Video Tape Recorder) studied the effects of LSD on engineers, and the result was a growing body of literature and data on psychedelic regimens and their effects on technical innovation.

These regimens included precise and intensive recipes for psychedelic experience such as the epigraph above – although essentially inflexible, psychedelic experience was treated as fundamentally and necessarily “programmable” through collective human attention. In a forthcoming book, I offer an evolutionary and ecological framework for comprehending and evaluating recent claims by innovators such as Mitch Kapor, Mark Pesce, and Kary Mullis that psychedelics played an integral role in the invention of their breakthrough information technologies. Given the importance of programming to psychedelic experience, the book argues that psychedelic adjuncts were useful to engineers and scientists less because they “expanded” consciousness than because they trained subjects in practices of focused attention, enabling the perception of forms embedded within larger scale structures, the “pattern that connects” (Bateson) perhaps measured in the Witken Embedded Figure tests, a perceptual assay on which psychonauts seem to have excelled.

### One More Time With Feeling?!

#### “Turn On, Tune In, Drop Out” Revisited

The biological science of attention could be said to be born in Charles Darwin’s model of sexual selection, where Darwin studied the “information technologies” (such as a peacock feather, or human speech) through which organisms signal sexual difference and orient attention toward likely reproductive and survival success. This

evolutionary search for attention—the original “flower power”, as flowering plants lured insects with their blossoms—acts through what the biologist V.I. Vernadsky later dubbed the “noösphere”. While the biosphere irreversibly and undeniably altered the lithosphere from which it emerged, the noösphere transforms the biosphere via the gathering and application of attention by all organisms. While many contemporary designers and engineers seek to “evolve” designs and programs through evolutionary processes, an expanded model of evolution

integrating sexual selection and its attention economy, the noösphere—not to mention psychedelics—is likely to be even more fruitful for the development, integration and transformation of information technologies.

Indeed, the famous but oft misunderstood mantra “Turn on, Tune In, Drop Out” suggested that in their own way, psychedelics “are” information technologies for honing and focusing the attention. As Stolaroff put it many years after the original studies, reflecting on the use of low doses of psychedelics: *... it is easier to focus attention under their influence, which permits developing the*

*attributes for good meditation practice. As one develops proficiency in entering the desired state, it is found that the advantage of one compound over another diminishes. The appropriate dose (found by experiment—generally equivalent to 25-50 micrograms of LSD) of most any long-acting psychedelic is helpful.*

<http://ccbs.ntu.edu.tw/FULLTEXT/JR-ADM/stolar.htm>

The ancient discipline of rhetoric—the sometimes shamanic practice of learning and teaching eloquence, persuasion, healing and information architecture by practicing and revealing the choices of expression or interpretation open to any given composer, poet, viewer, listener, singer, patient or reader using what Aristotle called “all available means”—has also always been a discipline for managing and modulating attention. Mantra—the rhythmic repetition of words, meaningful or not, in order to capture or steer the attention—are perhaps the simplest and yet most powerful techniques in the rhetorical traditions of our planet, so in order to share with you my thoughts on how we might best focus our attention in the midst of what hints at a renaissance of



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psychedelic research fostered by organizations such as MAPS, I want to begin with a rhetorical analysis of a mantra to see how it might, like the epigraph above, shape and reshape psychedelic experience.

#### **TURN ON**

This problem of attention tuning is an old one, hacked with practices of mantra in the Buddhist tradition, the eloquence and song of Mazatec curandera Maria Sabina, and the icaros of Upper Amazonian ayhuascera well before anybody thought to synch *The Wizard of Oz* with *Dark Side of the Moon*. Why did modern psychonauts, in the thick of the Cold War and, evolutionarily speaking, barely out of the trees, so favor this language of the “turn on” for all things psychedelic? The favorite analogy for the novelty and seemingly infinite potential of psychedelic experience was a machinic one: if psychedelic experience revealed itself to be extremely programmable, some psychonauts scripted themselves as informational machines both digital and analog open to yet further programming, what Leary compared to the practically infinite “glass bead game” found in Herman Hesse’s novel of the same name. For John Lilly this “turning on” meant “turning off” the sensory world in a flotation tank in order to “turn on,” program and metaprogram the human biocomputer. “Turn on” was digital, announcing a discrete state of “on” or “off.” So Timothy Leary’s oft quoted but perhaps misunderstood mantra begins with an experimental mapping of ourselves as Boolean machines with two states: on and off. Which one would you choose?

#### **TUNE IN**

Clearly, though, what was “turned on” was more than a machine. “Set and Setting” was a mantra, too, and “Set” includes our glorious status as embodied beings meshed with a pharmacopeia dynamically connected to our own minds, and “setting” includes the entire (often cosmic) context of psychedelic experience. For many this meant investigating what scholar Jeffrey Kripal has dubbed “the enlightenment of the body,” an investigation of “the body and its pleasures.” (Foucault) As the ethnobotanist Giorgio Samorini points out, animal use of psychedelics abounds, particularly in the context of courtship display, where techniques of ecstasy (such as birdsong) can be as important to evolutionary success as fitness for survival. And humans are indeed (in part) animals using psychedelics, with big brains that likely evolved, biologist Geoffrey Miller argues, as a “courtship device.” Miller’s analysis echoes Leary’s claim that “intelligence is the ultimate aphrodisiac,” especially when it was deployed in the “programming” of psychedelic experience.

“Tune in” resounds with the suddenly enormous freedom to metaprogram in pleasure and joy this obvi-

ously interactive “wetware” (Leary) aspect of human embodiment that LSD seemed to reveal to many after the often puritanical 1950’s, which featured the public burning of sexologist Wilhelm Reich’s writings by the FDA. Microsoft’s old slogan “Where do you want to go today?” was perhaps but a simulacrum of this older exploratory hedonic—and, Kripal argues, tantric—zeal of collective psychedelic exploration. ‘Heads’, exploring the capacities of these seemingly new technologies which turned on the “13 billion cell computer”, saw and felt the illusion of the officially scientific body/mind objective/subjective separation dissolve blissfully into its tantric, sexually selected evolutionary interface. According to Leary, it was Richard Alpert (now Ram Dass) who told him to “face the facts” of life:

*It’s true you can access any circuit in your brain and change your mind. But it’s time you faced the facts, Timothy. We’re turning on the most powerful sexual organ in the universe! The brain.* (Leary, p. 131)

Properly tuned, “turn on” reminded psychonauts of the remarkable sexual aspects of the LSD experience, which was now, like the Turing Machine with which it was being compared, a place for exploring not only the space of all possible computations and states of mind, but the space of all possible ecstasies. Albert Hofmann writes that with LSD “the sensual orgy of sexual intercourse can undergo unimaginable enhance-

ments” (*LSD: My Problem Child*, p. 116). Yet so too, Hofmann writes, could LSD lead to “a purgatory or even to the hell of frightful extinction...” In short, like the engineers with which we begin, LSD needed a script to focus the attention and tune the experience towards the best of all of the (practically infinite) set of possibilities for any given “set and setting.” So too can the very name of these plants and compounds script our experiences of them, as the coinage of “entheogen” by Jonathan Ott, Gordon Wasson, Carl Ruck and Albert Hofmann makes clear. In the vertigo of this “internal freedom”, Leary offered a programming script toward the highest Bliss of Ananda: Emptiness.

#### **DROP OUT**

Complete dedication to the life of worship is our aim, exemplified in the motto “Turn on, Tune In, Drop Out.” (Legal Papers, “League of Spiritual Discovery” Leary, 1966)

As a third order cybernetic operation, (a script of a script of a script of psychedelic experience) “Drop Out” tunes the program toward the most proximate bit of order available to any psychonaut: a “sample” of the self is examined and then subsequently dropped, released, remixed. Drop Out asked psychedelic experimentalists (“renunciants”) to query any aspect of themselves for any game other than the divine one, “the life of worship.” This

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penchant for letting go of accrued habit structure ("Gelassenheit" as Eckhart dubbed it) resonated with past seekers in what Aldous Huxley entitled (mistakenly after Leibniz) "the Perennial Philosophy", and seemed to initiate a practice of re-imagining self in the light of Self, embedding the part (ego) within a whole (Self) which it repeated on a different scale.

In this sense psychedelic investigation repeated a long strand of heterodox science and alchemy which treated the refrain of the Corpus Hermeticum "As Above, So Below" as the "achievement" of alchemical practice as well as a principle fundamental to it. (Terrence McKenna's righteous love and enthusiasm for all things fractaled is perhaps another case in point.) DROP OUT was above all a disciplining and focusing of the attention on any given moment: Was it divine? So according to Leary's script, "dropping out" was anything but a "giving up", but was instead an intensification of personal, yes spiritual informational rhetorical evolution necessary to the next scale of the human and transhuman adventure, the discovery of what Albert Hoffman called "The most worthwhile spiritual benefit from LSD Experiments...the inextricable intertwining of the physical and spiritual. "Christ in matter" (Teilhard De Chardin)". (*LSD My Problem Child*, 188) Teilhard, of course was the theologian and anthropologist most associated with the next scalar jump for human consciousness: The noosphere.

#### **Turn in, Turn in, I Beseech you**

To help each member to use the Sacraments to discover the divine within and then express this revelation in an external life of harmony, beauty and, particularly, to help each member to devote his entire consciousness and all his behavior to the glorification of God. Complete dedication to the life of worship is our aim, exemplified in the motto "Turn on, Tune In, Drop Out." (Legal Papers, "League of Spiritual Discovery" Leary, 1966)

As a rhetorical practice, dwindling any non divine aspect of self almost by definition brings out larger scale structures within which we are embedded, and suddenly, the scale shifts to the ecosystem and our awareness of it—the noosphere. Working with mantra as algorithms, Metzner and Leary's "Programming the Psychedelic Experience" ([www.maps.org/psychedelicreview/n09/n09005met.pdf](http://www.maps.org/psychedelicreview/n09/n09005met.pdf)) offered a linguistic, visual and sonic reorientation of the self through inquiry that let go of linguistic phenomena as anything but labels for our benefit and conscious evolution, echoing that other influential mantra from Count Korzybski, "The Map is not the territory!"

Letting go of any particular formulation about the self, the incessant inner speech of Who I Habitually Am,

something larger scale came into relief, the Upanishad's "Tat Tvam Asi", rendered in Victorian English as "Thou Art That" but perhaps equally well rendered for the 21st century as "Thou art that Fractal!" For Leary it was an "inner light" fusing the individual with that multiplicity, "internal life processes": "In the introverted state, the self is ecstatically fused with internal life processes (lights, energy waves, bodily events, biological forms, etc.)"

This unification with "life processes" could not have come at a better time, arriving at the same moment when scientific models of living systems were overwhelmingly focused on the molecular scale of life. Understandably entranced by the discovery of the genetic code and its protein messages, researchers sometimes seemed to forget the embodied, ecological and often symbiotic scalar contexts for the evolution and expression of DNA. So too did LSD itself both strengthen the reductionist biochemical model of mind—you can hack your "13 billion cell

computer" with as little as 50 micrograms of a molecule - and focus psychonautical attention on the larger scale structures—"your" body, the ecosystem, the cosmos—discovered through the withering of the ego and scripting the daily erasure of the ego's incessant news broadcasts about itself. This "liberation" occurred through erasure, the production of a "void."

Liberation is the nervous system devoid of mental-conceptual redundancy.

The mind in its conditioned state, limited to words and ego games, is continuously in thought-formation activity. The nervous system in a state of quiescence, alert, awake but not active, is comparable to what Buddhists call the highest state of dhyana (deep meditation). The conscious recognition of the Clear Light induces an ecstatic condition of consciousness such as saints and mystics of the West have called illumination...The first sign is the glimpsing of the "Clear Light of Reality, the infallible mind of the pure mystic state"—an awareness of energy transformations with no imposition of mental categories.

"Inner" and "outer" were some of the mental categories that were no longer imposed, and this language and visualization of "light" echoes with many earlier practitioners of the Perennial Philosophy such as the Quaker William Penn. In his youth, the founder of Pennsylvania discovered an inner light revealed through silence - the active removal and erasure of information "informing" the mind in "mental-conceptual redundancy." Like many psychonauts, Penn tried hard to describe this light:

*That blessed principle, the Eternal Word... is Pythagoras's real light and salt of ages; Anaxagoras's divine mind; Socrates' good spirit; Timaeus' unbegotten principle and author of all light; Hieron's God in man; Plato's eternal, ineffable and perfect*

**...the famous but oft  
misunderstood mantra  
Turn On, Tune In, Drop Out  
suggested that in their own  
way, psychedelics "are"  
information technologies  
for honing and focusing  
the attention.**

*principle of truth; Zeno's maker and father of all; and Plotin's root of the soul....* [www.universalistfriends.org/quf-elc.html](http://www.universalistfriends.org/quf-elc.html)

In this context, Penn urges us, like Leary, to drop out from the ego chatter of self and media, and to behold the inner light common also to meditative and, yes, psychedelic conditions. In an uncanny resonance with Leary's phrasing, the Pre-Cybernetic Penn asks us to "Turn in" rather than "on":

*"Therefore, O friends, turn in, turn in, I beseech you..."*

### **Turn on, Tune in, Get Epic**

But it was not only Perennial Philosophers who were investigating this "inner" realm that gave way to the scale of the divine, "Hieron's God in man; Plato's eternal, ineffable and perfect principle of truth; Zeno's maker and father of all..." Researchers Jay Stevens and Steven Marks have helped remind us of the important roles played by the intelligence community in the emerging science of psychedelics. Initial CIA interest in "psilocybe mexicana", for example, focused on the possibility that "magic mushrooms" could be a potent "truth drug." In other words, psychedelics were seen as aids to rhetorical practice—in this case, interrogation. This history repeats the horror of Dachau, where mescaline was investigated as an interrogation drug. But in their indigenous context, mushrooms were a kind of information technology of healing and divination. Maria Sabina, the curandera made famous by (sometime CIA funded) mycologist Gordon Wasson offered her own refrains, rhythmic chants with that hallmark of information: redundancy

*You are a green Father, a Father of clarity  
You are a green Mother, a Mother of clarity  
You are a budding Mother, a Mother of offshoots  
You are a green Mother, a Mother of clarity*  
([www.ubu.com/ethno/soundings/sabina.html](http://www.ubu.com/ethno/soundings/sabina.html))

Maria Sabina's eloquence, as poet and theorist Jerome Rothenberg points out, was not simply a result of the mushrooms; an entire shamanic and poetic tradition was referenced and reworked by Maria Sabina in her healing chants. But nor can her eloquence be rigorously separated from the ecology of *psilocybe mexicana*. Rothenberg: "The sacred mushrooms are considered the source of Language itself—are, in Henry Munn's good phrase, "the mushrooms of language." So despite our sense that "information technology" is a modern invention and catalyst of the globalizing economy, Maria Sabina and Stolaroff remind us that human speech and the attention minding it, and its poetic, rhetorical and healing effects, can be amplified and modulated by plants and fungi.

In the case of Maria Sabina, her use of the classical rhetorical form of "repetitio" - a form certainly older than the tradition that named it - helps to paradoxically empty

our minds by crowding it out in repetition. In this repetition was epic creativity. She did not merely chant from the "dictionary" of motifs and themes of Mazatec healing, in Rothenberg's good phrase, "she rewrote that dynamical dictionary throughout her life." [www.ubu.com/ethno/discourses/yepez\\_review.html](http://www.ubu.com/ethno/discourses/yepez_review.html)

Munn, who sometimes translated for Maria Sabina, called the rhetorical state achieved by Maria Sabina 'ecstatic signification', implying a simultaneous detachment and participation: "ecstasy" means literally a "being-besides-oneself" (Rotman) Psychologist Roland Fischer, in collaboration with the literary critic Colin Martindale, mapped the effects of this "ecstatic signification" induced by psilocybin on writers, and found that writing influenced by psilocybin contained more "primary process content" - content associated with the unconscious—than writing without. Perhaps most intriguing, Martindale and Fischer found that the pattern of primary process content

produced by psilocybin induced writing was isomorphic to the primary process content of epic literature. By 1973, Fischer was ready to argue that this epic structure of psilocybin discourse bore the hallmarks of an information compression or optimization technology: "Thus far, our studies suggest that certain hallucinogenic drug induced transformations in visual space may be regarded as an optimization of information." Roland Fischer, 1973

### **Just Say Yes to the Noösphere**

The noösphere is the feedback effect of collective attention on our environment. Writing in 1943, Vernadsky was amazed at the sudden circulation of "cultural minerals", compounds and alloys made possible only by the transduction of human consciousness, such as Aluminum ( which is very rare in its native state), and, we might add, LSD-25, first intentionally synthesized that same year in Switzerland by Albert Hoffmann.

The attention focused on Maria Sabina and her healing mushrooms and chants by Wasson's 1957 *Life* magazine article indeed had a feedback effect on the Sierra Mazateca. With the news of "psilocybe mexicana", thousands of travelers headed in search of Maria Sabina, and the result was the (partial) destruction of the very context that sustained the mushrooms and the healing poetics associated with them. So too did media attention intentionally and unintentionally garnered by Wasson, Hofmann, Leary and others seem to amplify the difficulties always inherent in any attempt to communicate about psychedelic experience, let alone any attempt to communicate about psychedelic experience to millions of people at a distance, reading *Life* magazine or a *MAPS Bulletin*... Vernadsky conceived the noösphere, after all, in the midst of war, and was amazed at the mass mobilization and

**Why did modern psychonauts,  
in the thick of the Cold War  
and, evolutionarily speaking,  
barely out of the trees,  
so favor this language  
of the turn on for  
all things psychedelic?**



transformations of the planet induced by a war consciousness with which we are all too familiar. Might the noosphere harbor that “purgatory or even . . . the hell of frightful extinction...”? Or, listening to Maria Sabina’s chants, was this perhaps yet another prophecy of the mushroom, an early symptom of a post modern globalization which, if not meshed with awareness, extinguishes more than it enlivens? Maria Sabina wrote:

*Before Wasson, I felt that the saint children elevated me. I don't feel like that anymore. The force has diminished. If Cayetano hadn't brought the foreigners. . . .the saint children would have kept their power...From the moment the foreigners arrived, the saint children lost their purity. They lost their force; the foreigners spoiled them. From now on they won't be any good. There's no remedy for it.*

Wasson struggled with the effects of his mass media story on his conscience and the Sierra Mazateca. Wasson wrote that he shared news of the magic mushrooms because of it's certain “extinction”: “If I did not do this, “consulting the mushroom” would go on for a few years longer, but its extinction was and is inevitable.” [www.csp.org/chrestomathy/maria\\_sabina-estrada.html](http://www.csp.org/chrestomathy/maria_sabina-estrada.html)

Yet, happily, Wasson was wrong about this extinction. Years later, the noosphere brought Maria Sabina’s little children to the labs of John Hopkins University, where a new, highly technical but alliterative chant emerged: “Psilocybin can occasion mystical-type experiences, having substantial and sustained personal meaning and spiritual significance. Psilocybin can occasion mystical-type experiences, having substantial and sustained personal meaning and spiritual significance.” Global warming, fossil fuel depletion, colonialism and post colonialism continue transforming the planet in globalized war, and by all accounts our attention must finally become focused on global survival of biodiversity in response to climate change and extinction events. So too did the noosphere bring an awareness, like Wasson’s, of our responsibility to and for these extinctions through *Life* magazine, eventually bringing psilocybin and its effects to mycologist and bioremediator Paul Stamets. Stamets compares the mycelial network covering the planet to that avatar of the noosphere, the Web:

*I believe the earth's natural Internet is the mycelial network,” he says. “That is the way of nature. If there is any destruction of the neurological landscape, the mycelial network does not die; it's able to adapt, recover and change. That's the whole basis of the computer Internet. The whole design patterns something that has been reproduced through nature and has been evolutionarily successful over millions of years.* [www.new-chapter.com/media/article/stamets\\_saloncom.html](http://www.new-chapter.com/media/article/stamets_saloncom.html)

Perhaps this is our epic, to open to and accept the tragedy of that nightmare from which we, like visionaries from James Joyce to Terrence McKenna, are trying to awaken and, yes, evolve. And we might evolve precisely by

focusing our attention along with Stamets on those “design patterns” such as the noosphere and its scalar difference. When it comes to naming the plants and compounds that can help us re-scale our collective attention, clearly a mixture of terms is called for, and into the mix I want to whorl “ecodelic”, a name that both samples from tradition and highlights an important but less discussed effect of these plants and compounds for inducing sudden bouts of interconnection, the perception of being enmeshed by the terrestrial and extraterrestrial ecology. Biologist Theodor Dobzhansky ended his epic of human evolution, *\_\_Mankind Evolving\_\_* (sic) with what he called the “poetry” of Teilhard De Chardin:

*A harmonized collectivity of consciousness, equivalent to a kind of superconsciousness. The Earth is covering itself not merely by myriads of thinking units, but by a single continuum of thought, and finally forming a functionally single Unit of Thought of planetary dimensions.* (*Mankind Evolving*, 347-348)

Working with the mantra “harmonized collectivity of consciousness” is no simple feat, tending as it does toward the idea of “homogeneity” and de-individuation for many, as in “hive mind” (Leary) or the Borg of *Star Trek: The Next Generation*. Yet imagining the noosphere, as Vernadsky did, as a scalar level of living systems (not unlike Gaia) that incorporates rather than excludes human consciousness, requires that we wither the ego and discover not our homogeneity, but our unique, finite urgent role in the emergent ecology capable of focusing collective attention on the planet as a whole. For the psychonaut engineers, who did so well on the Witkin Embedded Figure Test, did well indeed when it came to remembering both part and whole, “finding common geometric shapes in a larger design...,” and at our lab at Penn State we are testing Harman et. al’s claim that response to the Witkin Embedded Figure test is indeed immune to alteration through the use of a flotation tank. That’s one of our roles. What’s yours? For the “larger design” is now planetary in scale:

*For we are the local embodiment of a Cosmos grown to self-awareness. We have begun to contemplate our origins: starstuff pondering the stars, organized assemblages of ten billion billion billion atoms considering the evolution of atoms; tracing the long journey by which, here at least, consciousness arose.* (Sagan, *Cosmos*, p. 345)

Yes, it seems as though consciousness could extinguish just as it arose. Many contemporary narratives of apocalypse, such as 2012, sometimes augur Hofmann’s “hell of frightful extinction,” perhaps scripting us toward despair, and, as Buckminster Fuller put it, we face an “inexorable evolution.” Evolution is never easy, so here’s a mantra to get you through the rough patches: Just say yes to the noosphere! •

## An Interview with Kevin Herbert

By Louise Reitman



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at early times  
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KEVIN PAUL HERBERT is a computer programmer and software designer. Entirely self-taught, Kevin skipped college while his technical peers have advanced degrees. As an early developer for Cisco Systems, he developed software that now runs on millions of Internet routers worldwide. Kevin's work has been written about in *Wired* magazine ([www.wired.com/science/discoveries/news/2006/01/70015](http://www.wired.com/science/discoveries/news/2006/01/70015)), and he has been a major supporter of MAPS over the years. In addition to computers, Kevin enjoys dancing to live music (psychedelic jam bands) and psychedelic DJ electronica. He also builds costumes containing wearable electronics for performance, and has performed as a dancer at concerts at the Red Rocks Amphitheater in Colorado and other venues. Kevin is a strong supporter of civil liberties and social responsibility. He strongly believes that individuals, not governments, are responsible for social and moral decisions.

This interview was conducted by Louise Reitman. Louise interned at MAPS, in their Ben Lomond office, for two summers, and she volunteered to do psychedelic emergency work at the Burning Man Festival in the summer of 2006. Louise will be graduating from Barnard College in New York City this June with a degree in History.

**Louise:** *In general, what type of connection do you see between psychedelics and the recent computer technologies?*

**Kevin:** From my personal experience, psychedelics have helped me to get past some of my most challenging problems. Overall, I feel like it's affected the development of my ideas about what our responsibility is to society for the kinds of technologies that we develop. I think that it also has given me insight into how to create technology. So, extrapolating from there, I think that many technical people have been exposed to LSD—although, it's hard to say just how many people. This is because engineers working in corporate situations don't want to get into trouble.

In general, engineers can't really talk about their psychedelic use the way that, say, Alex Grey can talk about how he was tripping on this or that while he was doing a painting.

Psychedelics are especially helpful with the development of new computer technologies because recent developments have shifted toward more open technology, and an increased reliance upon software, as opposed to reliance on machines and mechanisms. I think the fact that everything in the world has become more and more flexible, and more programmable, is a result of people taking LSD at early times in their life, like in high school or college. It changes one's vision of the kinds of technology that one can build. It encourages a departure from things being rigid and imposing. Instead, contemporary computer software is flexible and malleable, changeable and not static. An example of a rigid system would be an old school-style cash register, where you had to press certain buttons in a certain order for it to work. Today a flexible unit would have interfaces and menus, where you fill things in and proceed in whatever way is convenient for you and suits the way that you think.

**Louise:** *What kind of relationship do you see between the Internet and psychedelics?*

**Kevin:** I think that the primary reason that we have networks like the Internet is because of graduate students at Stanford, MIT, and Berkeley who tried psychedelics. These psychedelic graduate students were influenced by ideas to build things that were open, distributed, and based on trust models. The opposite of an open network would be like a master-slave network, like the way IBM was building their networks. The IBM network had a mainframe that ran everything. Then, from that, there was remote terminals and remote job entry devices.

Everything was like this top down model of thinking. It was like the mainframe was some guy at the top running everything, controlling everything

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underneath it—as opposed to the networks that we use now (called peer-to-peer networks) in which all the machines creating the network are essentially equal. Like in IBM-style networks you didn't have computers at each location talking to one another. Now it's a mesh of everything talking to everything. So, I think the reason that the world has embraced open networks, and has given up centralized, hierarchical control, is from psychedelic inspiration.

**Louise:** *How have psychedelics influenced your work in particular?*

**Kevin:** LSD showed me a lot about myself. It's helped me feel comfortable making the decisions that I thought were appropriate. Like, I think that LSD helped me realize my desire to skip college, and it contributed to my confidence in following through with that. In a technical context I've seen solutions that otherwise evaded me. I've had specific situations where I've had a really complex problem that I've spent weeks looking at—then I would end up having a psychedelic experience, like tripping on LSD while seeing the Grateful Dead, and I would have it figured out. I remember seeing a BBC-Discovery Channel production series in 1997 that talked about how some of the electrical engineering students at Stanford were given LSD. They said they could visualize the electron flow through the circuit, and it gave them the ability to really think about it visually.

So, I think that LSD can help you out of these problems you've been wrapping your mind around for weeks. It can give you a fresh perspective on a problem that's so complex that it's not good enough to try to explain it to a coworker or something else. I also think LSD can be your best honed career advisor. I made my decision to leave the first firm I worked for, DECK, and work for Cisco Systems, while I was seeing the Grateful Dead on acid in 1989. The experience gave me the insight to see the writing on the wall—that the technology DECK was behind was not going to be the one to win in the marketplace, and they were really looking at the world in an old school way. So LSD has led me into states of mind where I'm able to make important life changes.

**Louise:** *What do you think the future*

*holds in store for technology?*

**Kevin:** I think that we are at a crossroads, where what happens with technology depends on the decisions that people make. Right now, the growth of all of the computer networking is making outsourcing very easy. [Outsourcing is the arrangement in which one company provides services for another company that could also be or usually have been provided in-house.] That's why we have all these call centers in Bangalore. The world is being reshaped by this technology export. I think that right now, as a society, as we contemplate issues like the ones being debated in the Senate right now concerning wiretapping, and immunity for telephone companies, the direction that technology takes is going to depend upon our relationship with technology and our relationship with ideas of what are our liberties.

I think that psychedelics, like LSD, are caught right in the middle of that battle. Sasha Shulgin has this notion of cognitive liberty that says that you own your own body, you own your brain, you have freedom of thought—so why don't we have the legal right to use LSD? These are the same issues that are occurring in technology. What represents our freedom? What represents what the government is allowed to regulate, and for what reason?

John Barlow, a psychedelic luminary who wrote lyrics for the Grateful Dead and founded the Electronic Frontier Foundation, wrote this article in the late 1980s called "Crime and Puzzlement." In this essay he compares the present time on the Internet with the American "Wild West" before the Law had moved in—before the marshals and sheriffs and everything else had moved in. At this past year's Burning Man, the theme was "utopia versus dystopia." I think of technology and the Internet, and I could go either way.

People being able to work anywhere in the world is one choice. The other choice is jobs will travel anywhere in the world, where people will be paid the least to do them, because where you are won't matter—which might mean that your boss may see you all the time, or it might mean it just doesn't matter. No one will care



because we'll all be concerned with the quality of our work output. We'll have technology to create either kind of scenario, but where we go with that depends on whether we're willing to embrace a model where things are open—including our own minds—or a model in which things are closed, including our own minds and the things we can think about, as well as the chemicals that we can use to affect how we think.

**Louise:** *What is your ideal vision of the future in reference to technology?*

**Kevin:** My ideal vision is one in which people have a right to real security. We have a right to use cryptography, to keep prying eyes out from our communications, a right to reverse engineer technology. My view is of a world where innovation is rewarded and not stomped upon. The current climate is really all about protecting intellectual property. The laws have changed. It used to be that you couldn't patent computer software. Now, in the U.S., starting in 2000, people can use copyrights for various reasons, and it's all about forcing people to have less choices and having people give away their freedom.

**Louise:** *Why are people being given less choices?*

**Kevin:** There's a whole set of complex reasons for doing it—like forcing you to buy one particular music player, to forcing you to buy the same movie over six times for various reasons. Or not being able to play your music or movies on everything that you own, to wanting to put in backdoors that you can't know about. We're at the point where there's starting to be cryptographic hardware on computers, but it's possible to make it that only government approved software can run on your computer. However, it's also possible to protect your computer from the prying eyes of the government, and how that is built really depends on society. For me, it's the same battle that we're fighting over psychedelics—do you have the right to modify your own mind? Do you have the right to modify your own computer? What are your rights and what is your own? What are the limits of society and what are the limits of the individual? •

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## Dreaming of MAPS

"A building, the Institute of the Multidisciplinary Association of Psychedelic Studies. I was inside. There was an Albert Hofmann robot that was in the lobby, very mechanical looking, with a massive head, but just from the chest up, no legs, very stationery. But the head moved around and it was having conversations with people, students. Further inside, the building progressed into a series of staircases that went in every direction. Almost like an Escher picture. There was one classroom where they were studying sound theory and dissonant noises and their effects. At the bottom of one long staircase there was a whole room covered in chalkboard, the floor, the ceiling, the walls all had chalkboard on them. In this room there were a bunch of people writing equations on the floor, ceilings, walls, so that there were mathematical sequences everywhere. And that is all I remember, then I woke up."

— Josina de Bree

## Use of LSD-25 for Computer Programming

HERE IS A WAY I used LSD-25 for a complex programming project in 1975. I was working in New York developing a compiler for an application language called “MARLAN”. This application was for the then popular IBM 360 and was written in 360 Assembler Language. There were six large phases for this application, and I was the responsible chief architect and programmer for the project. There were approximately eight hundred subroutines in the entire system.



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At one point in the project I could not get an overall viewpoint for the operation of the entire system. It really was too much for my brain to keep all the subtle aspects and processing nuances clear so I could get a processing and design overview. After struggling with this problem for a few weeks, I decided to use a little acid to see if it would enable a breakthrough, because otherwise, I would not be able to complete the project and be certain of a consistent overall design. Overall design consistency was important to reduce program and design errors.

I used only seventy-five micrograms because I was not interested in tripping, as I had a specific, limited and definite purpose for the use of LSD. While stimulated by the LSD I was able to get the entire system wholly in my mind at the same time. I spent some time mentally visualizing various aspects of the compiler, the language and the processing which would take place. I did discover three or four design inconsistencies while being stimulated by the effect of the LSD, and I made notes for later checking.

After twenty-four hours when the effect of the LSD was completely gone, I went over my notes. I needed to have a measure of ‘faith’ that the design changes suggested by my notes would produce the beneficial effects they seemed to imply; that is, I was again in the condition of being not able to conceive of the entire system at the same time in my mind.

Once all the changes were made, I was able to successfully complete the programming of this huge system. The design changes I made reduced future program modification errors and contributed to the elegance of the design. The system was a commercial success for my employer and was used for many years by them. Although the use of LSD was an important component of the success of the system, no one knew of its use except me. •

# Psychedelic Technology

Alexander Beiner

THE ENTHEOGENIC EXPERIENCE has swum through our collective consciousness for tens of thousands of years. It may well have made us who we are, guided our hands as we painted onto the moist walls of underground caverns. However, this essential experience was all but forgotten in the Western world until the twentieth century when it made an explosive return that shook the ground beneath our feet once again. The growth of psychedelic thinking in the Western consciousness has been problematic and difficult; its most promising seeds often held by a small group of passionate academics while thousands try to wrestle with the experience in a distinctly un-shamanic world.

To understand the relationship between psychedelics and technology, it is necessary to understand the chasm that exists between this Western world and the psychedelic realm. One is staunchly material, one immaterial. One promotes peace and unity, the other aggression and division. It is no surprise, therefore, that contemporary governments rally so fervently against psychedelics. It is equally unsurprising that we have been unable to create a paradigm shift that will enable anyone who wants to take entheogens in a safe and productive environment. This is a fundamental spiritual right, one being blocked by fear and imposed ignorance.

Ironically, some of the best tools we have at our disposal to create the aforementioned paradigm shift are psychedelics. While meditation and other spiritual practices are also hugely important and, in my opinion, bring one to a similar awareness, there doesn't seem to be a substitute for the barrier-busting, consciousness-expanding explosion of energy that defines a trip. It is this energy that leads thousands of people who approach entheogens as recreational drugs to eventually understand them as spiritual sacraments or psychiatric tools.

So where does technology come into it? Coincidence or not, psychedelics were rediscovered in the West at a time when technology was expanding at an unprecedented level. Much has been made of this connection; psychedelics have been juxtaposed with virtual reality and 3-D imaging software and there is a sense of something technological in the almost machinelike characteristics of some LSD and DMT experiences. However, while these connections may be valid and ultimately useful, there is a far broader union between what we term 'technology' and psychedelics.

In my opinion the question of how psychedelics relate to technology is problematic in itself. This is not because I see no connection, or that the shamanic realms we explore

are simply too different from the neon glow we return to. It is problematic because psychedelics are a technology. Much as an automobile brings you from A to Q, so too does an entheogenic sacrament bring you from one state of awareness to another. This transition allows you access to gnosis that seems to exist within everyone and crucially, bring it back and integrate it into your life.

Technology facilitates our interaction with the material world. Dams create electricity, a toothbrush allows you to clean your teeth more efficiently than a fingernail would. Entheogens, I would suggest, connect us with an immaterial reality so that we have the choice to lose our anxiety and live free from imposed barriers in the material world, thereby facilitating our interaction with it. Not only this, but they aid in problem solving and en-

hance creativity with often phenomenal results. Francis Crick unlocked the double-helix during an LSD trip. Later, the same substance helped to shift consciousness and stop the Vietnam War. One only has to listen to the mesmerizing voice of the late great Terence McKenna speak of the myriad of ideas and imagery inherent in the psychedelic experience to understand the sheer amount of information that lies within those realms.

Whether the entities we encounter there, and the truths we feel lie coded in our DNA, are the essence of our souls, or exist completely independently of our consciousness, is uncertain. What I do believe is that there are few avenues of

research on this planet that are more important than psychedelic research. I feel we're on the brink of something, perhaps a breakthrough that will enable us to utilize entheogens to their full potential. Safely, responsibly, courageously. Rick Strassman's DMT study was a huge step on this path. The words of one volunteer on coming out of the DMT realm ring in my head as I think about this subject:

"Suddenly, beings appeared... They were glad to see me... They seemed pleased that we had discovered this technology... They told me humans exist on many levels..."<sup>1</sup>

The message of this technology isn't straightforward, nor is it absolute. However, even the most rudimentary glance into trip reports, internet psychedelic forums and the dance ground of a rave suggests some common themes. Love, understanding, tolerance, freedom. This is what many psychonauts are seeking; it's what we seek to be. The question then becomes how to convince everyone else that what we've found with our technology is real. •

1. Strassman, Rick. DMT: The Spirit Molecule. (Vermont: Park Street Press, 2001) page 214



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# Surviving and Thriving With Psychotechnologies

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Psychotechnologies  
help us overcome...  
the Singlestate Fallacy...  
the erroneous  
assumption that  
all worthwhile  
psychological processes  
occur in our usual  
awake mindbody  
state.

WHEN WE THINK ABOUT A TECHNOLOGY, what usually comes to mind are electronic computers and other digital devices, electrical machinery, chemical processes, biotechnologies, and other ways of manipulating and engineering physical material. The word technology, however, means a standard technique, method, way, or craft-skill for producing goods or for efficient ways of solving problems. This meaning allows us to extend technology to psychological techniques—psychotechnologies. With attention focused on psychedelics, in this essay we'll consider (1) the idea of "psychotechnology" and what psychotechnologies are (2) how they enhance abilities, (3) the way they form one of the three foundational concepts of a multistate model of the human mind, and (4) a proposal for promoting psychotechnology research and development via dedicated mindbody institutions and/or foundations.

## Psychotechnologies

Psychotechnologies are ways of using psychological processes for a desired outcome and/or to select psychological processes such as perception, cognition, emotion, and their biological substrates. They include the mostly nonmaterial psychotechnologies such as hypnosis, meditation, contemplative prayer, sleep deprivation, and dreamwork; they include psychotechnologies that blend the nonmaterial with material including body oriented techniques such as yogas, the martial arts, and breathing techniques; and they extend to psychotechnologies that are largely material such as sensory overload, sensory isolation, and psychoactive drugs. Within this whole psychotechnological population, MAPS belongs to the psychoactive drug tribe, especially the tribe's psychedelic family. A UNIFIED VIEW.

One benefit of using the concept "psychotechnology" is that it allows us to see all these diverse techniques as related to each other in meaningful ways because each of them contributes to a larger, more

inclusive view of the human mind. These psychotechnologies are not merely a collection of scattered unrelated psychological oddities, as has been the case until recently; each takes its place contributing to a larger, multistate view of the human mind. So people who are interested in, say, psychedelics, meditation, and the martial arts come to realize we are all working together to draw a complete view of the human mind and to put the singlestate fallacy to rest.

## OVERCOMING THE SINGLESTATE FALLACY.

Psychotechnologies help us overcome the thinking error I call the singlestate fallacy. This is the erroneous assumption that all worthwhile psychological processes occur in our usual awake mindbody state. One origin of this error is a hangover from Freudian psychology. To Freud, almost all worthwhile thinking (secondary process thinking) occurred in our ordinary, awake, rational mature adult state. Exceptions were sleeping and dreaming, but they were primarily important because they were necessary supporters of secondary process thinking. All altered-state thinking, Freud maintained, occurred in the cesspool of the unconscious. Psychedelics and their sister psychotechnologies give overwhelming evidence that overturns this bias. (The enhanced abilities discussion below will give evidence of this.)

## COMPLETING THE MAP OF THE HUMAN MIND.

In *Altered States of Consciousness*, Charles Tart made one of my favorite points in psychological theory.

The most important obligation of any science is that its descriptive and theoretical language embrace all the phenomena of its subject matter; the data from [altered states of consciousness] cannot be ignored if we are to develop a comprehensive psychology. (page 5)

For example, by providing ways to explore the "antipodes of the mind," as Benny Shanon called them, ayahuasca (and other psychotechnologies) help us discover, describe, and develop these other



Laura Huxley Portrait  
by Dean Chamberlain  
11"x14" Pigment Print



Laura Huxley watching a recorded teleconference with Aldous Huxley. Summer, 2007.

Photos © Stacy Valis, [www.stacyvalis.com](http://www.stacyvalis.com) & [www.elementalphotoart.com](http://www.elementalphotoart.com)

See tribute to Laura Huxley by Valerie Leveroni Corral on page 42 .









"Laura Huxley's Departure" 2007, Acrylics/Canvas 48"x48" © Carolyn Mary Kleefeld, [www.carolynmarykleefeld.com](http://www.carolynmarykleefeld.com)  
See article on page 49. Original painting for sale, with fifty percent of the profits going to help raise funds for MAPS research.



continued from page 24

psychological lands and the fullest potentials of our minds. As with exploring the earth, there are psychological dangers too, and experienced mind-explorers learn to be alert to these problems as well as their payoffs.

When we apply Tart's intellectual standard to psychology, old assumptions give way, and a new paradigm emerges: (*Psychedelic Horizons*, Roberts, 2006, page 110):

cultural impact will be that for many people they asked the key questions: What other psychotechnologies are out there? How do we find them? What can we learn from them?

In discussions of diversity, an often missed aspect is how psychedelics help people look for and accept the psychotechnologies of other cultures.

Just as there is globalization of trade, communication, and finance, there is

**A Comparison of Singlestate and Multistate Paradigms**  
**— General Assumptions —**  
 (MBS = *mindbody state*)

**SINGLESTATE ASSUMPTIONS**

**MULTISTATE ASSUMPTIONS**

**HUMAN NATURE**

Mindbody states other than our ordinary state are interesting curiosities, but of little professional or practical interest.

A significant human trait is the ability to produce and use a variety of mindbody states.

**REALITY**

Time, space and matter are real.  
 Only experiences in our usual MBS are real.

The experiences of time, space, and matter depend on the MBS in which they are experienced.

**INTELLECTUAL CLIMATE**

Altered MBSs are not worthy of serious intellectual attention.

The major intellectual error of our time is the failure to recognize the fundamental primacy of mindbody states.

**PERSONAL EXISTENCE**

A person exists within a material body, specific place, and at particular times.

Personal existence may go beyond the usual limits of body-based identity, time, and space.

**KNOWLEDGE**

All knowledge comes through sense perception and reason.

Reason and perception differ from one MBS to another

...what will we learn  
 from a recipe that  
 combines hypnosis,  
 psilocybin and  
 deep breathing,  
 while listening to  
 Morten Lauridsen's  
 transcendent

*O Magnum Mysterium?*

**SPOTTING AND ACCEPTING NEW  
 PSYCHOTECHNOLOGIES.**

The people I know in the multistate world were all invited to join this worldview via a specific psychotechnology and/or the mindbody state it produced. Some stayed with their original psychotechnology, and others realized that their first psychotechnology experience could lead to many others. (It's a bit like sex in this way.) In addition to psychedelics' varied benefits, perhaps their greatest long-term

worldwide trade in psychotechnologies—various types of meditation, yoga, martial arts, psychoactive drugs, prayer, breathing techniques. These are parts of the cultural import-export trade in psychotechnologies. Jeffrey Kripal, a professor of Religious Studies at Rice University, describes how Esalen Institute (as probably the best known explorer of psychotechnologies) imported mindbody psychotechnologies and hybridized them and Americanized them (*Esalen: American*



...some previously  
impossible events  
may be impossible  
in our ordinary  
mindbody state,  
although not  
in other states.

*and the Religion of No Religion*, 2007). By showing that Tart's admonition to psychology should also be applied to a comprehensive study of religion, he implies a still larger point: all scholarly, scientific, and practical fields would be strengthened by considering how psychotechnologies can enrich them. INVENTING NEW PSYCHOTECHNOLOGIES.

But expanding the options open to the human mind and fulfilling its multistate potentials are not limited to using the mindbody psychotechnologies we now have at hand or limited to new, imported ones. We can move beyond only discovering current psychotechnologies, only exploring them, and only developing the states they produce: we can invent new ones. The simplest example is inventing new psychoactive drugs. The Grofs' Holotropic Breathwork™ is a nondrug example.

So far, most people use one psychotechnology at a time, but beyond this await psychotechnological inventors and engineers who will sequence existing psychotechnologies in novel ways and combine them into new recipes. For example, what will we learn from a recipe that combines hypnosis, psilocybin and deep breathing, while listening to Morten Lauridsen's transcendent *O Magnum Mysterium*? Obviously, the construction and design of new mindbody states should be approached cautiously and explored carefully; I am a fan of our ordinary awake state because I suppose it has evolved over the years for our survival, and I find it eminently useful for day-to-day functioning, but it would be an example of the singlestate fallacy to suppose (wrongly) that it is the only useful state. Like synthetic chemical compounds, innovative materials, hybrid plants, and transgenic animals, mind design is derived from natural processes but moves us beyond the givens of nature. We can build novel kinds of perceptions, emotions, and cognition—new ways of using our minds. Psychedelics and other psychotechnologies provide systematic ways of thinking outside the box.

POSSIBLING THE IMPOSSIBLE.

Grof's *When the Impossible Happens* (2007) illustrates that some previously "impossible" events may be impossible in our ordinary mindbody state, although not

in other states. When we say something is "impossible," we should qualify that by adding "according to what we know of our ordinary, awake state." By restricting us to look only in our ordinary mindbody state, the Singlestate Fallacy restricts our idea of what is possible in other states. *Possible, impossible, rare, unusual, paranormal*—all these words need to be reexamined when we realize that our normal awake state determines how we use them now. I expect that mind explorers will discover new kinds of human capacities in other mindbody states and that mind designers will invent or construct new kinds of thinking and other abilities. Additionally, these states may contain enhanced current capacities.

By boosting us past the singlestate fallacy, the psychotechnological paradigm gives us a fuller, multistate view of our minds. Thanks to psychotechnologies, we become more realistic about the vast human possibilities lying in (residing in) other mindbody states, about what it means to be a human, and they give us more realistic expectations of what our minds may be able to do. Not limited to our current psychotechnologies, these include spotting new psychotechnologies from other cultures and importing them, inventing new ones, and combining psychotechnologies to build new mindbody states and the enhanced abilities that lie within those states.

#### **Enhancing Our Repertoire of Abilities**

By increasing the repertoire of cognitive processes in our minds, psychotechnologies empower our mental processes. In a very real sense, installing additional cognitive processes (and emotional, perceptual and biological ones too), is similar to installing a new program in a computer. In our minds, as in computers, to use them fully, we need many programs.

programs : computers ::  
psychotechnologies : minds

The singlestate error of supposing that all useful information processing takes place only when we are in our ordinary awake state's program, while denying that other states have any use, is like claiming that there is only one good program to run on a computer. In this section we'll briefly

sample some innovations that psychedelic programs have brought. Except for the first item, they are more fully referenced and described in my book *Psychedelic Horizons*.

#### COGNITIVE ENHANCEMENT.

As I was writing this, I heard the postman delivering my mail and took a break to open it. There on page B4 in the Jan. 11, 2008, number of *The Chronicle of Higher Education* [higher in the sense of colleges and universities, not higher in the MAPS meaning] is a brief article about “pill-popping professors” using modafinil (Provigil) to strengthen their cognitive processes. The article includes seven comments about chemical enhancement, but none of the comments considers the problem of choosing not to function at one’s highest ability, as modafinil allegedly supports.

Suppose for a moment that modafinil and/or other drugs do improve cognitive functioning. Service to humanity makes an occupation a profession rather than just a way of earning income. With a professional duty to serve to the best of their ability, don’t educators, health professionals, scientists, and other professional have a duty to do the most they can for humanity’s sake? Is failure to perform at the top of one’s ability, say by not taking modafinil, a failure to live up to the ethical standards of one’s field, a dereliction of professional duty? As this question illustrates, mindbody psychotechnologies open a jungle of complexities for bioethicists.

#### A NOBEL PRIZE, MAYBE 2.

Kary Mullis, winner of a Nobel Prize for inventing the PCR technique, attributes his main insight to his ability to visualize cellular molecular processes, and he says he learned that cognitive skill thanks to his experiences with LSD. He is quite clear about the connection. A less clear example of using psychedelics to provide scientific insights is the report that Francis Crick, co-discoverer of the structure of DNA, had his insight thanks to LSD. In a newspaper obituary, reporter Alun Rees claims that when he challenged Crick to attribute his insight to his use of LSD, Crick did not deny the idea but did threaten to sue Rees if he printed it. Like modafinil now, LSD was a 1950s

cognitive enhancer.

#### PROBLEM SOLVING IN BUSINESS.

As the age of personal computers began, there was intense competition among programs to be accepted as the standard for the field. “The big quandary for software companies was getting into the market place, finding shelf space,” said Bob Wallace in an interview for BBC-TV. Bob came up with the idea of shareware, and he says that idea occurred to him thanks to altered states—micrograms for Microsoft. In an earlier study of creative problem solving, Stanford professor Willis Harman gave LSD to 27 people who were stuck with unsolved problems in engineering, design, academic, and similar work. During the carefully structured and monitored sessions, they relaxed, listened to music, ate snacks, and discussed their problems in small groups, then worked individually for 3 to 4 hours. Here again, they were successful by using psychedelic psychotechnologies to solve practical work problems.

#### INTELLIGENCE AND META-INTELLIGENCE.

Cognitive psychologist Howard Gardner is best known for his theory of multiple intelligences; he defines intelligence as the ability to solve problems or produce goods of value in a society. The examples above meet these criteria, so do we have evidence that the cognitive processes installed by psychotechnologies sometimes can boost intelligence? If we use psychologist Robert Sternberg’s definition of intelligence as “mental self management,” then increasing the degree of mental self management increases intelligence, and psychotechnologies increase the number of mental information processing programs we can select from, so they increase intelligence.

However, like most specialists on intelligence, Gardner and Sternberg limit themselves to problem solving and mental self management in our ordinary awake state. To me, the skill of selecting which state to use is a higher order mental self management operation that is prior to using any selected state, so I think this cognitive process deserves the name *metacognition*.

Clearly, this is not to say that all mindbody psychotechnologies always make us more intelligent. Just check out

Is failure to perform  
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of one’s ability,  
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modafinil, a failure  
to live up to the ethical  
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a dereliction of  
professional duty?

...learning to select  
the right  
psychotechnology  
for the right purpose,  
at the right time  
can benefit humanity  
at large and  
individuals.

the nearest drunk. What we do see, however, is that learning to select the right psychotechnology for the right purpose, at the right time can benefit humanity at large and individuals. Enormous amounts of metaintelligence research need to be done to answer: Which psychotechnologies? Taken by whom? For what purposes? Under what circumstances? We have vast storehouses of information about how people learn to be intelligent in our ordinary mindbody state, thanks to psychedelics and other mindbody psychotechnologies. Now we need to ask similar questions of other states. Expanding intelligence to include other states leads us to expanding other topics too.

THE MAJOR INTELLECTUAL OPPORTUNITY OF OUR TIMES.

Just as additional problem solving abilities and new kinds of mental self-management reside in other mindbody states, other psychological skills have their analogs in other mindbody states too. In psychology, for example, we can ask how learning and sense of self vary from one state to another. In biology, we can examine the underlying neuronal processes and immune system functioning differently. In theology we might ask how religious experiences vary from one state to another. The arts and sciences can both study other mindbody states and use them, as in Mullis's example, to think freshly about their topics. We can take almost any topic and ask what I call the Central Multistate Question: **How does/do \_\_\_\_\_ vary from mindbody state to mindbody state?**

Remember all the psychotechnologies that exist and the states they produce, then insert your favorite topic(s) into the question. All the knowledge and all the research and all the questions we have about these topics as they exist in our ordinary, normal, awake state get reasked multiple times for all other states. This question blows the roof off current singlestate limitations in the sciences, social sciences, arts and humanities, law, medicine, education, and other fields that use the human mind and study it—now our *multistate* mind. This is practically everything we do.

While psychotechnologies' enrich-

ment of music and the arts is widely acknowledged, it is time to recognize their benefits in advancing science and problem solving in business. Psychotechnologies prod us to extend the study of intelligence to include how to select the right mindbody state for various purposes, and they challenge us to explore the multistate prospects of other abilities including intelligence but not limited to it. But how do we learn to use the full range of psychotechnologies, particularly psychedelics, for their beneficial effects while reducing their damaging effects?

### **Multistate Theory**

*Psychotechnology* is one of three ideas which weave together into multistate theory. (See *Psychedelic Horizons*.) We've already run into the other two. Mindbody state is the second. *Residence* is the third. MINDBODY STATE OR STATE OF CONSCIOUSNESS.

Here I have simply substituted *mindbody* for *consciousness* as Charles Tart uses it "an overall pattern of biological and mental functioning at any one time." I substitute *mindbody* because the word *consciousness* has too many meanings, and I've found that people who are talking about quite different things all use the word *consciousness* and think they are talking about the same thing but are actually talking at cross purposes.

For example, in common language, we might say someone is now conscious, but last night was asleep or in a coma. Someone with a political bent will speak of *women's consciousness* or *worker's consciousness*; here they mean the thoughts and feelings that result from their places in society. If someone has *environmental consciousness*, we are likely to mean that person habitually thinks about environmental issues. A saint or holy person may have a *higher level of consciousness*; indicating a degree of spiritual development. And, of course, there are psychobiological states such as Tart means them, overall patterns of functioning.

The word *mindbody* also has the advantage of explicitly emphasizing that we are talking about a unified combination of mind and body taken as a whole. *Mindbody* makes the meaning clearer and not so ambiguous; although it begs the question: When does one mindbody state



change to a new one? I expect this will remain difficult to resolve and that different definitions will be useful for different purposes.

#### RESIDENCE.

The third term of multistate theory is residence. *Residence* expresses the idea that all human abilities, experiences, thoughts, emotions, and so forth take place in mindbody states, are expressions of those states. When a psychotechnology produces a mindbody state, then we can explore that state to discover its resident abilities. Again an analogy helps: just as different musical instruments produce their distinctive sounds, different mindbody states produce their distinct abilities, experiences, etc. Just as an oboe and a violin express the note C in their characteristic voices, various mindbody states express intelligence, thinking, and other potentials in their distinct ways.

Psychotechnologies, mindbody states, and residence help us recognize the singlestate fallacy and overcome it. They integrate the enormous variety of psychotechnologies and states into an overall multistate theory. They promote specific research hypotheses and formulate broad-scale agendas. They promote experimentation using psychotechnologies and mindstates—sometimes as independent and sometimes as dependent variables. Like electronic, chemical, biological, material, and other technologies before them, psychotechnologies offer broad horizons for unknown discoveries in the future of human development.

Most important, as the quotation from Charles Tart implies, without psychotechnologies, we cannot have a complete view of the human mind. Because we use our minds in everything we do, our view of our minds determines what we expect of ourselves and of humanity—what we can learn, what we can do, who we are. It determines what we think are possible and impossible. If our view of our minds is wrong—rather too restricted—then our accomplishments are restricted and our human future is bound to the singlestate fallacy. Psychotechnologies free us from a limited view of our minds and encourage us to develop their full multistate future.

#### INSTITUTE FOR MINDBODY STUDIES.

How can we achieve these goals most effectively? Until now much mindbody development—especially psychedelic—has been informal and outside our current institutions. In *Psychedelic Horizons*, I proposed an Institute for Multistate Studies. But given the large number of psychotechnologies and the larger number of topics to be looked at in each of them, it now seems to me that a large number of such institutes would be needed. Perhaps an Institute for Psychedelic Studies would focus on that specific psychotechnology. Others on the implications for a professional field or academic discipline—say, an Institute for the Law and Mindbody Studies.

#### MULTISTATE GRANTS AND FELLOWSHIPS.

In addition to organizing new centers and institutes, a large foundation could fund research using existing universities, research institutes, and study centers. Grants and fellowships would empower existing fields away from their singlestate limitations and toward more completeness: health, law, education, politics, religion, arts, sciences, humanities—these and others. They would be fulfilling Charles Tart's injunction: "The most important obligation of any science is that its descriptive and theoretical language embrace **all** the phenomena of its subject matter."

#### **Summary: Surviving and Thriving**

Solving practical problems, inventing scientific ideas and instruments, developing and using our complete range of thinking programs, becoming more realistic about our minds' cognitive abilities and learning to use their full repertoire, recognizing the full ecology of human brains and bodies and adapting with new skills—to anthropologists, evolutionary biologists, and developmental psychologists, these are the characteristics of successful cultures, species, and individuals: they survive and thrive. Used skillfully and carefully, psychotechnologies promote surviving and thriving. •

...without  
psychotechnologies,  
we cannot have  
a complete view  
of the human  
mind.

## Transhumanism & the War on Drugs

Tristan Gulliford & Ken Goffman (a.k.a. R.U. Sirius)



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KEN GOFFMAN (a.k.a. R.U. Sirius) is a well-known cultural commentator, author, editor, and internet talk show host, probably best known as cofounder and original Editor-In-Chief of *Mondo 2000* magazine. He is the author of *True Mutations*, *Counterculture Through the Ages*, and six other popular books about the cutting-edge of cyberculture. To listen to Goffman's radio show visit: <http://rusiriusradio.com>

This interview was conducted by Tristan Gulliford. To find out more about Tristan's work see: [www.myspace.com/djdreamcode](http://www.myspace.com/djdreamcode)

**Gulliford:** Some people have noted that the "War on Drugs" is actually a war on certain states of human consciousness. If this is true, then how can anyone ever hope to "win"?

**Goffman:** There are a lot of cracks in the drug war façade. For example, spokespeople for the War on Drugs now like to deny that people actually go to prison for mere drug possession. It's a lie, but it's a lie that speaks of a tremendous change in our social attitude towards drug use. And certainly, casual drug use is sort of winked at as an optional part of adult (and teenage) life in America today.

There was a period during the Reagan Administration's big drug war escalation when the media was intimidated and drug humor was virtually eliminated from TV. Now John Stewart and Colbert and Bill Maher get cheers from the audience whenever they mention pot; you've got shows like "Weeds", the kids on "That 70s Show" have smoked pot, and even Tony Soprano had a sort-of-meaningful peyote experience. Most of the major Democratic candidates say they'll leave medical marijuana alone. And, of course, starting in the '90s, the FDA began allowing some psychedelic research and there have been all kinds of positive news reports. I was particularly amused by the *New York Times* headline a few months back that was based on some John Hopkins studies with psilocybin. It read, "Mushroom Drugs

Produce Mystical Experiences." Wow! Scientists Discover Ass Not Elbow!

So yes, I think there's some hope. On the other hand, there's a huge drug war industry and the prison-industrial complex is one of America's biggest businesses, so those are powerful forces for maintaining the drug war. And hysteria about teens taking drugs is something politicians can still demagogue about. I think those are the reasons why the drug war continues. I don't think the powers that be are that concerned about altered consciousness itself anymore. That cat is already out of the bag and it's a market that they cater to. Realistically, it doesn't threaten the power all that much.

**Gulliford:** One of the topics covered in your book *True Mutations*, and also in *Mondo 2000*, is transhumanism. This is a field of futuristic study and speculation that can be defined in many ways. How do you describe its basic tenets?

**Goffman:** I don't know that I would claim to describe its basic tenets, but I'll say what the intrigue is for me. I see it in terms of hacking. One of the basic ideas behind hacking is that you take a technological system or object and you get it to do things beyond what it was apparently intended to do or was capable of doing. So I like to think of the transhumanist movement as an ongoing project to hack the human body and the brain, and the social and material worlds outside our bodies and brains, and get them to do things that they can't do now—including things that humans up to this point would have perceived as being in defiance of "nature."

That has, of course, been the story of technology, technique, science, and human ingenuity since day one. But now we're looking at hacking our biologies for extended lifespans, hacking our brains for increased intelligence, hacking molecules for material abundance, building intelligences that are greater than ours—or different from ours—and so forth. We also might be looking at engineering our level

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of happiness or bliss, engineering out painful forms of insanity, hacking our skin pigmentation color or our physical design. As Debbie Harry put it in our *Mondo 2000* interview back in 1990, “A tail might be nice.”

By the way, this is all terribly ambiguous and potentially “Brave New World.” In some ways, I’m less interested in arguing about whether it’s socially responsible to push forward with all this, and am more excited by the sense that it’s an irresistible manifestation of a human impulse that has been expressed in various adventure myths involving grail quests, magick, religious imaginings, science fiction imaginings, and so on. So it pleases me to imagine that human beings could win the prize, even though I’m not quite sure what the prize is. I don’t think long life, in and of itself, is a huge value. I’m interested in how all of this might open out into something extraordinary and profoundly psychedelic.

This interface between the literal expansion of human possibilities in the material realm and the expansion of consciousness through drugs and other

techniques is very complex and it comes with no guarantees. But a number of techno-visionaries have suggested that after the bio-age comes the neuro-age. With nanotechnology and a greater comprehension of neurology, we may be able to target chemicals—in the words of Zack Lynch—“to... deliver and regulate specific neurological pathways in specific regions of the brain without disturbing nearby processes.” In other words, we may learn to play this instrument—the brain—like Yo Yo Ma plays the fiddle. The implement for playing it will be chemical but the choices regarding how to use the instrument will be ours... well, it had better be ours or we’ll be locked into the perfect control system.

I hope people will check out my book *True Mutations* for ideas and debates about this potential trans/psychedelic future. •

One of the basic ideas  
behind hacking is that  
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things beyond what it  
was apparently intended  
to do or was capable  
of doing.

## Missed, Mist



Neal M. Goldsmith, Ph.D.  
neal@inch.com

I feel in a mist  
Sleepwalking through life  
Sleeptalking with other sleepwalkers  
Triggering out my insides.

On the other hand...

I float down to my ground  
And on the way down  
I cry my childhood into completion  
On the ground  
A glowing mound throbs  
Emanating peace

I touch the glowing orb  
And my sleeping seed awakens  
Reigniting the unfolding frozen so long ago  
Unfolding unto the sun  
Upward to the warmth of love  
From the glow to the warmth

– Neal M. Goldsmith, Ph.D.  
February 6, 2008



## Technology Appreciated By the **Psychedelic** Mind

Brummbaer



Brummbaer

brummbaer@brummbaer.net

www.brummbaer.net

Once I knew  
how it worked  
on Ketamine,  
it was relatively easy  
to copy the process  
in my visual cortex.

PRECISELY HOW psychedelic the sacraments of ancient religions were, we'll probably never know, but they appear to have used psychedelic technologies to instill spiritual states in their believers. We can tell because many of their buildings are still standing, and produce echoes, or have mysterious whispering corners. (You whisper in a hidden corner, but the sound is amplified across the building, where you can hear it loud and clear. At times the effect would be used for espionage.)

The echo/reverb, a popular effect, probably originating in caves, was soon utilized in temples and churches. The long echoes, the returning sound seem to have calming, meditative effects on the human brain, preparing it to meet its maker. (Haha!) In fact, there was a time when churches were built around organs, the church being the sound body of the most sophisticated musical instrument of the time.

Carefully placed, colorful church windows, like vibrating mandalas, a little incense, and a reverberating choir, almost guaranty a religious or psychedelic experience. From singing in the shower to listening to endless reverb/feedback loops, everybody has experienced the unique effect of such acoustic manipulation.

When electronics came around, introducing the first reverb features, and "Telestar", the first pop-song using feedback, hit the public, it became clear that the echo-monopoly of the churches had been broken and now everybody could do it with a little gadget. It was Jimi Hendrix, who first understood what it meant that music, while being transitionally electronic (between the instrument and the loudspeaker) could be manipulated any which way he wanted, while they were in the pliable, electronic state.

He understood that now the speakers were the sound bodies, while the instruments themselves, hardly made a peep. The "Soundbender" and the "Wa-wa-pedal" were the first electronic gadgets

for the electric guitar, which allowed to play the sounds between the notes. (Mind you, Jimi Hendrix was known to just violently bend the neck of his "fender" for similar effects.)

From here on it didn't take long for musical synthesizers to be built, even though there had been attempts by Thaddeus Cahill, who around 1890 built the first synthesizers, the gigantic "Telharmonium." (His Mark II version weighed almost 200 tons!) And not to forget the mysterious Mr. Leon Theremin, the Russian, who 1919 invented the "Theremin," of which a few are still around and used, mainly for "Scary Film Music." The invention of transistors in the Sixties brought us the "Moog-synthesizer," the "Mini-Moog," the "Synthy," the "Fairlight," etc...

Visually, the psychedelic mind traditionally feasted on ornamental, colorful designs. The posters, the album covers and the fashions of the Sixties clearly demonstrate this aesthetic preference.

But the lightshows arrived as a completely new medium—a mixture of sunsets on alien planets, multicolored rainbows, microphotography, unexpected glimpses into faraway galaxies, and bubbling, blubbing semi-biological events, in constantly changing colors, solarized, polarized, and kaleidoscopic. We projected outrageously beautiful, luminous visuals that never repeated and left no traces except a few burned slides. Art without a resulting, sellable object, created just for the moment, just for your divine eyes.

Not to forget the stroboscope, an originally industrial tool invented to observe the mechanics of machines that moved faster than the human eye, by creating very fast, very bright flashes of light. It worked particularly well with acid, because of the already highly exaggerated persistence of vision, due to the drug.

Sound amplification with reverb, as well as stroboscopes, have a similar, liberating effect on people. I have seen the

stuffiest of all people (for example, fifty year veterans of the Communist Party) sing and dance for the first time in their life, staring fascinated at the multitude of their waving hands.

Then there was Brion Gysin's "Dream-machine," a primitive stroboscopic device that, when projected on your closed eyelids, would create psychedelic patterns, supposedly because the rhythm corresponds to your brain's alpha waves, creating a hypnagogic state, or—with other predisposed people—cause epileptic seizures.

Today they are available in the handy size of large sunglasses, and are even worn by some people in the isolation-tank—another important technical device invented by Dr. John Lilly—to experience the mind on, or off drugs, sensory deprived, without the interference of outside stimuli.

In the early eighties computers became almost affordable, and I had the privilege to learn and work with the "Fairlight CVI," one of the first real-time digitizers, which meant that you could add all kinds of effects to a real-time recording or any other prerecorded video-material. You could change the colors, solarize, add color trails, strobe and mirror, etc...

At the same time I was seriously exploring Ketamine and understood that the way the computer puts together an image is the reversed process by which the brain analyzes it, to give meaning to what it is that one sees. It didn't take long until I could apply all kinds of "Fairlight-effects" to my sober vision – like color trails, multiple images, and kaleidoscopic effects. Once I knew how it worked on Ketamine, it was relatively easy to copy the process in my visual cortex. It was an interesting exercise, but I could not see any other practical application, besides bragging about it.

In the meantime, computers have achieved unrivaled abilities in sampling, modeling, and manipulating virtual reality, be it visual or acoustic. Some of today's screensavers could have bought you a psychedelic kingdom in the Sixties.

### **The Future of Psychedelic Technology**

There always comes the moment when the shaman has to take the phone

away from his trustee, and tell him that it's not a good idea to call his mother, to explain that now he understands everything and he wants to forgive her, or be forgiven, or whatever.

Then again, there used to be a time when we were communally tripping every Saturday, as did other communes in town. We'd call our tripping friends and leave the receiver lying around for anybody to talk and, of course, you never knew who might be on the other end. This resulted in interesting meetings between people, who might have never known each other. Occasionally somebody would give the other group a description of what was going on at his location, while everybody else was listening, and utterly amazed how they were being described, and how completely different everybody saw the same situation.

These days the cellular is ubiquitous, and everybody's umbilical cord. Now I wonder how sessions might work if the participants are connected via cellular or computer (with camera!)? Tripping as telepresence! Spontaneous raves, orchestrated by cellulators and coordinated by GPS-data!

### **Technology as a Result of the Psychedelic Experience**

I'll start with a question: Is there technology as a result of psychedelic experiences? (Or is it all retro-engineered alien tech?) This is hard to answer even with the testimony of people like Sir Francis Crick, who reportedly often took small amounts of LSD to increase his mental abilities, while discovering the structure of DNA.

Or Steve Jobs and Steve Wozniak, who, before inventing the PC, built the legendary "Blue box" that allowed you to phone anybody else with such blue box, free of charge. It was distributed illegally through underground channels. Jobs took LSD at the time and he called it: "...one of the two or three most important things he has done in his life."

Mitch Kapor (Lotus, spreadsheets), Mark Pesce (Virtual Reality Markup Language), and Kary Mullis (Polymerase Chain Reaction) claimed that psychedelics played an instrumental role in their creation of breakthrough technologies.

Now, if you imagine how many

Some of today's  
screensavers  
could have  
bought you a  
psychedelic kingdom  
in the Sixties.



"Timothy's Last Journey"  
by Brummbaer

...Dr. John Lilly...  
developed the theory  
that we should be able  
to simulate a TV-receiver  
with the neurons  
of our brain...

psychedelic drugs have been taken by how many millions of people, and this was all the technology derived from their use, I would say "not all that impressive," and we might have to admit that technological inventions don't seem to carry the strongest argument for the use of such substances. On the other hand, where would we be without the knowledge of DNA or the PC?

Still, it is obvious that mind-altering substances do increase creativity, which has been shown many times over the last fifty years. "Thinking outside of the box!" But people might argue that maybe LSD actually decreased Jobs' creativity, and only God knows what he could have invented had he stayed sober?

Then again, not every user will admit to the use of a mind-expanding drug, understandably for legal reasons, but also because scientists and artists are a vain bunch and want the whole credit of their creation for themselves, and they don't want to pass, let's say, five percent of the credit on to Dr. Albert Hofmann. Even

Sir Francis Crick admitted his drug use only late in life, and then threatened the interviewer, "Print a word of it and I'll sue."

In the mid-eighties I took a lot of Ketamine with Dr. John Lilly at his ranch in Malibu. He developed the theory that we should be able to simulate a TV-receiver with the neurons of our brain—all we needed was a transmitter with short enough waves, so the simulated, neuronal antenna would fit inside a brain. He had a young technician build a converter and we set up a video-recorder to feed into the transmitter. We had no idea what tape was in the recorder, and to verify, we needed a monitor, which I procured from the main house.

John's wife, Tony, had cancer, and was dying, surrounded by dozens of people, mostly New-Agers from Mill-Valley to Esalen. They occupied the main house and were appalled by John and me experimenting with Ketamine, while Tony was dying. I carried the monitor through the unfriendly crowd, but then, at the spur of the moment, turned around to say: "I hope you will remember this moment, when in five years you will drive down Sunset Boulevard, while receiving the traffic-report in your head..."

Since John was a bona fide genius, it scared everybody into silence. What if?

Back with John, we attached the monitor without turning it on, started the tape, and we each injected a hundred milligrams of Ketamine intramuscularly. And we waited. Forty minutes later, we took another shot. The results: nothing!

We leaned into the transmitter's antenna, hovered above the contraption, but just the usual Ketamine visuals, nothing remotely similar of what we later checked, was a *National Geographic* tape. So, to my greatest disappointment, I will have to drive down Sunset and use a cellular or another smart GPS-gadget instead of my brain... (Or maybe it did work; we just didn't think mankind was ready for it yet!) •

To find out more about Brummbaer's work visit his Web site:  
[www.brummbaer.net](http://www.brummbaer.net)



## MAPS Report from the **World Psychedelic Forum 2008**

*There is an almost sensual longing for communion with others who have a larger vision. The immense fulfillment of the friendships between those engaged in furthering the evolution of consciousness has a quality almost impossible to describe.*

—Teilhard de Chardin (found on WPF Web site)



Valerie Mojeiko  
valerie@maps.org

IN RECENT YEARS WE HAVE SEEN the beginning of a reemergence of psychedelic research. A social change of this sort creates a need for community, a place to gather with others who have similar opinions and to build and strengthen alliances so that we—as a movement—can reach out and present our ideas to the world. The World Psychedelic Forum (WPF) has arisen and established itself as that global gathering. Growing out of the LSD Symposium 2006, this event, also hosted by the Gaia Media Foundation, was held in the same location and with a similar lineup of speakers. Held in Basel, Switzerland—a small art and culture-rich city, where most of the people I encountered seemed to speak at least three languages—this year the WPF drew a crowd of 2000 psychedelic intelligentsia from 37 countries.

MAPS President Rick Doblin, Ph.D. was prominently featured on the conference lineup. During the opening keynote panel he gave a critique of The Good Friday experiment. Doblin spoke about his vision of nonprofit drug development during a group session with MAPS-sponsored researchers Michael Mithoefer M.D., Ann Mithoefer R.N. and Psychologist Sameet Kumar, Ph.D. He spoke about the past, present and future of LSD research in Switzerland on a panel with MAPS-sponsored Swiss researchers Peter Oehen, M.D. and Peter Gasser, M.D. And that was all on the first day! He also appeared on a question and answer panel

titled “Everything You Always Wanted to Know About Psychedelics” along with Dennis McKenna, Dale Pendell and Kathleen Harrison.

Last but not least, Doblin moderated a panel with Russian ketamine researcher Evgeny Krupitsky, M.D. and me. This was one of the more diverse panels in its subject matter. The theme of the panel was “From Problem Child to Wonder Child”. It included a very scientific (but playful) presentation by Dr. Krupitsky on his promising research results, using ketamine-assisted therapy in the treatment of heroin addiction. I gave a presentation titled, “Psychedelic Emergency



Photos pg 36-37: Karl Heinz Stein: www.kongressfoto.de

MAPS President Rick Doblin, Ph.D. filled the conference hall with eager listeners.

Services: Lessons from Burning Man to Boom to Beyond,” in which I spoke about the history of MAPS work in this area, and shared tips and techniques for working with people who are having a difficult psychedelic experience.

I also presented preliminary results from MAPS’ exploratory outcome study of ibogaine-assisted therapy in the treatment of opiate addiction. This was on a panel with study coordinator John Harrison, Psy.D. candidate and Iboga Therapy House Program Director Sandra Karpetas.

Programmatically, one thing that was unique to this event, and which worked out really well, was the “Rising Researchers” lecture series, held simultaneously in one of the side rooms. This series consisted of ten minute presentations from a variety of fresh voices in the psychedelic scene—from the evolution of salvia divinorum, to ‘xenolinguistics,’ to a forty year follow-up study of psychiatrists who formerly used LSD in their practices.

MAPS staffer Josh Sonstroem, along with volunteers Judith, Jonah, Joey, John, and Martha staffed a MAPS exhibit booth twelve hours a day Friday through Sunday, and kept the Euros, Swissfrancs, and dollars flying. Thanks to all of their hard work, and the generosity of the table

visitors, we came home with thirty new members, over \$6000.00 in donations and sales, and over two hundred new email addresses.

In between presentations and table staffing, we still found time for many meetings during the weekend. In a world where most of our communication is done through the computer or on the phone, it is rare to get so many of our allies together in one place. We have to make the most of our time together whenever these occasions arise.

We took the opportunity to hold some planning meetings with Boom Festival organizers and volunteers about the possibility of MAPS continuing to provide psychedelic emergency services at the event. No decision was made at the conference, but we did gather lots of interest and email addresses from potential European volunteers. I also held a small training session on the principles of psychedelic emergency services work along with Sandra Karpetas, who has much experience in this area through organizing a similar service at events in Canada and at past Boom festivals.

Not only the days, but also the evenings were packed with activities, with a special program guide for “Psychedelic



MAPS Staffer Josh Sonstroem, tables at the World Psychedelic Forum, bringing in over \$6000, 30 new members and nearly 200 new email addresses

Nights.” Many attended a dance party at “Das Schiff” (a docked boat on the river Rhein) on Sunday night that continued until noon on Monday. On Monday night a select group of MAPS researchers, donors and associates attended a birthday party for MAPS patron donor Robert Barnhart, held in the hotel restaurant. Dr. Peter Gasser, who is conducting our Swiss LSD/end-of-life anxiety study, was the special guest and came to meet with Barnhart, who has donated \$75,000 to his study. Other donors to our LSD study were also at the dinner, including Kevin Herbert, Vanja Palmers and Amanda Fielding, as well as MAPS Board of Director John Gilmore. Dr. Stan Grof, Ralph Metzner and Caroline Garcia also joined the dinner celebration.

After the conference was over, Rick, Josh, and I took the train to Paris where Rick and I presented on the first day of another conference, conveniently scheduled the following week. “Hallucinations in Philosophy and Cognitive Science” was a free symposium that drew a smaller, yet very engaged audience of about thirty people, and took place in a conference room tucked away in the Université René Descartes. Our goal was to try to catalyze efforts to start psychedelic research in

France. We are now working with several psychiatrists to explore the possibility of conducting an MDMA/PTSD pilot study in France.

I boarded the plane home from Paris feeling exhausted and inspired from the dizzying amount of conversations and interactions that had taken place. In a community this large, even though we are all on the same side, it was humanizing to see how many differences arose—slightly different opinions, hopes, dreams, fears. What held us all together though was a shared amazement for the wonders of psychedelics, and a desire to come together for the benefit of the movement.

Overall in this trip, I feel that—as an organization—MAPS accomplished a lot more than what was on the agenda or in the lecture series. I’ve often found with these types of events that it is the conversations over hotel breakfast, or the smile in the elevator, that can long after turn out to be the most rewarding or important. It’s too early to say now, but I look forward to witnessing the aftereffects of the butterfly wings that were flapped in Basel that week as the psychedelic research renaissance makes its way into history. •



# O Nobly Born

Valerie Leveroni Corral



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The Huxleys became  
pioneers of the  
psychedelic movement  
forging a  
scholarly approach to  
the development of  
the human  
potential.

IN A FEW SHORT PAGES I shall attempt a summation of a hundred years; a life led with grace and charm, and the power to encourage in others—and to discover in her self—the “possible human.” Were I Laura or Aldous Huxley, I would be able to do this with elegance and style, but I am not so clever or skilled. I am, however, Laura’s devoted friend and humble accomplice, and—with all my heart—I long to share her insights, in some of which I was able to participate. What I have come to know of Laura during these last years deepened our relationship. It could fill a tome. In many ways the measure of our friendship is what is revealed to me about myself. As our bond became more interdependent, so much of my own nature was reflected, not all aspects particularly becoming. Yet, the dying process can engage us in an indescribable dance as we are invited to participate in that profoundly intimate relationship with another human being. If every moment is life’s most important, then there is none that compares to this practice. There may not be any better way to fall in love.

Laura Archera was born in Turin, Italy on November 2, 1911. She possessed a commanding sense of self. Laura was a child prodigy and she practiced her violin six hours each day. She played before the Queen of Italy at fourteen, shortly before she came to America, spurred by the war. Suspicions grew with Fascist rule and her father, Felice Archera, whose mother was Jewish, was put under investigation during Italy's odious racial decrees of 1938. He wired her from Italy not to return. Laura stayed in America and made her debut performing Mozart's violin concerto n.5 at Carnegie Hall. She then moved to California and, as a virtuoso, performed with the Los Angeles Philharmonic. Mozart and Beethoven were her constant companions; their work filled her house daily playing on the stereo box in her living room. When her beloved and longtime friend, Virginia "Ginny" Pfeiffer became ill, Laura put her musical studies aside to become a therapist and donated her Guarneri violin to Yehudi Menuhin. She began to pursue a lifelong interest in health, nutrition, psychotherapy, and the advance of the human potential. Laura became accomplished in her undertakings and professions, among the many, as author and visionary.

Laura was hired on as a film editor at RKO Studio. In 1948 she set out to meet Aldous Huxley and his wife Maria. She had an idea for a film. After thumbing through *Brave New World*—and at the suggestion of Director John Houston—she schemed to persuade Aldous to pen a screenplay about Palio, the horse races in Siena. Nothing ever came of this; but their meeting fostered a legendary relationship. The three of them became good friends. In 1955 Maria died of breast cancer. The following year Laura and Aldous were married when he obliquely proposed to her, soliciting, "Have you ever been tempted by marriage?" Then, "Do you think it might be amusing to travel to Yuma and get married at a drive in?" She agreed and they went to Arizona and were married at a drive through chapel.

In 1953 Aldous sought out Humphry Osmond who had gained some notoriety for his observation of the chemical similarity between adrenaline and mescaline. Aldous wanted to be the subject for a mescaline study. Humphry was reluctant to administer the drug, stating that he did not "relish the possibility, however remote, of finding a small but discreditable niche in literary history as the man who drove Aldous Huxley mad." In correspondence between Aldous and Humphry Osmond, they

entertained a discourse on the appropriate terminology for drugs used in the intentional evolution of consciousness. In 1957 Humphry reported to the New York Academy of Sciences, "I have tried to find an appropriate name for the agents under discussion: a name that will include the concepts of enriching the mind and enlarging the vision... My choice, because it is clear, euphonious and uncontaminated by other associations, is *psychedelic*, mind-manifesting." Humphry regarded psychedelics as "mysterious, dangerous substances, and must be treated respectfully." By 1959 Al Hubbard introduced Aldous to LSD. Both Humphrey and Aldous regretted the trend that

would eventually lead to the loss of scientific research and medical application caused by the ban in the late 1960s.

The Huxleys became pioneers of the psychedelic movement forging a scholarly approach "to the development of the human potential." Laura was Aldous' muse, constant companion and his partner in its unfolding. During their marriage they worked separately on novels—Aldous on *Island* and Laura on *You Are Not the Target*, a condensation of her ongoing fascination with the growth of emotional health. Aldous tempted Laura with LSD. They took it while they listened to Bach's fourth Brandenburg concerto. Of that experience they reflected on having "aesthetic revelations."

About their years together Laura wrote, "As for the rest of our lives, we would speak of everything under the sun. I was very active in psychotherapy. We discussed that; we listened to music, experimented with cooking... One evening Aldous played a recording of *Time Must Have a Stop*. 'It is my favorite book of Aldous', Maria had told me the previous summer. It was a passage that has an extraordinary transporting quality. Now we would call it a psychedelic quality, but at the time the word had not yet been coined. The most amazing fact is that Aldous had written *Time Must Have a Stop* some ten years before he had taken mescaline, yet in the passage describing the transit between two states of consciousness the same preternatural qualities of certain aspects of the psychedelic experience is conveyed. The door which later opened wide was already ajar. As mystics and poets had done for centuries before him, Aldous had written of psychedelics long before he had partaken of the psychedelic plant."

The words that Laura used to describe Aldous, speak of the conscious lover who witnesses the presence of the highest form within the beloved, the divine. Laura

Laura often  
conducted interviews  
while she strolled on  
her walking machine,  
or while balanced  
atop one of  
the many huge  
exercise balls  
scattered throughout  
the house.

understood the importance of Aldous' work and its potential to influence our world. She dedicated herself to the certainty that as a luminous scholar and author he would be widely published. In fact, one of her last and most challenging efforts was to bring *Brave New World* to film. Dan Hirsch—Huxley archivist and Laura's longtime friend and confidant—assisted the project. She said she hoped instead to make the film of *Island*; that especially during this dark time, of the two, *Island* was the more important book. However strong her attempts to persuade, this did not come to fruition. Perhaps it will be the next film, she hoped, although she did not think it likely that she would live to see that happen.

Laura and Aldous were married for seven years before his death from cancer in 1963, the same day of John F. Kennedy's assassination and the death of C.S. Lewis. The manner in which Aldous greeted death is noble. Laura read to him from the *Tibetan Book of the Dead* as he opened to the possibilities and set forth on his adventure. Of this she said, "Doing his best to develop fully in himself one of the essentials he recommended to others: Awareness." He requested that Laura give him LSD. She complied by providing him with two injections, each a few hours apart.

Following the second dose, Aldous died, while Laura softly urged him to let go, to move toward the light. Peacefully, his breathing stopped, "as a piece of music just finishing so gently in a *sempre più piano, dolcemente*."

I often arrived at Laura's late in the night, entering past the open iron gates of the driveway that led into a flurry of grasses; mutiny in the garden, still always something blossomed. The door was never locked; inside her house a continuous spray of orchid flowers bloomed a salutation to every visitor. I recall Laura saying that orchids possessed a quality that could rouse even the dullest caller.

On one late night arrival Laura left me a note at the top of the stairs, "Goodnight, Dearest Valerie. Maybe I am awake." I went to her room and knocked lightly on her door. "Tonight we will speak of everything," she said. We spent hours discussing the past, her present situation and how her health was declining. She said that she had told her most trusted companion, her nephew, Piero Ferrucci, that she must make a choice between life and death and that she had chosen life. But as these options became fewer, discussion turned to sitting, to waiting and to observing. 'Idleness is the greatest sin. But then one is

forced to idleness. When you cannot use your body you think and think of this good thing and that bad thing. So many thoughts. But I can do nothing by myself. Before thoughts would come and I would act. But now I must ask for everything." She couldn't tolerate chemo, even the very small amount that she and her oncologist had bargained she would take. The side effects were daunting and she wanted to feel vital again. Chemotherapy left her exhausted, her gums burning, her lips scorched and

cracked, a fire raged in her mouth. The rest of that night I half slept. But in the morning Laura was up and moving through the house with a note of her usual vigor regained.

Aldous and Laura moved into Ginny's Hollywood Hills home after theirs was destroyed by fire. Those flames consumed many manuscripts and letters, making ashes of literary history. I slept in what Laura, as a favor to me, I suspect, referred to as "my room," but really it was Ginny's bedroom. Ginny adopted two children, the first single-woman adoption to occur. Ten years after Aldous' death, Ginny died of cancer. Laura then took legal guardianship of Ginny's granddaughter, Karen Pfeiffer. Ginny's room was located across the hall from Aldous' and looked out onto a grand old

swimming pool. That pool, an invitation to bathe in an enduring record of cracked tile and gnarled trees, whispered tales of a collection of guests, including Gerald Heard, Krisnamurti, T.S. Elliot, D.H. Lawrence, Humphry Osmond, Ram Dass, Buckminster Fuller, Bertrand Russell, Alan Watts, Timothy Leary, Allen Ginsberg, and Christopher Isherwood—just a few of the illustrious personalities to call on the Huxley's. Many of Hollywood's extraordinary intellectuals and most noted characters joined Laura, Aldous and Ginny for conversation. Laura reportedly excused herself on more than one occasion. She told me that she never considered herself an intellectual and often she would find these talks too esoteric. I found her to be fathomless about so many things.

Another night Laura explained her first encounter with earphones. Aldous had come across a pair and brought them for her to try. He placed them on her head and put Mozart on the phonograph. She lay on her bed listening, after some time she felt herself being shaken from her reverie, hearing Ginny's voice asking why she was yelling. Laura said she had no idea she had made any sound and that for the first time she truly heard the music of Mozart. She had been transported from this earthly

...when asked

why she had never

had children of her own,

Laura responded,

"I never thought

I was

old enough."





Laura Archera Huxley

Photo courtesy of the Laura Huxley Trust

realm and she was transformed. Many nights Mozart's spell would wander from Laura's bedside CD player into my room to lull me into sleep.

The phone seldom stopped ringing. Beginning early each morning and unceasingly throughout the day, someone called to ask Laura for an interview, her counsel, and always to feast hungry eyes on her profound beauty. A constant throng of visitors, laden with chocolates or bouquets, kept the days busy when she wasn't setting out to accomplish any number of other projects. She was pursued for her perspicuous viewpoint, with an editor's keen eye she would rip through the clutter of language, her writings or that of anyone else. Laura could be brutally honest. A quality that was both charming and harsh. She would say between the two of them, Ginny possessed the true talent of editing; but all I ever knew of Ginny was what Laura told me.

Laura often conducted interviews while she strolled on her walking machine, or while balanced atop one of the many huge exercise balls scattered throughout the house. Her home was all light, perfectly accented with white furniture, arching windows cast sunlight across the length of her living room. "Light is everything," she remarked. Many academics had been enticed to explore the yoga of inner balance while visiting her, sometimes being compelled to accept a ball in place of a chair at her dining room table. She moved constantly and knew more about her body than anyone I have ever met. She would inform her practitioners and her doctors, who were also her most trusted friends, of any ailment and they listened intently, making house calls, providing care and any treatment at home. Everyone came to call on Laura.

Besides developing her own narratives, on which she worked judiciously with Pierro; two other of Laura's passions were: to maintain the legacy of Aldous and the development of environments for children. The latter was spurred by the arrival of Ginny's granddaughter into her life. Laura said that when Karen first visited she "threw me into a state of expanded consciousness. I wandered around the house feeling great love and compassion." This process of self-discovery offered a revealing insight, for when asked why she had never had children of her own, Laura responded, "I never thought I was old enough."

In 1977 Laura founded Our Ultimate Investment (OUI), a nonprofit organization dedicated to the nurturing of the possible human. Two of the programs set in motion are mentioned here: The first is the Caressing Room Project, where seniors are encouraged to simply

hold tiny babies. Several rooms were successfully established. The second program is Teens and Toddlers. Today this program continues to foster success in Los Angeles high schools and pairs young people with toddlers. The idea, as Laura once said, "If you want to teach teenagers about pregnancy and parenting, put them in the same room with toddlers." In England in just a few years Laura's long time friend, Diana Whitmore, propelled this work into brilliantly successful government supported curriculum in schools.

In April 1994, marking the centenary of the birth of Aldous Huxley, Laura's Foundation sponsored the highly successful four day Conference entitled, CHILDREN: OUR ULTIMATE INVESTMENT, addressing the issues of children's conditions in our present society. "The predicament of the human situation," she says, "begins not only in infancy, not only before birth, but also in the physical, psychological and spiritual preparation of the parents before conception." The name of the organization has since been changed to Children: Our Ultimate Investment ([www.children-](http://www.children-investment.org/Laura.htm)

[ourinvestment.org/Laura.htm](http://www.children-investment.org/Laura.htm)). Karen Pfeiffer oversees this project.

Laura's work with her foundation led her to success and widespread recognition in humanistic achievement. She is an Honoree of the United Nations, a Fellow of the International Academy of Medical Preventives, she possesses an Honorary Doctorate of Human Services from Sierra University, and in 1990 she received the Peace Prize as an Honoree of the World Health Foundation for Development and Peace. Laura became the 2003 recipient of the Thomas R. Verny award presented by the Association of Prenatal and Perinatal Psychology and Health for her outstanding contributions to the field of prenatal and perinatal psychology.

Every weekend Laura's home teemed with laughter, dance, mountains of wholesome fruit and vegetables, and a bounty of love when Karen's young daughter, Kaya, came to stay. To compliment the long evening meals of delectable conversation, Laura and Kaya would adjourn to the living room to share in a pas de deux, always encouraging guests to join. Abandon ensued. Laura was indefatigably nurtured by this relationship, and it is this special bond that contributed to the pure, youthful joy that she embraced since the day of Kaya's birth.

In July Laura took a fall in her bedroom and broke her hip. She still lived alone and lay for hours unattended. She had much time to think. She asked me to come when the

I commented,  
"Laura, I thought that  
you had surgery  
on your right hip."  
She quickly answered,  
"...Yes, I did,  
but I mustn't forget  
my yoga."

procedure was done. I arrived in LA the night of her surgery. The following day I went to fetch her from the hospital. Everything was ready for her arrival home. When I walked into her room she was stretching, pulling her knee to her chest. Surprised, I commented, Laura, I thought that you had surgery on your right hip. She quickly answered, "Oh, Darling it is lovely to see you. Thank you for coming. Yes, I did, but I mustn't forget my yoga. Now take me home." Laura was always her best healer. She never neglected her health. Following surgery she declined taking pain medication. Her physical therapist observed her determination and commented that regardless of age, he had never encountered a patient so driven to quickly recover. He had never met Laura Huxley.

I sometimes stayed with Laura for extended periods. I had been gone only few days when, on December 6th, Laura left me a message; her voice was strained and quiet. She asked me to "come home". I caught the 5:40 flight and arrived at her house shortly after 7:30. I rubbed her feet, gave her water, read some of the letters that Aldous had written to Humphrey. The night wore on and we briefly discussed a possible bit of inner work with the Moksha medicine on Saturday. I offered more water; I asked if she would like a smoke. I blew a few puffs across her lips and under her nose. She coughed, asked for more water, then another fluff of smoke. We said good night, and I asked if there was anything she needed before retiring, she smiled deeply, but remained quiet. Is there something? "Yes," she spoke strongly with a certainty of force, "I need," she began, "to live well or to die," she softly smiled again. Hmmm, I thought for a moment. Yes, my friend, I promise you that either one or the other will happen. Laura laughed heartily.

We often teased Laura about being the "conductor." It was the one thing, she said, that she regretted not having accomplished. Her full participation in every aspect of her life was an extension of the practice she had engaged daily. She absolutely became the conductor. A few days before she died we were talking about the process and the way that she wanted me to attend to her needs. She said, "Valerie, you will ask me everything before you do it, and I will tell you yes or I will tell you no." So—at her instruction, and under her tutelage—I ask everything, every intention to move her body, to touch her, to bathe her, to dress her, to give water. Water, water, water, always more water...one drop at a time. I ask even if I think she may not hear; even if I know she will not respond. But when listening in silence, the subtle energy presents a powerful

message. And she informs me of what to do and whom she would see.

She had planned to take LSD, as Aldous did, prior to, or as she was, dying. But each time I inquired, she responded with a faint shake of her head. On the days leading up to her death she would say, "Well, maybe tonight." As the evenings passed, she made no request. Her state of consciousness was changing swiftly. She entered into a realm of exploration of her body's function and its discomfort, of her loss of sight, of the advance of the cancer, of her thoughts, of allowing and of letting go. She asked me to post her door with several messages to those who might approach. One message read, "However my body may appear, remember that I am soul, just like you." Once Laura told me to ponder and to speak these words often, "The sensuality of the spirit and the spirituality of the senses." Then they took on an even deeper meaning, "I will have a difficult time dying, I think. I love my body so much, the sensuality, all the senses, the magnificence; I think I will not let go easily." In the end she did, with a quiet, peaceful breath, she

opened to the possibilities and she did a master's work. She died perfectly.

Two days before, she called for Diana and me to sit with her. By then I rarely left her side. She was trying to find a comfortable position. I sponged her; we dressed her in cut velvet and silk. We smoked a small amount of marijuana. She closed her eyes. We sat in that vast silence. Suddenly Laura spoke. "Emptiness, emptiness, emptiness. It is emptiness." Laura laughed with weakened enthusiasm. With that smile still on her face she looked at me, "Tell Ram Dass, it's all brand new. It Is All Brand New," in a soft, rich laugh. She began to speak about the things we all must face, uncertainty, longing, pain. But there was no remorse or sorrow, only peace and luminosity. She was stunningly beautiful.

Laura cried out from her sleep raising her right hand skyward, "Help I'm falling, I thought I was falling."

You are perfectly safe, perfectly safe.

Stay nearby.

I am right here. You are perfectly safe.

She lay quietly. The she called Michael Frederick to her bedside. Michael is an Alexander master. She told him he had a short time, less than an hour to instruct me in the Alexander technique. He was surprised, but he did as she said, coaching me to properly hold and lengthen her. Then Laura thanked Michael, he left and she took over instructing me. I understood from that lesson that I am the tool,



the only work I was to do, was with myself. From her deathbed I received this teaching. I held Laura, feeling my hands, feeling her head.

She asked, "Whose hands are these?"

Mine.

"Right hands, right hands, right hands," she kept repeating. "Right hands, right hands. Massage my heart." I did as she instructed.

A few years ago Laura showed me the shroud that she had adorned Ginny's body with when she died. She showed me the photographs she had taken. Ginny was stunning. She asked me to be certain that when I lay out her body to use this same fabric. She wanted to be cremated in it. No make up she told Piero and me. That same night she said that both Aldous and Ginny had commented on love. Aldous spoke to her, "We can never love enough." Then later in a letter written by Ginny, "We must love more than we can love." This amused her. She told me that while Aldous died peacefully, Ginny's pain was great. When Maria was dying of cancer in 1955, Aldous used hypnotic techniques to talk her through the memory of ecstatic experiences she had earlier in life. It was 1973. Laura did not know what she could do to help Ginny. Finally, Ginny was quietly released.

Aun Aprendo - "I am still learning," I read aloud from a commencement speech by Aldous, "The process goes on from the cradle to the grave and doubtless, beyond." Then Laura responded, "This is a unique line – it shows he believes in the survival of life, because we learn after we are dead. Very, very extraordinary."

The interdependent relationship between the dying person and caregiver is revealed when we sit with awareness and observe the becoming of the master. We were honored guests, participants really. In the hush of that night a nocturne drifted from the hearts of each who love her, up the stairs from the living room, across the distance, through this timeless moment. Our promise was to repeat the message of her life's work, to recall attention to alert passivity and awareness, to read what Aldous had spoken to Maria and what Laura had spoken to Aldous, to prompt with language that which continues beyond words.

In Los Angeles when a person dies at home the police must come to make a report. When they arrived I was preparing Laura's body for honoring; washing, anointing and dressing her. I was grateful for many things. Laura, cloaked in Ginny's shroud, looked exquisite, beautiful really. Two officers arrived at the house. They were young, a woman and a man. Under the man's turtleneck, sneaking above his collar and only slightly visible were tattoos. He was handsome and kind. Laura would have appreciated him. He asked me what I was doing when she died. I told him that she was an author and that I was reading

from her book, *This Timeless Moment* and from *The Tibetan Book of the Dead*. I said that we had been reading the same passages that she had read to her husband when he died in 1963. I also said that I needed to get back to tending to Laura. He looked me squarely in the eyes, "My grandmother is dying. I am going back to see her in a few days and I don't know what to say." Ah, let me send you with a copy of Laura's book. I will mark the passages for you to look at. Perhaps you will find them helpful. She would like that. He eagerly took the book in hand and then asked if I wouldn't

mind if he peeked in on Laura again. "Oh, she looks so beautiful," he said. Yes, eternally beautiful.

That era of women who possess such grace and style is concluding. We have surrendered our *i più nobili e donne eleganti del nostro tempo*. What remains is a courtship with death; it is All Brand New, built from the wisdom of the aged, of the timeless masters. "Emptiness, emptiness, emptiness. It's all brand new."

*(sempre più piano, dolcemente*

*– more and more plainly, softly, sweetly)*

*(i più nobili e donne eleganti del nostro tempo*

*- the most noble and elegant women of our time)*

Once Laura told me  
to ponder and  
to speak these words  
often, The sensuality  
of the spirit and  
the spirituality of  
the senses.

## For **Beloved Laura** and Friends

Carolyn Mary Kleefeld



Carolyn Mary Kleefeld

[www.carolynmarykleefeld.com](http://www.carolynmarykleefeld.com)

The passion  
of intimacy  
that we can share  
with another,  
in crisis and otherwise,  
seeds our beings  
and changes us forever  
beyond what we can  
imagine.

THERE ARE SO MANY FEELINGS that can't be expressed. Perhaps the most important ones must go unsaid. It seems that putting words to the soul's tremors can destroy their delicacy. When a beloved is dying, how intimate is our heart's embrace. In the midst of these raw tides, we can only cherish the poignancy of every moment.

We are all "dying" and being conscious of this sobering truth gives the moment its rightful wings. The passion of intimacy that we can share with another, in crisis and otherwise, seeds our beings and changes us forever beyond what we can imagine. A mysterious exchange of gifts flows between the caregiver and the recipient, as they become one.

The roles we play are interesting to examine. Often it is possible to see the karma or seeds of being a caregiver early on in one's life. To quote Mephistopheles: "In the end we all create the creatures we ourselves depend on," which is a thought-provoking statement. Certainly the shadows we cast are ourselves reflected, as are the rainbows.

As always, Laura made the impossible possible. I say this because the nobility and courage she lived in her dying offered me an undying strength that will live on forever as a blazing torch. I am ever fortunate to have been inspired by the muse of Laura, and to share her beams of light with you.

October 2007

Laura Archera Huxley; 1911-2007;  
beloved friend; violinist;  
therapist; author; founder of  
Children: Our Ultimate Investment

### **O eternal flower**

(for beloved Laura Huxley)

O eternal flower,  
how fragrant your scent,  
and how far-reaching your stem.

Although you've come and gone,  
you're still here, nevertheless.  
Somehow, concepts of life and death  
are too limited  
for your present formlessness

No, it's not real to me  
that you've died  
It's no more real than  
life's other illusions.

My truth is, O eternal flower,  
that you still exist — outside of time  
like a scent that forever lingers.

How infinite your spirit,  
as it travels the universe  
and mocks the smallness  
we dote upon.

O eternal flower,  
how fragrant your scent,  
and how far-reaching your stem.

No, it's not real to me  
that you've died.

It's no more real than  
life's other illusions

February 10, 2008  
Carolyn Mary Kleefeld

To find out more about Ms. Kleefeld's  
work see: [www.carolynmarykleefeld.com](http://www.carolynmarykleefeld.com)

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Carolyn Mary Kleefeld will be having an exhibit at The Frederick R. Weisman Museum of Art at Pepperdine University in Malibu, California from August 23rd to December 14th, with an opening reception on Saturday, September 13th from 6:00 to 9:00 PM. Her paintings "Dionysian Splendor" and "Laura Huxley's Departure"— as well as the art by Brummbaer and Dean Chamberlain, which also appear in this issue of the *Bulletin*— are for sale, with fifty percent of the profits going to help raise funds for MAPS research. For more information visit: [www.maps.org/catalog](http://www.maps.org/catalog)

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## Letters to MAPS

Dear MAPS...

I chose to send my support because we in the scientific community need to know more about all of these substances. Their use continues to grow, yet our knowledge about them remains fossilized (i.e. LSD-1970s, MDMA-1980s). Ignorance is not bliss. It is my hope that MORE researchers WILL be permitted access to these drugs that are LARGELY only available on the black market.

– John Gianoli, M.D.

Having received the latest (MAPS) Bulletin, I felt like a lost sailor spotting land after drifting at sea. The human mind is a miraculous thing. Coupled with spirit, it has the capacity to endure and overcome some of the most trying of circumstances. I look forward to seeing this place in my rear view mirror, and swimming in a sea of peaceful, good vibrations. Keep up the good work.

– Solo

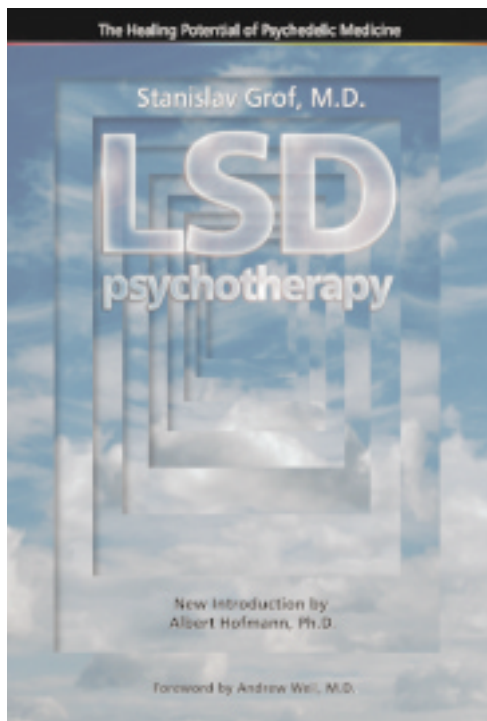
By no means am I a rich benefactor, but I do a fair amount of charitable giving nevertheless, primarily to environmental organizations, including my own non-profit, since I think that, without a viable planet, all else means little to humanity. However, I believe that people are the main problem for the environment and nothing less than a psychedelic revival has the potency to awaken the masses enough for us to collectively stop industrially defecating on our own habitat. Ergo, MAPS deserves more support and I will see what I can do.

– Research Professor  
at a Major University

I donate more to MAPS than any other group because the research that MAPS supports is a vital part of the radical transformation that humanity must experience to survive and flourish. Any methods that help people to see beyond a limited worldview and embrace a more authentic, primal, and loving life are worth pursuing.

– Glenn Smith,  
Santa Cruz, CA

### The Healing Potential of Psychedelic Medicine



## Now Back in Print **LSD Psychotherapy** by Stanislav Grof, M.D.

This classic text is once again available... in a revised edition, published this Spring by MAPS. The new edition includes a new introduction from Albert Hofmann, Ph.D., a foreword by Andrew Weil, M.D. and new afterword with contributions by L. Jerome, Ph.D., Valerie Mojeiko, and Rick Doblin, Ph.D. Also included are 40 pages of color images created by study subjects recording their LSD experiences. Printing of this new edition was made possible by generous grants to MAPS from Kevin Herbert and the Helios Foundation. Available for \$19.95 (plus shipping) from MAPS, visit our website [www.maps.org/catalog](http://www.maps.org/catalog)





Rick

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



Valerie

**Valerie Mojeiko, Director of Operations and Clinical Research Associate**, coordinates projects at MAPS' Love Creek office and facilitates psychedelic research around the globe. Formally educated at New College of Florida and the California Institute of Integral Studies.



Ilsa

**Ilsa Jerome, Research and Information Specialist**

Ilsa earned a PhD in psychology from the University of Maryland. She helps MAPS and researchers design studies, gathers information on study drugs by keeping abreast of the current literature and discussion with other researchers, creates and maintains documents related to some MAPS-supported studies, and helps support the MAPS psychedelic literature bibliography.



Josh

**Josh Sonstroem, Technology Specialist and Events Coordinator**, earned his B.A. in Philosophy and Religion from New College of Florida and is a chef, musician, poet and technologist. He immensely enjoys the depths of existential experience.



David Jay Brown

**David Jay Brown, Guest Editor**, earned his master's degree in psychology from New York University, and has been interviewing accomplished thinkers about their creative process for over 20 years. He is the author of *Mavericks of Medicine*, *Conversations on the Edge of the Apocalypse*, and five other books about the frontiers of science and consciousness. To find out more about David's work see: [www.mavericksofthemind.com](http://www.mavericksofthemind.com)



Jalene

**Jalene Otto, Membership and Sales Coordinator**, studied philosophy and sociology at Cabrillo College and the University of California, Santa Cruz. She is a story weaver and a mother.

## MAPS: Who We Are

MAPS IS A MEMBERSHIP-BASED ORGANIZATION working to assist researchers worldwide to design, fund, conduct, obtain governmental approval for, and report on psychedelic research in humans. Founded in 1986, MAPS is an IRS approved 501(c)(3) non-profit corporation funded by tax-deductible donations from members.

"Most of the things worth doing in the world  
had been declared impossible  
before they were done."

— Louis D. Brandeis

If you can even faintly imagine a cultural reintegration of the use of psychedelics and the states of mind they engender, please join MAPS in supporting the expansion of scientific knowledge in this area. Progress is possible with the support of those who care enough to take individual and collective action.

### THE MAPS BULLETIN

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



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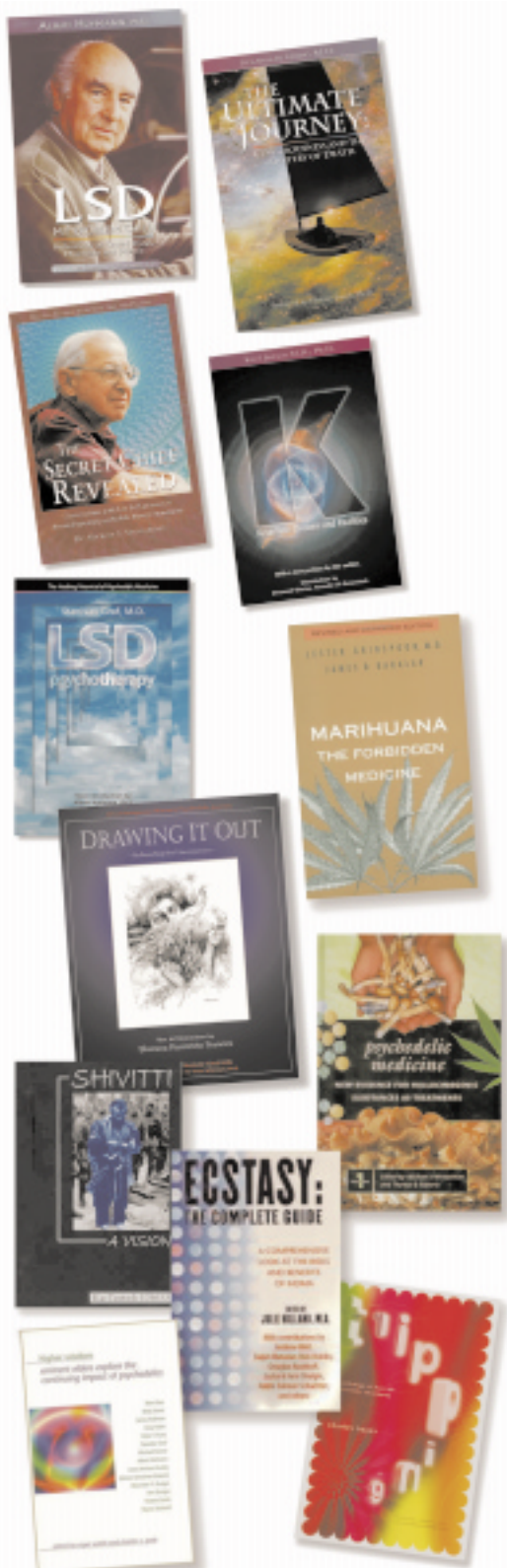
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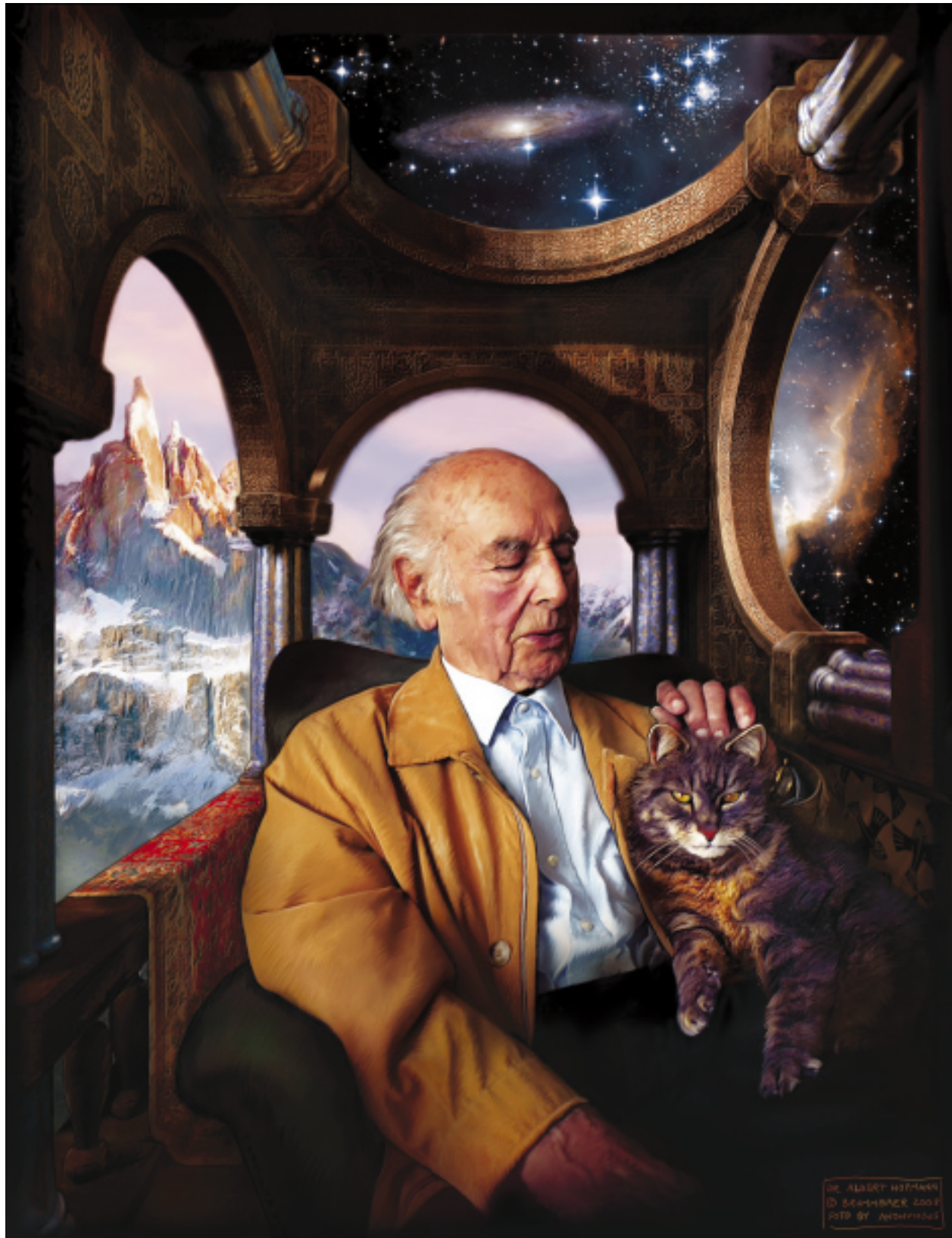






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See article by Brummbaer on page 36.





Albert Hofmann: January 11, 1906 ~ April 29, 2008

See [www.maps.org/albert](http://www.maps.org/albert) for obituaries from around the world