

MULTIDISCIPLINARY ASSOCIATION FOR PSYCHEDELIC STUDIES

MAPS



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Psychedelics and Ecology
Edited by David Jay Brown, M.A.

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for Psychedelic Studies, Inc. (MAPS)
309 Cedar Street, #2323, Santa Cruz, CA 95060
Phone: 831.429-6362
Fax: 831.429.6370
E-mail: askmaps@maps.org
Web: www.maps.org



Editor: David Jay Brown, M.A.
Design/Build: Noah Juan Juneau

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2	Letter from Rick Doblin, Ph.D., MAPS President
3	Letter from the Editor, David Jay Brown, M.A.
8	Treat Her Right: Lessons From a Medicine Walk, Kathleen Harrison
12	Psychedelics & Species Connectedness Stanley Krippner, Ph.D. & David Luke, Ph.D.
14	Consciousness Expansion & Counterculture in the 1960s & Beyond Ralph Metzner, Ph.D.
21	Could Flower Power Have Saved the World?, Gregory Sams
24	Ecology of the Inner Landscape: Green Burial, Valerie Leveroni Corral
28	Psychedelics & the Evolution of Ecological Consciousness Dragonfly de la Luz
29	From the Inside Out, Rick Harlow
30	Decoding the Cosmic Serpent: An Interview with Jeremy Narby, Ph.D. David Jay Brown, M.A.
35	Shamanic Medicines & EcoConsciousness: A Conversation with Dennis McKenna, Ph.D. David Jay Brown, M.A.
39	Salvia divinorum & Ecological Awareness: An Interview with Daniel Siebert David Jay Brown, M.A.
41	Psychedelics & the Deep Ecology Movement: A Conversation with Arne Naess Mark A. Schroll, Ph.D. & Donald Rothenberg
44	Psychedelics Can Serve as Catalyst for Deep Ecological Consciousness David Lawlor, M.A, Ph.D. candidate
46	Psychedelics, Deep Ecology, and Wild Mind, Dale Pendell
48	Peyote, Ecology, & the Inspiration for the Biosphere 2 Project John Allen, M.B.A.
50	Ecology, Technology & Biosphere 2, Mark Van Thillo
53	Accessing Ecoconsciousness: The Potential Role of Psychedelics Shena Turlington
55	The Anthropocosmic Vision of Psychedelic Environmental Ethics Sam Mickey
57	The Ecologic Niche of Psychedelic Plants, Kim A. Dawson, R.Psych.
59	Another Green World: Psychedelics and Ecology, Daniel Pinchbeck
61	Awakening the Spiritual & Mental Ecology, Michael and Violet Divine
63	Conversations with an Amazonian Shaman, Louise Reitman
65	Symbiosis of the PostHuman Identity & the Biosphere, Sara Huntley
68	To Touch Truth: Toward a Consciousness of Connection, Lily Ross
71	Who We Are: MAPS Staff
72	Membership Information

It's MY PLEASURE to welcome you to this special, themed issue of the *MAPS Bulletin* focusing on psychedelics and ecology, guest edited by David Jay Brown.

As my wife likes to tease me, I can take practically any topic of conversation and relate it to psychedelics, usually with just a few leaps of logic. With psychedelics and ecology, the connection is so direct and fundamental and so inherently present that it requires no intellectual acrobatics to perceive the connecting threads. Albert Hof-

mann, the inventor of LSD, spoke about the connection between psychedelics and ecology to psychiatrist Stanislav Grof during an interview in 1984. He said, "Through my LSD experience and my new picture of reality, I became aware of the wonder of creation, the magnificence of nature and of the animal and plant kingdom. I became very sensitive to what will happen to all this and all of us." According to Craig Smith, the reporter who wrote Albert's New York Times obituary, "Dr. Hofmann became an impassioned advocate for the environment and argued that LSD, besides being a valuable tool for psychiatry, could be used to awaken a deeper awareness of mankind's place in nature and help curb society's ultimately self-destructive degradation of the natural world."

Our exploration of the link between psychedelics and ecology in this special issue of the *MAPS Bulletin* is part of our larger idealistic, yet realistic, view of the potential of psychedelics to catalyze beneficial individual and social change. One mechanism of individual change is through the research that MAPS is sponsoring administering MDMA and other psychedelics in a clinical, therapeutic setting. Right now MAPS is sponsoring research exploring MDMA-assisted psychotherapy in the treatment of post-traumatic stress disorder in the US, Switzerland, and Israel, with more studies in development in Jordan, Canada and Spain. MAPS and an allied organization, the Heffter Research Institute, are investigating the use of MDMA, LSD or psilocybin-assisted psychotherapy in people experiencing anxiety associated with end-of-life issues stemming from cancer and other illnesses. MAPS is also sponsoring a study of ibogaine in the treatment of people dependent on opiates, and seeks to overcome the suppression of medical marijuana

research. With these studies, we hope to show the FDA, the European Medicines Agency, and society at large that these drugs have a legitimate place in our world. When enough individual patients in a society have been successfully treated, there will be a perceptible impact on society itself.

Aside from psychedelics' therapeutic applications in treating illnesses, the Council on Spiritual Practices has sponsored research at Johns Hopkins into psychedelic mystical experiences catalyzed by psilocybin. The articles in this *Bulletin*

From the desk of Rick Doblin, Ph.D.

tin demonstrate that the link between psychedelics and ecology comes primarily from the long-term changes in attitudes and behaviors flowing from these mystical experiences, which of course can and do occur sometimes in therapeutic studies and can certainly be produced without the use of psychedelics. These are core human experiences that psychedelics can help facilitate. The essence of the mystical experience is a sense of unity woven within the multiplicity, forging a deeply-felt and unforgettable common bond between humans, other life forms, nature and matter. This common bond can generate respect and appreciation for the environment, for caretaking and wonder. Mystical experiences also have political implications, as seen by Robert Muller, former Assistant Secretary General of the United Nations, who called the shaping of a global spiritually to be key to humanity's survival of the fierce passions produced by national, religious, racial, economic and gender differences in a world with technologically-advanced weaponry of ever-increasing destructive capacity.

This issue of the *MAPS Bulletin* points toward the larger implications of building a society that incorporates rather than suppresses psychedelic experiences. While MAPS' work is most frequently focused on time-sensitive details of our political, scientific, therapeutic and financial struggles to develop medical applications of psychedelics and marijuana, the link between psychedelics and ecology explored in this *Bulletin* offers a refreshing glimpse of the vaster horizons available to us all. As the Beatles wrote, "And the time will come when you see we're all one, and life flows on, within you and without you."

 Rick Doblin, Ph.D., MAPS President
rdoblin@maps.org

From the Editor: David Jay Brown



David Jay Brown, M.A.
MAPS Guest Editor
davidjay@maps.org

Merry Prankster and technophilic creator of *The Whole Earth Catalog* Stewart Brand once described an LSD trip that he had in 1966 where he imagined looking at the Earth from space. He thought that a photograph of the whole planet would change people's perceptions of the world for the better, and he didn't understand why NASA hadn't released any photos of the whole planet yet. After his LSD trip, Brand began printing buttons with the question, "Why haven't we seen a photograph of the whole Earth yet?"—which he sent to scientists, secretaries of state, senators, people in the Soviet Union, United Nations officials, and leading-edge thinkers. In 1968 the Apollo astronauts sent back the first color photos of the Earth from space, and, a year later, Earth Day was founded by peace activist John McConnell.

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According to Brand:

Those riveting Earth photos re-framed everything. For the first time humanity saw itself from outside. The visible features from space were living blue ocean, living green—brown continents, dazzling polar ice and a busy atmosphere, all set like a delicate jewel in vast immensities of hard—vacuum space. Humanity's habitat looked tiny, fragile and rare. Suddenly humans had a planet to tend to. The photograph of the whole Earth from space helped to generate a lot of behavior—the ecology movement, the sense of global politics, the rise of the global economy, and so on. I think all of those phenomena were, in some sense, given permission to occur by the photograph of the Earth from space.

Seeing a photograph of the Earth from space undoubtedly created a paradigm shift in the collective human mind, for the reasons that Brand points out. However, it's also interesting to note that Brand's insight first arrived in an LSD vision, as many people have said that their experience with psychedelics helped to increase their sense of ecological awareness. In fact, a number of people believe that the modern ecology movement was,



at least, partially inspired by the collective use of psychedelic drugs and plants that began in the 1960s and continues to this day. There is evidence that psychedelics played at least as vital of a role in the creation of the worldwide Green movement as Rachel Carson's classic 1962 book about the environmental dangers of DDT, *Silent Spring*.

For example, Arne Naess, who founded the Deep Ecology movement in 1973, was profoundly influenced by his LSD experience in 1968. Mark Schroll, Ph.D. discusses Naess's work in the pages that follow, and provides an excerpt from an

interview with Naess about his LSD experience. Mycology expert Paul Stamets—author of *Mycelium Running*—credits his increased sense of ecological awareness to his experiences with psilocybin mushrooms. Freeman House—the author of *Totem Salmon*, who has been involved with a community-based watershed restoration effort in northern California for more than twenty-five years—has said that psychedelics played a role in his sense of ecological awareness. John Allen—who conceived and organized the building of the Biosphere 2 project in Arizona, the most ambitious environmental experiment of our time—was initially inspired by his experience with peyote. As psychologist Ralph Metzner points out in the following essay, psychedelic movements and ecology movements often go hand-in-hand.

Some commonly-reported characteristics of the psychedelic experience include a boundary-dissolving sense of unity with nature, a feeling of interconnected oneness with the natural world, a sense of how sacred, fragile, and precious all life is, and a long-term evolutionary perspective on our current historical situation—all of which can contribute to a greater sense of ecological awareness. These insights are described in exquisite poetic detail by the late philosopher Alan Watts in his classic book on psychedelic experiences in nature, *The Joyous Cosmology*. The late Swiss chemist Albert Hofmann, who discovered LSD and psilocybin, remarked that psychedelic drugs helped him to reexperience a sense of sacred oneness with the natural world, similar to the spontaneous mystical experiences that occurred during his childhood.

Even without the assistance of psychedelic molecules nestled in the synapses of one's brain, often, just being out in nature can expand an urban dweller's consciousness into transpersonal dimensions, and there has been quite a bit of nature-inspired mysticism, writings and artwork—from Henry David Thoreau and William Blake, to contemporary poets and artists, like Carolyn Mary Kleefeld, whose beautiful painting was featured on the cover of the *Bulletin* that I edited last Spring, and photographer Klea McKenna, who shares some of her work with



Photo of Nina Wise by Klea McKenna. www.kleamckenna.com

us in this Bulletin. This issue also includes remarkable visual art by Penny Slinger Hills, Michael Brown, Luke Brown, Rick Harlow, Salome Starbuck, and Sara Huntley that address the theme of ecology and psychedelics.

Certainly not everyone who has done a psychedelic becomes more ecologically aware, as anthropologist Jeremy Narby points out in the interview that we did for this Bulletin. For example, early psychedelic researcher Timothy Leary was actually opposed to the ecology movement—at least for a time—and called the whole field “a seductive

dinosaur science” because he was convinced that the human species would soon migrate into space. Nevertheless, many people in the West—including myself—credit their increased sense of ecological awareness to their use of psychedelics, and indigenous cultures that integrate psychedelic plants into their lives appear to live in greater harmony with their environment.

Since every life form descended from common ancestors, we are literally all related, and it's not merely metaphorical to speak about our kinship with other organisms and our unity of the biosphere—it's a living truth. We are inseparable from the intricately interconnected web of life on this planet, and what we do to the web, ultimately, we do to ourselves. Psychedelics may sometimes allow us to see these often-hidden connections a little more clearly—but the connections are always there. In fact, our entire existence is built upon them, and unless we begin to pay attention to these fragile environmental connections, humans may soon be just one more species—as most are—that is lost forever to the dark void of extinction.

With a massive reduction in biodiversity on the planet, global warming on the rise, and other signs of serious climate change growing ever more ominous, the possibility that we can increase our ecological awareness certainly seems like a timely topic for discussion. That's why this special theme edition of the *MAPS Bulletin* brings together scientific authorities and artists, from a variety of disciplines—both seasoned experts and young thinkers—to explore the important relationship between ecology and psychedelics.

Awakening the Gaian Mind Within

The biosphere is a thin layer of microbes, fungi, plants, and animals that surrounds the Earth. It is a self-sustaining system that is powered almost entirely by sunlight. Through decomposition, and the recycling of basic elements, the biosphere works such that the waste from one group of species becomes the resources for another group of species, and nothing is wasted. The life forms of the biosphere create a dynamic system so delicately balanced that it appears to be self-regulated, and many people have come to see the entire biosphere as operating in a way that is akin to a single organism, a single cell, or a single interconnected system. The late physician Lewis Thomas wrote a classic book exploring this subject in 1974 called *The Lives of a Cell*, and NASA scientist James Lovelock (along with microbiologist Lynn Margulis) developed a compelling theory that views the biosphere, as a living, self-regulating system, called the Gaia Hypothesis (first published in book form in 1975 as *Gaia: A New Look at Life on Earth*, although the idea was first put forth in the mid-1960s). The Gaia Hypothesis has become a powerful meme in the psychedelic community.

Lovelock's theory helps to explain how the delicate chemical ratios in our planet's oceans and atmosphere are consistently maintained such that life is possible. According to the Gaia Hypothesis, it's no accident that the environment on Earth is so ideal to support life. The Gaia Hypothesis has been extremely popular in the psychedelic community, and it is often mixed in people's minds with spiritual notions of a primordial Mother Earth goddess. Many people—such as the late ethnobotanist Terence McKenna—have speculated that the biosphere, or Gaia, may have a type of intelligence far and above what Lovelock acknowledges, and that psychedelic fungi may allow communication between human beings and the planetary mind. Many people have reported that their use of psychedelic plants—especially ayahuasca, peyote, psilocybin mushrooms, ibogaine, and *Salvia divinorum*—brings them in touch with what they describe as an “intelligence in nature.” To explore this idea further, I interviewed anthropologist and environmentalist Jeremy Narby, author of *The Cosmic Serpent*, for this *Bulletin*.

I also interviewed botanist Dennis McKenna, Ph.D., coauthor (with his brother Terence) of *The Invisible Landscape*, to discuss these ideas, and about the possibility that the widespread use of psychedelic plants and fungi around the world could be the biosphere's decisive response to human patterns of ecological destruction, and that an intelligence in nature may be utilizing psychedelic plants as catalysts to increase human ecological

awareness, hopefully, before it's too late. There's interesting evidence to support this commonly-encountered idea in the psychedelic community. According to mycologist Paul Stamets, psilocybin-containing mushrooms tend to grow in areas that are disturbed by ecological upheavals, such as where roads are cut into a forest, the grounds around a construction site, and landslides. They seem to especially proliferate in areas where there has been a lot of human activity, almost as if they are a response to our use of the Earth.

In *Psilocybin Mushrooms of the World*, Paul Stamets explains:

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Before the impact of human civilization, psilocybin species were largely restricted to narrowly-defined ecosystems, and they tend to thrive after ecological catastrophes. Landslides, floods, hurricanes, and volcanoes all create supportive habitats for many *Psilocybe* mushrooms. As humans destroy woodlands and engage in artificial construction, *Psilocybes* proliferate, feeding on surplus wood chips and refuse, especially in the interface environments, wherever humans, forests, and grasslands struggle to coexist. Since human development seems inextricably associated with ecological disturbance, *Psilocybe* mushrooms and civilization continue to coevolve. Today, many *Psilocybes* are concentrated wherever people congregate—around parks, housing developments, schools, churches, golf courses, industrial complexes, nurseries,

gardens, city parks, freeway rest areas, and government buildings—including county and state court houses and jails! This successful adaptation is a comparatively recent phenomena; in the not-too-distant past, these species were competing in a different environmental arena. Many of the *Psilocybes* are now evolving in a decidedly advantageous direction, parallel to human development. The way these mushrooms have evolved in close association with humans suggests an innate intelligence on the part of the mushrooms.

It almost appears as though psilocybin mushrooms are a response by the biosphere, like a chemical signaling system within the body, to help the wayward human species become more symbiotic with its environment. Can it really be a mere coincidence that a fungus reported to increase ecological awareness specifically proliferates in those areas that are ecologically damaged? Once restricted to very narrow ecosystems—thanks to human activity—these mind-expanding mushrooms now flourish all over the globe. *Psilocybin* mushroom and ayahuasca-using cultures, also once restricted to a few areas in central Mexico and South America, are also now spreading

all over the planet, like a mycelium network.

There are now hundreds of ayahuasca churches established throughout the world, and the U.S. Supreme Court even allows one of them to operate legally within U.S. borders. According to anthropologist Luis Eduardo Luna, Ph.D., studies done in Brazil suggest that ayahuasca use tends to make people more sensitive toward ecological issues. Fieldwork among members of the syncretic churches, for example, reveal that many of them decided after participation in ayahuasca rituals to change their professions so that they could work with natural products or environmental issues. In the pages that follow, Environmental Sustainability Consultant Shena Turlington reports on several scientific studies that shed light on this important connection between psychedelics and increased environmental awareness.

As I mentioned earlier, one person who was inspired by his use of psychedelic plants to explore new ecological frontiers was Global Ecotechnics founder John Allen—who conceived and organized the building of the Biosphere 2 project in Arizona, the most ambitious environmental experiment of our time. Biosphere 2 is a miniature Earth under glass and the world's largest laboratory for global ecology ever built. It is the largest artificial, self-sustaining ecosystem, and it is truly a masterpiece of human engineering. For two years and twenty minutes, inside a completely sealed, glass-enclosed 3.15 acre environment—composed of miniature replicas of all the earth's environments, and housing 3,800 species of plants and animals, designed to function together as a single system—eight courageous men and women had to grow all their own vegetables, raise all their own livestock, and live so that a hundred percent of their waste was recycled.

In other words, the animals and plants in Biosphere 2 had to produce all of their own biological resources without polluting one another out of existence. Now, in larger sense, the same sort of process that goes on inside Biosphere 2 is going on with the planetary biosphere that we call home, only it's not as obvious. The plants and animals on this planet create all of the nutrients necessary to sustain life from one another's waste, and any chemical toxins or heavy metals that we release into our atmosphere or oceans quickly finds its way into the air we breath and the water we drink because the biosphere is a single system. This is why you find the flame retardant used in American children's pajamas in the fatty flesh of animals that live in the Arctic Circle.

Biosphere 2 was the most tightly sealed structure ever built by human beings and no air, water, or food could be brought in from the outside once the project began. Many scientific discoveries and new technologies have resulted from this ambitious project. In his book *Biospheres*, science writer Dorion Sagan—the son of

Carl Sagan and Lynn Margulis—builds upon Lovelock's Gaia Theory and explores the possibility that the Earth's biosphere is an organism that's "actually on the verge of reproduction," and that Biosphere 2 is it's first offspring. In John Allen's recently published memoir *Me and the Biospheres*, he recounts the story of how Biosphere 2 came to be, and he reviews the evolution of his thinking on this fascinating subject.

In the following pages, John shares with us how his participation in a traditional Huichole Indian peyote ritual brought him a new perspective of the biosphere, which lead to the development of Biosphere 2. Also, one of the brave "biospherialians"—Mark Van Thillo—who lived inside Biosphere 2 during its first two year inaugural mission, and presently helps run the Planetary Coral Reef Foundation, joins us in this special issue to discuss how his psychedelic experiences inspired his interest in integrating ecology and technology.

Spiritual Malaise in the Biosphere

Some people think that the ecological crisis on this planet reflects a deeper, underlying spiritual malaise, that psychedelics help to illuminate and heal. For example, after a historical review of how psychedelic plant substances have come into use, and the impacts that they have made upon different cultures throughout history, psychologist Ralph Metzner, Ph.D. associates the use of these substances with political developments that help to counter the mounting environmental crisis. Metzner said:

Certainly, it is not difficult to see the parallels in several cultural movements that seek to correct the dangerous imbalance in humanity's relation to nature: in deep ecology and ecofeminism, which call for a respectful, egalitarian, ecocentric attitude towards the natural world; in the organic gardening and farming movements, which seek to return to traditional methods avoiding chemical fertilizers and pesticides; in the movement to increased use of herbal, nutritional and complementary healing modalities with less reliance on high-tech interventions; and in several other philosophical, scientific and religious movements...

According to Metzner, the greatest environmental threat that we face isn't the depletion of ozone, or the world's natural resources, it's the depletion of the human spirit. The global ecological catastrophe began when the religions of Western civilization were no longer based on living harmoniously with the Earth. "Once Western religions began to seek dominance instead of partnership with nature, we created a pathology that led to a massive destruction of the human spirit and a frightening worship of consumerism to fill the void. Simply put, by disrespecting and destroying the Earth, we are disrespecting and destroying what sustains the human spirit," explains

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Metzner. In the pages that follow, Metzner addresses this idea further, and explains the importance of developing a system of eco-psychology.

So far as we know, no other planet in our solar system supports complex intelligent life. Our planet is special. It's a precious jewel floating in the empty blackness of space, and it's all we have to call home. Reading James Lovelock's most recent books, *Revenge of Gaia* or *The Vanishing Face of Gaia*, or watching Al Gore's *An Inconvenient Truth*, can be far more frightening than watching *Night of the Living Dead*, on Halloween night, all alone on a hundred micrograms of LSD. Humans are seriously interfering with the fragile web of life and all of civilization is at stake. Although the consequences of what we're doing are unknown, the scientific reports that are coming in don't look good. We are living in a time that is marked by one of the most widespread mass extinctions in the history of our planet.

Conservation biologists tell us that climate change, habitat destruction, ozone depletion, toxic chemicals, and invasive or infectious species are driving biodiversity on this planet back 65 million years, to the lowest level of vitality since the Age of the Dinosaurs. The increase in green house gases, like carbon dioxide and methane, the massive migration of heavy metals into the biosphere, deforestation, the loss of biodiversity, the widespread use of pesticides, the spread of radioactive waste, and other environmental toxins are—according to environmental biologists—overwhelming our precious biosphere's ability to maintain the cozy Goldilocks temperatures that we've become so accustomed to.

If humans disappear into extinction, the biosphere will go on. We're not nearly as important to the biosphere as bugs and insects, microbes and bacteria. Biologist E.O. Wilson once said, "If all mankind were to disappear, the world would regenerate back to the rich state of equilibrium that existed ten thousand years ago. If insects were to vanish, the environment would collapse into chaos." Nonetheless, we are a uniquely creative, technological species, linking together a knowledge-based, electronic communication system around the globe. Our engineering activities have lead physicist Peter Russel and others to speculate that the fiber-optic network that our species is constructing around the planet serves as a "global brain" in the developing planetary organism, so Gaia may have reason to keep us around.

Despite all the blaring warning signals from climatologists, there are also good reasons to have hope for the human species and the future of our biosphere. The founder of systems philosophy Erwin Lazlow—who was

one of the first people to start warning us about the (now obvious) "limits to growth" back in the 1960s—presently sees our current ecological problems as a "decision window" where we not only face the danger of total global collapse, but also the opportunity for renewal of the world. In his recent book *The Chaos Point*, Lazlow points out that there is a measurable cultural shift occurring around the planet, as public opinion is changing, and societies are developing more sustainable, environmentally-aware public policies in response. Complex systems that approach a state of disequilibrium, like our biosphere, are difficult to predict because small changes can quickly grow exponentially.

Lazlow believes that we're in a race against time, and that it's not too late to turn things around—but we must act quickly! Either we reorganize ourselves into a more sustainable equilibrium with our environment soon, or the biosphere will reorganize itself on a lower level of complexity, wiping out whole human civilizations, like tsunamis crashing against a city of sandcastles.

Personally, I'm optimistic about the future of our biosphere, and I think that we're going to make it to the next level of evolutionary order—largely because of my experience with psychedelics and my faith in the human spirit. I realize that there isn't much time left to rescue our biosphere from serious damage, and that things look pretty grim from an ecological perspective, but I've personally witnessed just how quickly psychedelics can psychologically transform people and open

up their eyes. I agree with the McKenna brothers, that the planetary mind, the Gaian matrix that we're immeshed in, is far more intelligent than we are, and this intuition helps motivate me to harmonize with it. I like reflecting upon a message that Dennis McKenna brought back with him from one of his shamanic encounters, "You monkeys only think you're running the show."

Psychedelics can help us heal the damage that we've done to ourselves, and to the Earth. This is why I believe so strongly in the research that MAPS is doing. There isn't much time left before our biosphere starts to unravel, and we may only have a small window of opportunity to save our fragile world. I think that MAPS—and our sister organizations, like the Beckley Foundation and the Heffter Research Institute—are industrialized society's best hope for transforming the planet's ancient shamanic plants into the respectable scientific medicines of tomorrow, and, in so doing, bring psychedelic therapy to all who need it. This may not only help to heal a number of difficult-to-treat medical disorders, and increase ecological harmony on the planet, but it may also open up a doorway to untold and unimagined new worlds of possibility. •

Can it really be a
mere coincidence that
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Treat Her Right: **Lessons from A Medicine Walk**

by Kathleen Harrison



Kathleen Harrison
kharrison2@earthlink.net

Kathleen Harrison, ethnobotanist, has over thirty years of fieldwork experience in Latin America and has helped establish ethnobotanical teaching gardens in Peru, Costa Rica and Hawaii. For fifteen years she has participated in an exchange of nature-based knowledge with indigenous people in the mountains of Mexico. She teaches ethnobotany field courses for the University of Minnesota (in Hawaii) and Arizona State University (in Ecuador). Kat is also a botanical illustrator who enjoys helping people learn to see nature. She is currently writing a book about what she has learned.

To begin with, I'll go out on a limb: Nature loves it when we take psychedelics and wander around, appreciating her, in a state of respectful awe and gratitude. For the ease of language and because we don't know otherwise, I'll personify her—this grand, sentient, multi-formed presence. Some call her Gaia, an ever-transforming yet meta-stable entity who is far more than the sum of her amazing parts, but we'll just call her nature here. She is embodied in all the living things, the elements, the planet and, some say, the heavens.

Our psychedelic experience in nature initiates us into the awareness that we had as very small children, when everything was a wonder to behold; or that our ancestors had, not so long ago, until they got so obsessively rational; or that some indigenous people still know and cherish. Psychedelics are not the only way to get there, to this state of exalted perception, but they are indeed a class of species and related molecules that have come into our collective Western hands at a time in history that desperately needs medicine for its ills. Nature needs her humans to know and love her, to remember how to treat her kindly. So much of the human world is so very far from nature now, that even many of us who regularly send monetary contributions and vote to preserve or protect nature somewhere barely give ourselves time to be immersed in it.

In our lengthy cultural ignorance of the natural world, we've forgotten how to even look, much less see what's there. Being in nature is an opportunity to cultivate the child-eyes, the child-mind that neither knows nor presumes to know. We have learned that psychedelics can help us examine complex or hidden things and come to understand them, appreciate them, or untangle them. That's part of the

action of the medicine, and that action is how we are opened to seeing nature. To be able to truly see, we must truly look, we must want to see. Careful use of psychedelics can help re-animate and liberate our de-animated and colonized psyches—that's part of why these plants, mushrooms and molecules are still largely kept underground. Animation of the psyche and the recognition of animate nature go hand in hand.

Whenever we meet nature—in the garden, in the wild, in a dream, or under a starry sky, in any state of mind—we are illuminated by the effort. We don't necessarily understand all that we see, but by turning our senses toward her, we glimpse the great natural mysteries and bring some realization home to savor. This is even truer when we explore nature while a fine psychedelic heightens our senses. As a lifelong nature-girl, traveler, teacher, and as a mother, I've always been an advocate of outdoor education for all ages. Just go outside and look around, you'll learn something, and your troubles may be put in perspective. But I must say that my own experiences in nature with one of the venerable psychedelics have been some of the very best educational moments I've ever had.

Learning to See

In the ongoing love letter from my heart to nature, I can say there is nothing like being a human nestled in the natural world, enhanced by sacred medicine, somewhere off the beaten path, perhaps in a glen or garden that I know well, perhaps on my favorite hike.

In that state, we are really attentive, and wide open: open to seeing with new eyes, open to experiencing wonder. If we are in that state, then nature seems to come forward to meet us, showing us her sparkling day, her great soft meadows, her jeweled creeks, the birds singing in her hair. In that state, I trust that everything seen is real, and astonishingly true to itself. The aesthetic is reliably exquisite.

So let's say we go for a walk through the woods and over the hill on a beautiful spring day, a "medicine walk" some call it, which means the walker's perceptions are enhanced by psychedelic medicine. Of course we need to know the lay of the land, where the path is, where it leads, how to find our way back, where the shifty edges are, if there are dangers to be aware of, and we should be supplied with warmth, water, a little nourishment, a good hiker's common sense, and the finest medicine we can come up with, in a dose appropriately modest, for walking, for looking, for tuning in to what we see. (This kind of foray is not the best for melting, best save that for your inner sanctum.) We must keep our bearings, and most likely it's wise to have a friend along. We take time to invoke vision, expanded awareness, and protection. We honor the spirit of the place to which we have come. Small, spontaneous, intuitive ritual helps us cross over from our busy-mind world, to become present. We stop to thank the medicine and ask for clarity and insight on the path.

As we come into psychedelic focus, we begin to notice that the myriad designs of every member of the flora and fauna answer nature's fundamental operational question, "What works?" This works, they say, and this!: See my wings, my bark, my skin, my roots, my seedpods? See me nodding in pleasure as my pollinator visits me again, and again. See my spores waft away on the breath of the land? See how we species meet, and

cooperate, reproduce and reciprocate, even die and recirculate? And so as we watch with our clearest eyes, they carry on the show far beyond the described, explicit form and function; beyond our slim understanding of the niche each species fills; into the absurd, brilliant, touching dramas of our fellow beings. Or maybe they reveal entrancing or even ominous patterns: leaves seem to be arranged like beaded chevrons on undulating serpent skin.

Can it be, they appear to be arranging themselves as I watch, or is it an unfelt breeze? There we see a pattern of growth unfolding before our eyes, here we recognize the eons of strata revealed across the canyon. Eons. Branches seeking to grow away from the winds, nestled in the hollows, hugging the low spots, making shelter for the fragile ones, the ferns tucked into crevices. On this magical walk, we seek the roots too, the shade, a place to rest our backs against a big trunk in deep meditative empathy. We can feel the lifeblood of the tree running up to the sky, flowing throughout its limbs with nourishment derived from the absolute miracle of photosynthesis. Later, as we reach the ridge, the ocean breaks in the distance, wildflowers vibrate in the breeze, the sun hangs shy behind its thin veil of clouds, tall grasses like fur rise on the backbone of the hill. Astonished, we realize that we are standing on the head of some great beast lapping at the river curled around its haunches far below, leaning into the wind, sheltering its young, those hillocks behind us... "Wow!" is the appropriate comment. Foliage softens the edges, rocky outcroppings round out the subtle palette. We are overwhelmed with gratitude. We gaze over the vista and it is clear that nature and culture embroidered together form the quilt that now lies over the world.

Reciprocating

Experiencing a deep love of nature rewards us with insight and pleasure, and we are wisely grateful, but it also initiates the impulse to protect and nurture that which we love and recognize. This principle of reciprocity is inherent in traditional indigenous systems of both ecological and spiritual management. Everything is an exchange of energy and

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awareness. Practically speaking, the widespread psychedelic awareness of nature, coming out of the Sixties, helped birth the entire environmental movement. Many activists and key thinkers in this field have been motivated by their psychedelic experiences to embrace and expand the notion of environmental stewardship: caring for the land and its species, keeping the wild places wild, understanding what wild even means, learning the old ways that had a lighter touch, maintaining unspoiled shorelines, restoring health to damaged waterways, creating sustainable systems of farming that are not toxic to the land and water, and educating our young to love these places from the start.

In the arts, sciences and digital realms, experiences with these sacred medicines have been the ah-ha! moment in the evolution of a career or the solution to a problem. We all know this, it's just that psychedelics (whatever you choose to call them) are still taboo, so it's still hard for all those who've been inspired by them to admit their inspirational experiences. Well, those psychedelic revelations—revealed information—work the same way when we think about how to care for our home, our planet. People realize that we must take care of her, and this path of wondering can lead us to answers about how to take care of her. Of course the planetary stewardship meme is much more widespread than the direct psychedelic effect, but movements evolve that way: Uplifted and inspired by remarkable insights, people form a dream of a better way, then by tapping into ancestral memories, weaving in indigenous views, finding those elders who'll share what they know, and using our creative intelligence, a practical concept or a way to live ripples out into widespread awareness. We're seeing the fruits of psychedelic thinking in some of the many solutions that people are working on right now.

Treat Her Right

Nature, it seems to me, also reciprocates, and holds us with a special sweetness when we regard her through our sacred medicine.

One night I went to sleep asking for guidance, and to know a few key words that I could share with a crowd of psychedelic advocates who were meeting

the next day. As I awoke the following morning, I became aware of simple words that were waiting for me: "Treat her right." They were perfect as words to live by: Treat her—the planet, the plants, the feminine in all her forms—as though she were your own self, your beloved. Treat the psychedelic plants and their uses respectfully, and take care of the planet they and we live on. That means that, yes, we join the best environmental projects or groups that we can find or initiate, and that we also take time to be in Nature, wide open so that she can heal us of our grievous wounds. I think one of the coolest causes is bringing very urban kids to the country, the forest, or the shore, the kind of places they've never seen. They just open up and are amazed. They were starving for nature. Aren't many people starving for nature, and they don't even know it? So, to be clear here, I'm advocating "outdoor education" for all, and for some of us who are mature, up to it, experienced, and oh so careful, maybe a special enhanced day in nature?

Be careful, I must warn you, watch your step! The plants and fungi have been known to hijack humans! Many of us! Of course, those of us who've been hijacked seem to be pretty darn happy about it, so there's that. But so many people have turned toward plants, toward growing things, from what they thought was their career, it's laughable. In the Amazon, a number of native groups recognize a spirit-being that appears sometimes in the forest or at its edge: a small man, with a club foot or something that causes a limp, sometimes with a cane, a friendly enough fellow, but he's tricky and will ask you your name, then may ask you to come with him, to show you something, take you into the forest. You mustn't go, they say, because you may never come back. He takes people into the wild and they may be made to forget the world they came from, their families, and their homes. Who is that trickster? Why is there a story with a warning about wild enchantment and good judgment? Discernment is always important, whatever the endeavor, even or especially when we are engaged with powerful spiritual medicine. Who is asking what of you? Where will the unchecked impulse

lead you? The experienced people recommend that you not be fearful, just be discerning. In psychedelic investigations, both internal and external, balance the thrill, and the risk, with the means and knowledge of how to get home in good shape, the wiser for it.

Some of the psychedelic flora actually show you nature, and literally teach, even if you are not out in it, with your eyes open. Ayahuasca can facilitate various kinds of learning, but one that many South American healers cite as instructive is an archetypal experience that I had when I first encountered the medicina tradition in the Amazon in the 1970s: While I was sitting in a traditional ceremony, in a circle with savvy indigenous folks, I had a visionary experience of being taken by the hand, led along a path in the forest, stopping to examine certain plants. I was clearly told something about each of them, their personas and their use. The vine-and-leaf duo that make up ayahuasca are known as teachers, and they take their job very seriously, as other teacher species do too.

Years later I had taken a large dose of psilocybin mushrooms on beautiful tropical land that I knew well. As I sat in meditation, I was led in my mind down a familiar trail, past the marvelous plants that are native to that place, to a particular tree whose form I had admired. There, gloriously, stood Kuan Yin, framed in the cleft of the tree. I could barely cast my eyes on her beauty. She asked me a key question, then sent me back up the trail, back into my sitting body. I had received comfort, counsel in the form of a question, and I knew how and where to find her: nature in the form of a psychedelic mushroom opened the possibility to me. Nature in the form of a compassionate goddess drew me to her, then offered potent communication. Nature brought me back up the path and back to myself, to my waiting body: I who am nature too, just like you.

Awe leads to humility. It gets you outside yourself, and puts your story in appropriate perspective as an instant in a very long saga, the one we're all in together. That we humans, and human cultures, are embedded in natural cycles becomes obvious. The question—and psychedelics certainly raise more questions than they answer—is how do we best 'wear' and 'articulate' that fact of being creatures with unusual agency in nature's timeless epic.

Where the Path Goes

Part of tuning deeply into the natural world and its sentience is that one feels, in the roots of one's being, the profound tragedies of species and habitat diversity now lost forever, and the heartbreak of current teetering extinctions. We feel pain too from the fact that we humans hack away at the planet that nurtures us. Tears of grief may flow and that is fine, as it should be. Part of knowing and loving the natural world is mourning her suffering and that of everyone born of her. To be washed in your own wise tears is a cleansing that is in itself a gift. Grief integrates and becomes compassion; informed compassion arises as conscious action.

We humans have largely forgotten how to let nature intimately into our awareness. We have forgotten that we are nature, however fragmented and separate we may feel, yet it has not been that long since we knew we were part of it. The emergence of psychedelics into so-called Western culture is surely an offering from what's still possible—they are a key medicine that we need, golden threads that can at least help heal the rift, heal the world. Exploring the wonders of the world, and the worlds within, is part of the reunification of reality.

That revelation that you had when you focused in on the single dewdrop dangling on the tip of the leaf and you saw the whole world in it? That's the one to carry with you as you do your part. •

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Psychedelics and Species Connectedness

THE FACT



Stanley Krippner, Ph.D.
Saybrook Graduate School
skrippner@saybrook.edu



Photo of David Luke by Jonathan Greet

David Luke, Ph.D.
Beckley Foundation
drdluke@gmail.com

THE FACT that this issue of the **MAPS Bulletin** is given over solely to ecology suggests that at the very least the consumption of psychedelic substances leads to an increased concern for Nature and ecological issues. On one level we can understand that this may be due to a basic appreciation of place and aesthetics that accompanies the increased sensory experience, or that since psychedelic plants come from Nature we are forced to enter its realms when we search them out. However, on a deeper level we can also appreciate that a communication with Nature may on occasion occur through the phenomenological properties of the psychedelic experience, some of which have been hailed by experiencers as life-transforming and spiritually renewing, even “mystical.”

With the aid of mescaline Aldous Huxley came face to face with such a mystical experience, even though the Oxford Theologian R.C. Zaehner (1957) denigrated his experience of “nature mysticism” as somehow inferior to the “genuine” theistic mystical experience. Yet the irony remains that the very split from Nature that some Christian theologians claim occurred in the Garden of Eden may lie at the heart of many people’s current sense of separateness from their ecology. Whereas, under specific circumstances of substance, set, and setting, psychedelics are capable of augmenting such a reunion. Despite Zaehner’s derisions, Huxley (1954) reportedly witnessed this reunion through his experimental uses of mescaline: “I was seeing what Adam had seen on the morning of creation – the miracle, moment by moment of naked existence” (p. 4).

Is it this naked existence that reconnects the natural environment to the mental capacities of those psychedelically-inspired experiencers? This type of experience forges a way of thought that is filled with ethical, ecological implications, and which is reflected in the work of shamans, alchemists, and other practitioners who respected nature (Krippner, 1994/1995). The patriarch of psyche-

delia, Albert Hofmann, demonstrated this by reporting that a mystical nature experience he had had when he was young prefigured his discovery of LSD. He stated that “...my mystical experience of nature as a child...was absolutely like an LSD-experience.... I believe I was in some fashion born to that” (Hofmann, Broeckers, & Liggensstorfer, 2009, p.2). Hofmann wrote about attaining “one-

ness with Nature,” and it is this feeling of unity that characterizes many of these experiences described as “mystical,” no matter how diverse they might be in other aspects.

Throughout his long life Hofmann increasingly drew upon the great hope that psychedelics were the key to this reconnection for others. When asked about the role that LSD had played in bringing people back to Nature, he commented,

It has given many people good ideas, and those who have gone back to Nature have been saved. Many people, however, are still stuck in technological Hell and cannot get out. Nevertheless, many have discovered something which hardly exists in our society any longer: the sense of the sacred. (Hofmann et al., 2009, p.6)

Always vocal on ecological issues, Hofmann recalled that among his most satisfying experiences were hearing young people say things like, “I grew up in the city, but once I first took LSD, I returned to the forest” (Hofmann et al., 2009, p.4).

Providing us with an insight into the cause of this yearning for a return to Nature, based on their extensive experiential research with psychedelics, Masters and Houston (1966) noted that,

...the [psychedelic] subject, almost from the start, already has achieved a kind of empathy with his [or her] surroundings as a whole...That is to say, nature seems to the subject a whole of which he [or she] is an integral part, and from this characteristic feeling of being a part of the organic ‘body of nature’ the subject readily goes on to identify with nature in its physical particulars and processes.

But if a person is empathizing with Nature in this state, whose feeling’s is she or he feeling? The notion that there is some entity with which to empathize implies that the thing itself has emotions, and the idea emerges that Nature itself and the beings who inhabit it – be they animal, vegetable or perhaps even mineral – are also sentient.

Such animism is at the root of all shamanic belief systems, and, as Jeremy Narby (2006) noted, shamanism involves

“attempting to dialogue with nature” (p.16). In shamanism, of course, this communication is frequently achieved through the ingestion of psychedelic plants, fungi, or other natural substances (e.g., Krippner, 1994).

As a nature-based epistemology, shamanism is ecological to its core. The shaman is a caretaker of Nature and a negotiator between people and “other-than-human persons,” as Graham Harvey (2005) called them in his “Animist Manifesto.” For Harvey, it is humanity’s fungal friends themselves that transmit the idea of animism the best: “Maybe sometimes the mushrooms just want to help us join in the big conversation that’s going on all around us.” (Harvey, 2005, p.128)

Mycologist Paul Stamets speculated that mushrooms have a hidden agenda to bring humans into communication with other species. In studying the taxonomy of the *Psilocybe* genus Stamets noted how these psychoactive mushrooms proliferate particularly in the wake of human’s habits of “taming the land” and other interactions with the natural world. Examples include, “chopping down trees, breaking ground to create roads and trails, and domesticating livestock” (Harrison, Straight, Pendell, & Stamets, 2007, p. 138). By this means, Stamets believed, certain mushrooms become available to those who most need to speak to Nature through them. For Stamets, when this dialogue is engaged, the message “...is always that we are part of an ‘ecology of consciousness,’ that the Earth is in peril, that time is short, and that we’re part of a huge, universal bio-system.” However, Stamets is not alone because “many people who have taken these substances report receiving the same message” (Harrison et al., 2007, p. 138).

There is a body of research that backs up Stamets’ assertion that it is not just he and Harvey who are receiving mycelial messages from Nature. A survey into people’s exceptional experiences with psychedelics found that encountering the “spirit” of the ingested plant or fungus was the most widely reported of a range of 17 “paranormal” and “transpersonal” type experiences occurring with those taking psilocybin-containing mushrooms (Luke & Kittenis, 2005). According to the

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respondents this encounter also occurred quite frequently, and was the second most prevalent experience with any one substance, preceded only by experiences of “unity consciousness” on LSD. Additionally, the encounter with “plant consciousness” was the most widely reported transpersonal event for several other psychedelic substances too, such as ayahuasca, *Salvia divinorum*, and the *Amanita muscaria* mushroom. If Harvey’s “Animist Manifesto” is to be taken seriously then these plants are clearly trying to tell humanity something.

Interpreting humanity’s many dialogues on the mushroom experience, mycophile Andy Letcher (2007) termed these mushroom-mediated encounters with discarnate spirit entities the “animaphany.” He warned, however, that these experiences largely go ignored because, in a Foucauldian sense, they offer a resistive discourse to that of the societally legitimated explanations of what occurs under the influence of such plants and fungi, in the West at least (Foucault, 2006). Being based solely on the effects of mushrooms on others, these legitimated discourses typically take a pathological, psychological or prohibitory stance, and so this subjective animaphany appears to transgress a fundamental societal boundary, communicating with “spirits,” which subsequently becomes labelled as “madness.” But which is the more “mad,” communicating with the spirits of Nature or sitting back while Earth’s ecology descends rapidly into the greatest wave of mass extinction in 65 million years?



Albert Hofmann and Stanley Krippner.
Photo courtesy of Stanley Krippner

It appears that the plant entities are not the only ones getting in on the apparent conservation conversation; as such pharmacologically-induced trans-species communications also engage the animal kingdom. Through the use of psychedelics, particularly LSD and ketamine, the physician John C. Lilly, M.D. (1978) claimed to have begun communicating telepathically with other species and consequently made an ethical U-turn in his highly invasive animal research (such as dolphin dissection), to increasingly involving consensual peer to peer exchanges with nonhuman species. If other species can communicate with humans, then perhaps the best way to do this would be directly – in a language that transcends physical restrictions. If such telepathic-like communication requires changing one’s consciousness, then certain plants are expertly disposed to begin this dialogue through their potent psychoactive compounds.

Ever since Albert Hofmann (2005) had an out-of-body experience on his first accidental LSD journey, and Gordon Wasson’s photographer Allan Richardson had an apparently predictive vision during their seminal mushroom trip in Mexico (Richardson, 1990), such psychedelic explorers as Aldous Huxley and Humphrey Osmond have been intrigued by the occasional stimulation of anomalous faculties with the use of these psychoactive substances. A review of the parapsychological literature (Krippner & Davidson, 1970; Luke, in press) indicates that while the issue still requires further research there is good reason to consider the possibility that psychedelics might actually promote such parapsychological phenomena as telepathy. However, the kind of species centrism that *Homo sapiens* are prone to, tends to promulgate the view that animals, and especially plants, lack consciousness. However, given the possibility that these plants and animals might be sentient, direct communication with them should not be ruled out, and might be encouraged instead. Psychedelics, especially those involving plants, would seem well suited for that task.

The question still remains why certain plants produce highly psychedelic alkaloids that often have profound effects on humans. Is it just an accident that these plants produce exotic compounds that have no apparent benefit to the plant and yet interact so sophisticatedly with human minds, especially given that Nature (apart from humans, perhaps) is not disposed to wasting resources without good reason? On the contrary, some evidence has emerged that the human brain actually developed in co-evolution with psychedelic plants (Winkelman, 2008), although one may well ask for what purpose?

Psychedelic shamanism might be thought of primarily as a communication with Nature, for instance by asking the plants directly which ones can heal a particular illness, or by asking the plant spirit to teach them, or by using the plant in aiding the psychological metamorphosis into a plant or animal “allies” (Dobkin de Rios, 1996). Given that shamans have most likely been communicating with Nature in this way for thousands of years (Devereux, 2008), it might well be asked what can be gained for humanity’s relationship with the ecosystem from such a dialogue and, more importantly, how can Nature benefit from this relationship?

the environmental need of the time” (p. 97). As a sense of “ethical and psychological continuity with the nonhuman world deepens, we have the chance to recapture...some trace of the ancestral sensibility” (p. 96). This might be a clue that answers the question concerning human-ecosystem dialogue. Psychedelic substances may have provided a hidden resource to keep *Homo sapiens* from becoming so estranged from Nature that the human species would contaminate, pollute, and ultimately destroy life on Earth. The growing interest in psychedelic plants, their effects, and their use coincides with a need for what Ralph Metzner, Ph.D. (1999) referred to as “healing the planet” (p. 165). If so, the task of mending this tattered Earth can truly begin, and psychedelic sensibility can play an important role in helping humans devote their efforts to attaining ecological sustainability before the time runs out and Nature’s clock winds down. •

References for this essay are available on the MAPS Web site: www.maps.org

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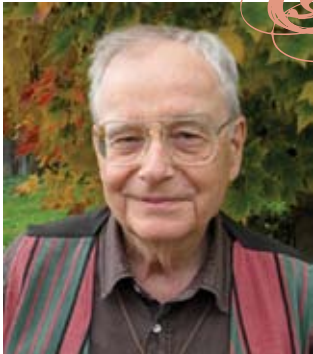
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This question is of central importance to ecological psychologists who attempt to understand behavioral and experiential processes as they occur within the environmental constraints of animal-environmental systems (Adams, 2002). There are several branches of this field, but all of them criticize what they see as contemporary human separateness from the natural environment (Krippner, 2002, p. 973). Rozak (1992) postulated an “ecological unconscious” that “rises up to meet

Consciousness Expansion and Counterculture in the 1960s and Beyond



By Ralph Metzner, Ph.D.
www.greenearthfound.org
rmetzner@svn.net



A dramatic expansion of our collective worldview occurred in the early sixties, when astronauts and cosmonauts were launched into space on Earth-orbiting satellites, and brought back the first dramatic photographs of the whole Earth from space. Emblematic of the aspirations for space exploration, the television series *Star Trek*, with an alien as one of the main characters, began airing on NBC, and became a cult classic in American science fiction. In 1969 Neil Armstrong became the first man to walk on the Moon. As explained by astrologer-scholar Rick Tarnas in his book *Cosmos and Psyche*, close conjunctions and alignments of the planetary archetypes Uranus, Pluto and Saturn characterized the revolutionary, liberating and creative energies of this decade. The boost in the exploration of outer space was accompanied by a parallel surge in the exploration of psychic or inner space.

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As far as I know, the concept of consciousness expansion was first used by Tim Leary and his associates at Harvard, to describe the effects of drugs like psilocybin and LSD, which were also later termed *psychedelic* (“mind-manifesting”). In a 1961 letter to Leary from Albert Hofmann, the discoverer of LSD expressed his appreciation to Leary for the concept of consciousness expansion, stating that he had been urging Aldous Huxley and others, that while the applications of LSD in psychiatry and pharmacotherapy were important, there were wider implications of these experiences for the enhancement of creativity and deeper understanding of the further reaches of the human mind. In this regard, Hofmann was far more open-minded than Huxley, R. Gordon Wasson and most psychiatrists, who tended to believe strongly that these drugs could only be used safely by psychiatric patients under medical supervision, or at best by elite intellectuals. Tim Leary’s approach was radically different, though it was not, as some believed, opposed to psychiatric research being done with psychedelics.

Leary and his associates began their research with psilocybin at Harvard University in the early 1960s, carrying out studies with “normal” people in supportive, naturalistic settings that were neither clinics nor laboratories. Participants in these studies could clearly confirm that these substances, although called hallucinogenic by some, did not induce hallucinations in the sense of seeing illusions of things objects that weren’t “really there.” Rather, they seemed to affect the actual psychophysiology of perception in such a way that one would see everything that was there, as ordinarily, and in addition much more: vibrating fields of subtle energies, or associated thought-forms and patterns that related to one’s personal history, or our relationships with other beings, human and non-human in the world around us.

The process of consciousness expansion induced (with the appropriately favorable set and setting) by these drugs, was in some ways analogous to the process of awakening: when we awaken from sleep, our perceptual world opens up and we emerge from the closed cocoon-like state of dream and sleep to become aware of our body, the bed we’re in, our sleep companion, the room, perhaps the garden outside the window, the greater world beyond – potentially all the way to the infinite cosmos. As we do, our sense of identity changes, we may remember the more limited dream world we had been in, and find that we have a greatly enhanced freedom of choice – freedom to think and see differently, to move and do things hitherto impossible.

Later studies with LSD or peyote in the treatment of alcoholism, or ibogaine or ayahuasca in the treatment of cocaine addiction, were based on the finding that experiences of expanded consciousness could be, depending on set and setting, associated with insight into one’s own character and deeper needs, and therefore lead to more healthy and positive choices. Addictions and compulsions, whether consumptive (drugs, alcohol, food) or behavioral (sex, gambling, shopping) can be understood as involving contracted states of consciousness, where attention and awareness is fixated on repetitively and ritualistically taking in

something or doing something. The treatment of addictions and compulsions with psychedelic, consciousness-expanding drugs was (and is again now) one of the most promising applications of these substances in health care.

One of the studies carried out as part of the Harvard research, involved the “experimental mysticism” study of Walter Pahnke, in which theology students took psilocybin in a religious setting, and reported a high proportion of classic mystical experiences. This study of religious-mystical experience induced by psilocybin has recently been replicated in research by Roland Griffiths at Johns Hopkins University. Mystical experiences involve a complete transcendence of the usual boundaries of time, space and the physical body and a sense of oneness with the divine and the cosmos – representing the ultimate expansion of consciousness. In my view, a second major application of psychedelics in the future is likely to be in the psychological preparation of people for dying, enlarging their awareness and sense of identity beyond the confines of the body and personal ego-mind. [*Publisher’s Note: To learn more about current research of this type visit: www.maps.org*]

Through the discoveries of R. Gordon Wasson and others in Mexico, and Michael Harner and others in South America, by the late 1950s and early 1960s, the psychological and medical researchers who first applied LSD and other consciousness expanding drugs in Western laboratories and psychiatric clinics, found themselves unexpectedly connected to ancient lineages of mystical, spiritual and shamanic teachings and practices. Both the shamanistic and the Asian yogic traditions are based on worldviews vastly expanded in comparison to the standard materialistic paradigm accepted in the West. In these worldviews there is a recognition of many levels of reality, many dimensions of being, equal in reality to the time-space-matter dimension, which is the only one recognized as real in Western science. Furthermore, these Asian and indigenous traditions also recognize the reality of beings, called “spirits” or “deities,” existing in these multiple dimensions, that have their own independent, autonomous existence, and

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are not merely symbols or archetypes in human consciousness.

Thus, the discovery of consciousness-expanding drugs in the West and the re-discovery of the role of consciousness-expanding plants and fungi in shamanistic societies, along with other modalities of exploring consciousness such as the shamanic drumming journey and yogic meditation practices, led to significant expansions of the Western materialist scientific worldview – at least in the thinking and writing of many individuals, if not the academic establishment and mainstream media.

It is possible to apply the consciousness expansion of concept to the forms and patterns of collective consciousness: to mass-mind images and memes, to scientific paradigms and worldviews, to the ideologies of spiritual practice and religious devotion. In my book *The Expansion of Consciousness* (2008), I pointed out that the decade of the 1960s was a time of several interconnected movements of socio-cultural transformation that profoundly changed Western society, and more indirectly other countries in the world as well: the environmental movement, the women's liberation movement, the anti-war movement, the civil rights movement, the revolution in sexual and family relations and an explosion of new forms of expression in music and the visual arts. Even though there is no evidence of a direct causative connection between ingestion of psychedelics and these socio-cultural transformation movements, each of them represents an expansion of collective consciousness, a transcending of existing limited conventions, attitudes and norms, similar to what is classically associated with psychedelic experiences in the individual.

The historian Theodore Roszak, in his very influential 1968 book *The Making of a Counterculture*, identified and described these transformation movements as constituting a kind of quasi-revolutionary culture in opposition to the mainstream. Although these social movements were countercultural or even, at times, revolutionary, in that they challenged unjust, limiting or outmoded attitudes and practices of the dominant social order, it is

important to recognize that being against something was not the primary intention behind these movements.

In an infant's struggle to be born, ultimately into a larger world and way of being, there may be a phase of intense and sometimes violent opposition to the limitations of the existing order (represented by the mother's body). This kind of opposition, which may even threaten the mother's life, is not however the ultimate aim of the neonate's struggle – which is rather to emerge from a condition that has become intolerable, too limiting, into an expanded world of greater freedom and possibilities for growth. Let us look at these movements, which continue in various ways to this day, through the dual lens of counterculture and expanding consciousness.

Rachel Carson's book *Silent Spring*, published in 1962, raised awareness of environmental despoliation and is generally considered the beginning impetus for the American environmental movement, and for major conservation and preservation organizations and policies that persist to this day. The very title *Silent Spring* refers to an experience of expanded consciousness: if we do not hear the singing birds we are accustomed to hear, we naturally ask – why not? This question in turn leads us to investigate environmentally destructive processes caused by human technology – which we then engage as activists to ameliorate, for the health and wellbeing of humans and the integrity of the ecosystems which we inhabit along with other animal and plant species of life.

This process is analogous to the kind of therapeutic "course-correction vision" that drug addicts and alcoholics often report when relating their experience with plant-based entheogens such as peyote or ayahuasca: under the influence of these botanical sacraments, a person may report becoming clearly aware of hitherto hidden patterns of thought and behavior that are leading them in a self-destructive direction – and therefore feel empowered to make health preserving new choices. I have published several accounts of this kind of healing vision in my edited volumes on the sacred mushroom and

on ayahuasca. Also in these books are accounts by individuals who in the early 1960s were powerfully affected by their psychedelic experiences and became committed environmental activists for the rest of their lives (including myself).

Many individuals and groups integrated their expanded conscious visions for a food supply free of chemical additives and pesticides into the development of the organic food movement, which in the ensuing decades emerged as a wide-spread and viable alternative to industrial factory farming. Similarly, the recognition of the industrial pollution of the atmosphere and water supply was channeled into political advocacy for clean air and water preservation. Thus, we see that the environmental movement counters and critiques the destructive and polluting effects of industrial corporations and seeks to preserve and enhance the integrity of both wilderness and built environments.

The women's liberation movement critiques and counters the sexist discrimination of deeply entrenched patriarchal attitudes and institutions and seeks to establish equality in work and pay and to protect the rights of women to make their own choices in the areas of sexuality and child-bearing. The 1963 publication of Betty Friedan's *The Feminine Mystique* launched the women's liberation movement, with its "consciousness-raising" groups, in which women-only groups met in council to discuss issues of identity and relationship. Questioning themselves and each other—who am I, besides being someone's wife, daughter, sister, lover, secretary? And such consciousness expanding questions would naturally lead to making new and healthier choices in life-style, work and creative expression.

The anti-war movement countered the American war-machine, with all the formidable power and resources that it disposes—and this opposition could and did result in flare-ups of public violence between state authorities and counter-cultural rebels and dissidents. But the underlying intention and vision of the anti-war movement is to be oppositional only temporarily, and then to further the peaceful unfolding of the civilization's

potentials in all their diversity.

Similarly, the civil rights movement countered racist discrimination practices, the legacies of slavery, principally in schools and housing. But its ultimate intention vision, as in Martin Luther King's "I Have a Dream" speech (1963), was to see a society in which black children and white children, and those of other races, could go to school together in freedom and peace. In the 19th century, waging war against the slave-holding South was not the ultimate intention of the abolitionist movement-- rather it was the emancipation of slaves.

"Injustice anywhere is a threat to justice everywhere" was one of the Reverend King's memorable inspired sayings. And it is probably because of King's unshakable commitment to the practice and advocacy of non-violence that the counter-cultural impulse in the civil rights and anti-war movements did not lead to more violence than it did. Even so, the repressive forces of the established power-elites, who saw their positions and wealth threatened by the counterculture, exacted a heavy toll: the assassination of four dynamic and popular leaders--the Kennedy brothers, and M.L. King and Malcolm X. Interestingly, at the present time of 2009 and beyond, American society again will examine the atavistic residues of slavery and racial discrimination under the presidential leadership of a younger, and multi-cultural African-American.

The movement for increased freedom of sexual expression, supported also by the women's movement, by the invention of the contraceptive pill, and by the books of zoologist Alfred Kinsey on human sexual behavior (1943, 1953), countered and critiqued many unexamined and prejudicial religion-bound conventions of marriage and family; but ultimately aimed for wholesome, non-patriarchal alternatives to the so-called "nuclear household." There was a wave of communitarian experimentation, as has happened periodically in American history. Intentional communities sprang up, such as the one Leary, Alpert and myself participated in for a few years at Millbrook, New York, experimenting with new forms of extended family relations,

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sexuality and child-rearing. A conversational memoir by Ram Dass and myself of the Harvard and Millbrook years is forthcoming under the title *Birth of a Psychedelic Culture* (Synergetic Press, 2009).

The vision motivating the counterculture of the 1960s was pioneering innovation, reform and liberation, based on an expanded awareness of the needs of the whole society (as in the civil rights, women's liberation and sexual revolution), of all of humanity (as in the peace movement) and the regional ecosystem and biosphere (as in the ecology movement). The innovative and pioneering aspects of these socio-cultural transformations are particularly obvious in the breakthroughs that occurred from new discoveries in the sciences, and new forms of celebratory expressions in the arts. Here we don't necessarily see opposition to an existing order, but simply a highly energized, innovative and creative "moving beyond" into an expanded worldview.

On the other hand, the countercultural and revolutionary elements in these movements, especially in the political and economic sphere tends to produce violent backlash and repression by the dominant culture, as "the empire strikes back." This in turn leads to intensification of the rebellious oppositional forces, bringing about an escalation of violence and destruction – all tendencies that we can see being played out in subsequent decades, to the present day.

Undoubtedly, an energizing and amplifying influence in the growth of the expanding consciousness culture during the 1960s was the widespread availability of inexpensive psychedelic drugs, as well as cultivated mushrooms, for personal use by increasingly large numbers of people. This certainly amplified the innovation and creativity in the arts and sciences and added much larger numbers of spiritually committed individuals to what before were relatively small minority movements. Whether psychedelics also amplified the rebelliousness and confrontational resistance movements of the 1960s, is impossible to say. Some would argue that the greater physical violence

of the revolutionary movements was more connected to amphetamine use.

Going beyond the political and economic changes brought by the countercultural movements of expanded consciousness, our global human civilization may be involved in change processes at the level of planetary evolution. Processes of desertification, deforestation and the destruction of habitats have plunged planet Earth into what has been called a "sixth extinction." At the same time, industrial civilization's addiction to carbon fuels as energy source has brought the biosphere to the brink of catastrophic collapse through global over-heating.

Many individuals who have worked in a respectful and spiritual way with plant and fungal teachers, as well as working shamanically with animal spirit guides, have reported increasing communication from the spiritual realms of Nature in response to their divinatory questioning. Their messages and visions have to do, as one might expect, with practices that reduce our adverse impact on ecosystems, with the preservation of wilderness and the essential diversity of life, and with the development of sustainable, bioregional economies and communities.

There may be a profound and mysterious shift occurring in the balance of life on this planet. The dominant and dominating role of the human in relation to the natural world has brought about unparalleled ecological disaster, degradation of habitats and loss of species. Could it be that the profound consciousness-raising and compassion-deepening effects of the visionary plant brews and tinctures are signaling an evolutionary initiative coming from other, non-human, intelligences on this planet? Instead of the usual attitude of arrogant and exploitative superiority, those who have experienced mushrooms, peyote, ayahuasca and other entheogens are more likely to find themselves humbled and awed by the mysterious powers of nature, and strive to live in a simpler way that minimizes environmental harm and protects and celebrates the astonishing diversity and beauty of life. •

Could **Flower Power** Have Saved the World?



Gregory Sams

gregory@gregorysams.com

<http://www.gregorysams.com>

The psychedelic experience appears to have been, at one time or another, part and parcel of human cultures throughout the world; with or without assistance from the plant world, and usually with. Today, as our civilization careens mindlessly out of control and we face rejection by the planet that is our only home, it is appropriate to ask whether the virtual absence of the psychedelic experience in modern culture might be connected with the predicament in which we find ourselves.

The fields of ecology and green consciousness are products of the Sixties hippy movement, now branched and developed far beyond the first “back to the land” aspirations of the time. Before then, a few select and far-sighted individuals primed the pump, from Rachel Carson to Bertrand Russell, Aldous Huxley to George Ohsawa. But it was the wholesale ingestion of psychedelics that enabled large numbers of a new generation to break out of a mental straightjacket that has constrained our dominant Western thought processes for far too long.

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Psychedelics can transport us into an unfamiliar space. The familiar world in which we live, with houses, plumbers, parliaments, cellphones, cars, advertising, restaurants and so forth is but one channel on the set of all possible channels. Because this is the reality we have created within the world around us, we are tuned to it to such a degree that we easily become oblivious to the deeper nature of this intricately interwoven world, of which we are but a part, living upon our little speck of dust within the Universe.

The psychedelic experience is not embraced as an escape from our world but as a ticket to escape from the single channel; to see the bigger picture and the smaller picture; to see our world from a different perspective, even from a different dimension. It is hard to emerge from this voyage without developing a realization, amongst many others, that those ‘in power’ are possessed of a narrow vision fuelled primarily by the desire to stay in power. Their viewpoint is of one channel only--the one that represents the status quo they understand, in whatever country they control--and their efforts to control and fine-tune this channel to a micro-

degree can often appear ludicrous.

The “alternative” culture that developed in the Sixties was the first mass-movement to recognize that the channel we are tuned to is incompatible with the fostering of health, happiness or peace and goodwill among humankind. Perhaps we did not recognize the coming of climate change and the scale of the threat. But we certainly recognized, through a new and spiritual perspective, that our communal ship was in danger of sinking. The state’s natural response was to do everything in their power to prevent us from building lifeboats, to stop us from tuning into new and experimental channels. And what may have most frightened the maintainers of the status quo was the prospect of a generation who were inserting flowers into gun barrels; embracing threatening concepts like love, peace, one-ness and non-violence; looking inside themselves; and rejecting a nine-to-five future as tax-paying consumers in an untenable endless-growth economy. Who would need Big Government any more?

The psychedelic experience re-connected us with our inner self and a world of spirit; with concepts such as harmony and

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good vibrations; practices such as meditation and yoga; values such as conservation and re-cycling; organic farming and natural eating; alternative healing techniques from acupuncture to herbal and the laying on of hands. It is difficult, today, to imagine just how grey and disconnected from our true reality was the pre-Sixties culture of the Western world. Opening the doors of perception in those days was a much greater surprise than it is today. Yet it is depressing to see just how little has changed in the core mindset of those who profess to run our world; those who rely upon the power of coercion and propaganda to achieve their ends; those who ban cannabis and psychedelic drugs; those who seek to restrict and even ban the expression of dissent and protest; those who would drill holes in the lifeboats.

But how did we get disconnected in the first place--how did we get to the point where things that come naturally would be part of an "alternative" culture--be a "movement" instead of the mainstream? In the same way that we would not need a nutritional supplements industry were our food not refined and denatured in the first place, there would be little need for ecological awareness and a green movement had our culture not come to be isolated and dis-connected from the world around it.

Though our profligate consumption of the world's oil reserves can easily be seen as a root cause of our ecological crisis, it is important to recognize that our dis-connection from the planet was in place long before the Age of Oil. It is complex, bordering on the impossible, to conceive just how the discovery of cheap and transportable power would have impacted upon a culture that had not banned shamans and the shamanic experience. Those who developed the oil industry were of the same stock as those who slaughtered herds of buffalo in order to sell their tongues, the same who would destroy beautiful landscapes to extract a few pounds of yellow metal, the same who ardently believed in a universal god whose prime purpose lay in producing, providing for and monitoring the human race.

Perhaps we can track the original suppression of the shamanic, psychedelic experience right back to Adam and Eve in the Garden of Eden, described in the Bible's opening pages, and the most commonly known Bible story of all. In this fundamental story, the fruit-pushing snake is portrayed as an agent of the dark side for telling Eve that "when you eat of it your eyes will be opened, and you will be like God, knowing good and evil" (Genesis 3). The snake, of course, has been symbolic of knowledge and divinity across many religious and shamanic traditions throughout the world. An angry God, as punishment for being disobeyed, visits toil and suffering upon the human race thereafter, especially targeting women by promising to "greatly multiply your pain in childbearing" and decreeing that men shall "rule over you." It's a peculiar story to be sure, and one that has impacted upon us ever since.

An alternative interpretation of this Adam and Eve story was held by the widespread Gnostic sects known as the Ophites, who revered and recognized the serpent as man's benefactor and saw Jehovah as the bad guy who sought to keep us in ignorance by denying us knowledge of our potential divinity. The Ophites were declared heretics and brutally extinguished by the spread of an organized and intolerant Christianity in the fourth century. One could be forgiven for suggesting that had our species embraced the serpent's gift, we might still be living in harmony with each other and our planet--enjoying life in the paradise that we inhabit. Instead, a lack of differentiation between good and evil seems to be the hallmark of those in power today.

The powerful post-Constantine Church claimed a monopoly on spirituality, banning or destroying anything they thought to be in conflict with their religious hegemony. Witchcraft, astrology, spiritualism, soothsaying, and worshipping the Sun or moon could all get one into serious trouble. A patent was effectively put upon the ecstatic state, with punishment meted out to those caught seeking a 'religious' experience by any means other than those approved by the Church.

The psychedelic experience and shamans were out--thought control was in. A select group of people now decided what we could think and how we should behave, assuming a mandate from God to do so. The natural world was not supposed to be able to teach us things and our intuition was not to be trusted in matters which had been divinely decreed, or decreed by those who claimed divine responsibility to do so. We could use our intellect to learn about the natural world, usually for the purpose of exploiting it, but that world itself was stupid and could not inform us, and to believe it could was to indulge in superstitious pagan behaviour. That was a dangerous place to be.

The natural world had been provided by our divine creator as little more than a store cupboard for humanity. A common mindset believed that we were specifically given "dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth." as well as "every herb bearing seed, which is upon the face of all the earth, and every tree, etc." It says it all, right there in the Bible (Genesis 1).

A consequence of this assumption of human dominion over all was to invest Western civilization with a God-given license to take from this planet with unabashed greed, wiping out species and blithely destroying landscapes and cultures in the process of "developing" them. Humanity was relieved of the need to show any consideration or thought to the land or its other residents, except for their utility to the intelligent human race. Everything else in the Universe was seen as stupid or inanimate, other than creatures kind of like us, and the denizens of Heaven. It is becoming more and more apparent that this viewpoint is ungrateful, thoughtless, plain stupid and as damaging to us as it is to the planet that hosts us. Yet it has infused the culture of the so-called "developed" world for seventeen centuries.

Doors opened by the psychedelic experience allow us to blow this crippling mental straightjacket right out of our mind space, revealing a world more inter-connected, alive and wonder-filled than we had ever realized; a world in which we may feel like gods, but not a world that we can rule over like deterministic kings; a world that is our host and teacher as well as our conscious provider. We learn to respect the world, and wonder at how we could have ever done otherwise.

For the shaman in all of us, spirit IS out there and is as real a part of our world as the physical stuff we can see and touch. When we recognize the spirit in the trees, the spirit in the mountain, the spirit in the earth and the Sun and its fellow stars, we live in harmony and respect with our environment—it comes naturally. •

"If the doors of perception were cleansed every thing would appear to man as it is, infinite. For man has closed himself up, till he sees all things through narrow chinks of his cavern."

—William Blake, *The Marriage of Heaven and Hell*

Gregory Sams is the author of *Uncommon Sense: the State is Out of Date*—not recommended by leading politicians, (Chaos Works, London, 1997, available online at: <http://chaos-works.com>) and *Sun of gOd*—the key to understanding a Universe brimming with intelligence and design, with no need for an Intelligent Designer. (Weiser Books, 2009)

"Sun of gOd is simply one of the wisest, most lucid, and thoughtfully written books that I've ever read on integrating spirituality with other disciplines. A marvelously written, unusually insightful, and extremely well-integrated discussion on the origins of religion and the evolution of consciousness, that radically refreshes our view of the world."

—DJB

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Ecology of the Inner Landscape: **Green Burial**

 **Walking up the steep grade** to the ‘jumping off place’ reminds me... breathe. The air is crisp. I draw in deeply filling my lungs and continue up, up, up to where the masters rest. The Oak Tree is our graveyard, home to what remains of 27 members of our family and friends, now mere dust. From here I can see the Earth’s curve, an embrace that summons the wanderer a jillion miles out across the sea to fall off the Earth’s edge or to fall into eternity.

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My work with the Wo/Men’s Alliance for Medical Marijuana (WAMM) has provided an extraordinary opportunity. WAMM is the longest running medical marijuana collective in the nation, offering medicine to seriously ill patients on a donation basis. It is the strand that has led me to care for people who are facing death. 201 WAMM members have died since our inception in 1993. That is more than one each month. I have been at the deathbed of a majority, most of whom wanted to die at home; hence, the genesis of our new sister non-profit organization, Raha Kudo, the Design for Dying Project, our volunteer group of caregivers who assist dying people as they design their own path. Every aspect is considered, from in-home care during the dying process, the death, the wake, the funeral and the final resting place.

Every step we take, every joy, every hardship is part of this preparation. This is the training ground for the becoming of the master. As we long to be touched by love in every part of our human experience, it is no less so in death. When the body lies in state it is also true that we may enter into a profound interconnectedness with our loved ones. Here I have the great fortune to serve the ailing temple body when sick and the opportunity to anoint the empty temple body after death.

Our community is a teaching ground... at times, a playground. A place to attend to the work inside, then to participate in a break loose gambol, weaving the difficulties of dealing with illness into the gratefulness that comes when suffering is eased. We help each other. We improvise. We lean into every utterance and we listen deeply to the silence. And so we are instructed in the ways that are unknown to those of us who are not yet “dying.” We are being trained so that we are better able to serve and so that we may do well when we actually must face our own death.

And when our service to the living body is complete we must consider what to do with what remains. It begins with quiet and tranquility. It includes the gentlest movement of the body, its alignment, tending to the eyes, the mouth, to the fluids, all of this to achieve a natural state of peace. I bathe, anoint and dress our friends. On occasion I am left instructions that include the most intimate details. Then the room is arranged. I may hang cloth on the walls; curtain the windows, making adjustments to the space, always with minimal disturbance to the environment. The body is framed with a halo of flowers complemented by incense and candles. Music is carefully chosen and may be what was playing at the time of death. It includes every genre; Gregorian

chants, Zen meditations, jazz, metal, Klezmer, gospel, classical, an Irish jig, R & B, ruds, punk, funk, world fusion, flamenco, there is no limit to the range of composition. This setting inspires a communion of emotion from the depths of loss that is often filled with both tears and laughter. When prayers and the poetry have been uttered, when relations have said goodbye, after each visitor has shared stories and asked for forgiveness, when ceremony and smudging have ended, interment takes place. Each of us unique and remarkable, leaves behind some measure of our existence when we die.

With baby boomers launching the back-to-the-land movement a sort of extended version has emerged in the form of green burial. Not everyone may find this appealing. Yet, the modern practice of embalming, encasing and interring is a relatively new practice. When we think of green burials we are really talking about embracing age-old practices in what may be considered as expanding our ecological role, returning to Earth that we once walked on. But even the most environmentally astute person may be unaware of the impact that a dead body has on the environment. What ever you may perceive as the "beginning of the human race," presently around 6.75 billion of us are scurrying over the surface of our planet right now. It will take a lot of space and a quick turn around in decomposition to make room for all of us. But most of us will end up beneath it eventually. What ever you might believe happens after death, rest assured that a body, in some way or other, must be disposed of.

Each year \$11 billion is spent in the funeral industry and green burial makes up just a fraction of that market. To maintain a cemetery requires continued reli-



Valerie Leveroni Corral

valerie@wamm.org • www.wamm.org

Photo by David Jay Brown

ance on heavy equipment and the fuel to run it; the backhoes, the lawn mowers, tree trimmers, hedgers and the weed eaters. Add to that the use of fertilizers and herbicides and you have a very personal donation to the creation of toxic waste. Each year Americans bury 827,060 gallons of embalming fluid, including formaldehyde, 30-plus million board feet of hardwoods, 209 million pounds of steel for

caskets and vaults, 3.3 billion pounds of reinforced concrete in those vaults and 5.4 million pounds of copper, lead and bronze to reinforce and decorate the caskets. It may take up to sixty years for an embalmed body in a coffin to decompose. Investigators at the National Cancer Institute have found that embalmers and anatomists who are exposed daily to formaldehyde are at increased risk for leukemia and brain cancer. It is listed by the International Agency for Research on Cancer as a known human carcinogen. The EPA lists formaldehyde as a suspected carcinogen and the Occupational Health and Safety Administration has established a permissible exposure limit averaged over an 8-hour shift of 0.75 parts per million.

In the United States cremation is a cost-efficient alternative and often thought to be "green." But is it really? Of the 1,000 crematoria here in the U.S., collectively 500,000 cremations are conducted each year. But compared to the average funeral ranging from \$5,000 to \$10,000 the investment of \$500 is an attraction often motivated by finances. Harmful chemicals including hydrocarbons and mercury vapor are released into the atmosphere from the coffins and dental fillings when a body is ignited--including hydrocarbons and mercury vapor. The average burning time in a crematorium is 5 hours at 1600 degrees Fahrenheit. A study conducted by the San Francisco

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Public Works Department in 1999 noted in their area crematoria is the third highest contributor of mercury. There are no health codes that necessitate embalming and the law never routinely requires it. In addition, there is no law that obliges the use of a casket. Still, any decision must be weighed against an individual's personal or religious beliefs.

Planning to meet the responsibility that is required when death comes may be challenging and often families are unprepared. There are institutions designed to provide direction in such cases. An inquiry into a memorial society in your area will give literature and information regarding what they offer and their membership fees.

Once we decide that we want to be buried green we unearth a tangle of choices. A Green Burial is a way to ensure the preservation of open space. While there are over 200 green cemeteries in Great Britain, in the United States there are 6,000 cemeteries, but only 6 are registered as green. Still, in America there is a burgeoning movement to deinstitutionalize death, encouraging families to become involved. Where it is allowed, loved ones are decorating the caskets and digging the graves themselves. Should they choose not to embalm, the body might be wrapped in a simple, natural fiber shroud made of linen, silk or ethnic textiles. Then placed in a biodegradable coffin made from pine, wicker, cardboard, reeds or bamboo and then decorated with bumper stickers, painted handprints, artwork, poetry, and photos. Often bits of memorabilia are included inside the coffin to accompany on the journey; one that reflects a modern version of the tombs of ancient Egypt.

Since green burial eliminates embalming, caskets and tombs, it is often presented as an inexpensive alternative to conventional burial. As the green burial movement progresses so does a range of options. A Swedish environmental biologist recommends freeze-drying. The process takes a few steps: freeze, followed by an immersion in liquid nitrogen, dry, crumble into an odorless powder, and place into a biodegradable coffin and voila! up to 65 pounds of pure organic matter is produced in just a few months. In the drollest sense, crematoria may

someday be replaced with "compostoria" where dead bodies are turned into organic mulch and buried in economical green coffins that quickly degrade.

Memorial preserves may be in open land or in underwater artificial reefs. The reef sites are made from concrete into which the cremated ashes are mixed. Hopefully concrete is sealed so as not to leak toxins into the ocean. Such areas are marked so that divers who wish can visit the gravesite. They can cost between \$900 and \$3,000 before the cost of cremation is included. Making these choices help to keep land undeveloped. Such areas include forests, grasslands, meadowlands, prairies and other natural areas. Many of these area locales have no gravesite markers and rely on GPS coordinates as the only means of guiding loved ones to graves.

Three types of cemeteries accommodate green burials: Conservation burial grounds are established as a conservation partner, with an easement on the property. These are operated, according to the principles of restoration ecology. Natural burial ground must engage in both land stewardship and restoration planning. While this type of cemetery does not have a conservation easement, it does have deed restrictions or a covenant that ensures its operation as a green cemetery. Hybrid burial grounds accommodate both conventional and green burial. They incorporate a natural burial ground with sustainable landscape design and have the option to simply allow for vaultless burial.

Should one choose to handle death privately there are precautions that must be taken. Observing all state and local regulations is necessary and while they are not complex, a failure to comply could be troublesome. There are only six states that limit the right of families to control the process; they are, Indiana, Louisiana, Nebraska, New York, Connecticut, and Michigan. While Michigan has a law that allows such participation on the part of families or loved ones, the department of health is uncooperative and blocks access.

There are necessary considerations that must be followed in any death. The following suggests what you should know if you do not hire a funeral director or

don't defer to a memorial society. A death certificate states the cause of death. It must be signed by a doctor and is filed in the county or district where death occurs. In no state is it required to embalm. Dry ice or refrigeration can be used in lieu of embalming. Under special circumstances, however it may be necessary to embalm according to state law, especially if a body lay undiscovered for a time. A burial permit may be required when a burial takes place outside the county or city where death occurs. And additional permits are required to inter a body or ashes. If no decision is made as to the final resting place of ashes no permit is required. The top of a coffin must be at least 3 feet below the soil surface. The site chosen to bury must always be 150 feet or more from a water supply and never near electrical or power sources or lines. Before you move a body be certain that you possess a permit or have some form of medical permission. The local coroner or medical examiner can provide a permit-to-cremate if it is needed and usually only a modest fee is charged. It is legal to keep a body lying in state at home for up to approximately three days. Heat and light are contributing factors to the length of time for an in-home wake. Under extremely hot conditions dry ice may be used beneath the body to delay decomposition.

These days many people are planning their own funerals. They include their favorite music, the readings they would like and some even write their own eulogies. One evening at a WAMM meeting I asked members if they were interested in attempting to write theirs. Most had no interest, but about 15 people chose to do so. What came from these narratives was amazing and informative. Some patients became deeply involved in the process. Some shunned the notion of the grim reaper; engaging instead in a courtship with death, embracing her as lover. In the poetry of perspective they designed their passing. Through such awareness we may become acquainted with the unknown... as all of us shall someday enter into this realm of becoming masters.

From here I can see the Earth's curve
 An embrace that summons the wanderer
 a jillion miles out across the sea
 to fall off the earth's edge or to fall into eternity.
 I can hear the rumble of the ocean's break upon the shore,
 I can hear a roaring inside
 That echoes the surf at the Landing where the waves
 never forget their way back
 And I can hear the words of the masters...
 They tell me to be quiet...to listen
 To the ecology of an inner landscape
 The exploration of the fabric of the space
 between nations,
 between atoms and quarks, between us,
 It is unexplored,
 It is the unknown
 The jumping off place
 Its immensity should silence me, but I can't stop wondering
 What is it that I do not know
 Everything, they say, nothing

In the drollest sense,
 crematoria may someday
 be replaced with compostoria where
 dead bodies are turned into organic mulch
 and buried in economical green coffins
 that quickly degrade.

References for this article are available on
 the MAPS Web site: www.maps.org

Psychedelics and the **Evolution of Ecological Consciousness**



By Dragonfly de la Luz
ganjaprincess@hotmail.com

Photo by David Jay Brown

Psychedelics rejuvenate our sense of novelty by exposing us to things we have never encountered before. They reconnect us with the curiosity most humans lose shortly after childhood, and are not likely to find again unless they travel the world, spend loads of time in solitude, or go to Burning Man. Psychedelics give us instant access to a sense of childlike curiosity, which reminds us that we have not seen all there is to see, thought all there is to think, dreamed all there is to dream, or know all there is to know. It seems that the human ecosystem could not progress without this awareness. Beyond giving us the awareness that we do not know more, psychedelics give us the eagerness to discover more, turning experiencers into willing candidates for the evolution of human consciousness.

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I was on LSD when I first encountered the giant redwood trees of Northern California. It was nighttime as we drove up the coast, and the sight of these otherworldly giants compelled us to stop our car and have a closer look. They seemed higher than the stars. When I stood before them and tilted my head so far back that the back of my head touched my shoulder blades just to behold them in their tremendous entirety, I was stunned. I felt so tiny that I lost my balance. I grabbed onto the arm of the friend standing next to me to stabilize, and physiologically reacted with what felt identical to a fear response. But I was not afraid; I was in awe. I wanted to drop to my knees in reverence.

In that eternal psychedelic moment, I saw the Earth as otherworldly, with features one might expect to see on some other planet. And I realized that just as I was awestruck by its stunning characteristics, a traveler from another planet might witness this and be reduced to

a mush of reverie, as well. To someone from elsewhere, the giant redwoods are indeed otherworldly, and who knows how rare this species is in the galaxy or the universe. Our Earth may be as unique as a snowflake. It could be renowned as a psychedelic travel destination for psychonauts throughout the universe. And for us, it is home.

People who use psychedelics often report feelings of oneness, peace, love, joy, and gratitude. Perhaps the most fascinating way psychedelics impact the Earth's ecology is by engendering the thoughts, feelings, and emotions which have been shown to have a measurable impact on the physical world. According to Dr. Masaru Emoto's research, which found that thoughts change the molecular structure of water, these feelings have measurable effects on the environment around the experiencer. Our negative thoughts have an equally impactful effect. Thoughts can create chaos as equally as they can create order, as evidenced in the geometric

shapes formed in the water after being exposed to thoughts of love and gratitude, and the shapeless blobs that appear in response to negative thoughts. We can only imagine what impact our thoughts are having on the rest of the physical world, and our own water-based bodies.

Through the connection that joins all things, scientists have shown that the ‘stuff’ that the universe is made of—waves and particles of energy—responds and conforms to the expectations, judgments and beliefs that we create about our world. The key to awakening such an awesome power is... to make a small shift in the way we see ourselves in the universe. We must see ourselves as a part of everything, rather than separate from everything. Beyond merely thinking of ourselves from this unified view, we must feel ourselves as part of all that we experience. (Braden)

This feeling of oneness
is one of the most
commonly reported effects
of psychedelics.

Psychedelics give us an opportunity to choose the course of our own evolution, to consciously evolve--the implications of which are immense. Psychedelics prepare us for future realities by reminding us of our ancient connection to nature. They reconnect us to the beauty of our planet, compelling us to realize our place in nature and protect the environment. Psychedelics, moreover, engender thoughts of oneness, love, and gratitude, and can thereby be the catalyst to create positive physical effects on our planet. Indeed, psychedelics seem already to be accelerating the evolution of the human ecosystem. It is up to us, however, to decide what we will become, and what will become of the Earth. •

References for this essay are available on the MAPS Web site: www.maps.org

Dragonfly de la Luz is a fashion model, travel writer and psychedelic festival reporter for *Cannabis Culture* magazine.

From the Inside Out

Rick Harlow created the beautiful art on the cover of this Bulletin. —DJB



For the past 23 years I have been traveling to the Colombian Amazon. Much of this time I spent along the rivers Apaporis and Mitití Paraná, living with Macuna, Yucuna, and Tanimuca peoples. They taught me to feel at home and at ease in the forest, how to walk without falling down, how to hunt, fish and gather food. They taught me about the different plants, insects and animals. They showed me which ones are useful, which are dangerous and which are sacred. They told me their stories of how their world was created, stories of how they came to live there, stories that explain their relationship to all living things and their place and purpose in the web of life. Stories that contain great lessons on how to live correctly, stories of the spirits that live in the rivers, in the forest, in the underworld and in the Milky Way. They invited me to participate in their rituals, dances and sacred ceremonies. They initiated me into the tribe and gave me a new name. They introduced me to the teacher plant Yajé (*Banisteriopsis caapi*) or Ayahuasca as it is more commonly known. I was taught that this sacred plant is the umbilical cord that connects us to the cosmos.

These experiences have served as the main inspiration for my paintings. In creating these works, I do my best to paint not only what I have seen, but also what I have felt or sensed. Often, as is the case with “From the Inside Out”, I combine observed landscape imagery with visions revealed to me during Ayahuasca rituals. •



Rick Harlow

rickharlow@verizon.net

An Interview with Jeremy Narby, Ph.D. by David Jay Brown

Decoding the **Cosmic Serpent**



Jeremy Narby
jnarby@bluewin.ch

Anthropologist Jeremy Narby, Ph.D. is the author of *The Cosmic Serpent*, *Intelligence in Nature*, and is the coeditor of *Shamans Through Time*. He received his doctorate in anthropology from Stanford University, and spent several years living with the Ashaninca in the Peruvian Amazon, cataloging indigenous uses of rainforest resources to help combat ecological destruction. Narby sponsored an expedition to the rainforest for biologists and other scientists to examine indigenous knowledge systems, and the utility of (the hallucinogenic jungle brew) ayahuasca in gaining knowledge. Narby has said that the information that shamans access “has a stunning correspondence with molecular biology,” and that one might be able to gain biomolecular information in ayahuasca visions. Since 1989, Narby has been working as the Amazonian projects director for the Swiss NGO, Nouvelle Planète. To follow is an excerpt from a recent interview that I did with Jeremy; the complete interview will appear in my forthcoming book, *Renaissance of the Mind*. —DJB

Ayahuasca
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David: *What type of relationship do you see between psychedelics and ecology, and do you see psychedelics playing a role to help increase ecological awareness?*

Jeremy: In the spirit of dialogue, I would quibble with the question a little bit, because I think that in as much as psychedelics have a relation with ecology, it's via people. So people are lacking in the question. Then, I think that psychedelics have different effects on different people. So the short answer to your question is that it depends, and if you could make your question more precise, I could advance with it. I don't just think that psychedelics--as a group of substances--are any sort of instant ecology-awareness pills.

David: *Perhaps you could talk a little about the relationship between ayahuasca use in the Amazon and how this effects the ecological relationships there?*

Jeremy: Okay, that's getting a bit more precise. But, once again, I think that by asking the question that way it does omit who is taking the ayahuasca, what ayahuasca it is, and where they are taking it. I think that the ayahuasca experience is also a function of who's doing it, where they're doing it, and how they're doing it--beyond set and setting, which is just obvious. So, in other words, who are we talking about? For example, the indigenous people of the Amazon and what we know about them historically? Or how ayahuasca has impacted on their eco-cosmologies? That could be a subject of a whole book, but it's certainly a precise question. You want me to talk about that precise question?

David: *Yes, and maybe you could also talk a bit about the worldwide ecology movement, and whether you think that's in any way related to people who have used psychedelics?*



"Resonance 2" by Salome Starbuck. salomestarbuck@yahoo.com, Oil on panel, 30x48", \$2,600

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for knowing the world,
as microscopes
have been
for biologists.

A lot of people think that psychedelic experiences have been an important part of the inspiration for the ecology movement.

Jeremy: Yes, it's true that one runs into quite a few people in the broad ecology movement who say that their engagement has been souped up by ayahuasca, and I guess I would include myself in that bunch.

David: *So maybe you could also address a little bit about the use of ayahuasca by indigenous people in the Amazon, and how that affected their relationship with their environment?*

Jeremy: I think the way that they look at it is like this. There is a level of reality that is parallel to our own, but that we don't see with our, let's say, "normal eyes," but in certain states of mind you can see it. Ayahuasca is known by the people who use it to make the invisible visible, and first and foremost you take ayahuasca to see, and to see what you normally don't see. So, in their view, one could say that ayahuasca is an important tool for knowing the world, as microscopes have been for biologists. It's an absolutely central tool in approaching an otherwise invisible level of nature.

So, in their view, ayahuasca--but also other plant teachers like tobacco--have enabled them to have an ongoing conversation with the powers in nature, entities or essences corresponding to the different species. For them, ayahuasca is the telephone, but the person on the other end is the whole assembly of nature. So what's important is not the telephone; it's the conversation that you have with the other species. It would seem that these indigenous societies have been dialoguing--at least in the visions of their shamans--with the essences of plants, animals, and ecosystems for millennia. And they view nature not as an object—but as a subject, or a series of subjects, with whom you negotiate if you want game and health.

So yes, ayahuasca is central to the eco-cosmology of many indigenous Amazonian peoples. It is that which enables communication, but that doesn't mean that it needs to be worshipped. Once again, the importance of the conversation, in their view, is because nature really is a bunch of subjectivities, and it really is important to communicate with them, because we're

on the same planet as them. So, how the human community negotiates its relation with other species is precisely what shamans negotiate traditionally in their visions attained using these plants. That's why these plants are central to their eco-cosmology.

But I guess the reason why I object to the general nature of the question about psychedelics and ecology is that it's like the question about psychedelics and creativity. If only it sufficed to take psychedelics and everybody could play the guitar like Jimi Hendrix--but it doesn't happen that way. Some people have taken psychedelics and have done terrible things. Likewise, there are a lot of people in the ayahuasca movement, and they may talk about this and that, but some of them lead pretty un-ecological lifestyles, it seems to me. Unfortunately, there are Westerners that are demonstrating that it's possible to turn ayahuasca into a kind of a drug, really. So if only everyone who was guzzling ayahuasca became an ecological activist, at least it would be easy to answer the question.

David: *I was just wondering whether you've seen a pattern of any kind. It seems to me like psychedelics, in general, are basically boundary-dissolving, nonspecific brain amplifiers.*

Jeremy: Exactly. So if somebody's got an ecological sensitivity, then it will amplify it. But if they're power-hungry, then it will amplify that too. So depicting ayahuasca as this magical thing that draws people to understand nature better, and then to become healing-oriented, would actually be misleading. It's way more complicated than that. One of the loops that's missing is that it depends entirely on the individuals, and there's a lot of variation in the individuals out there.

Another thing that I would like to say about this is that the more I've been able to get into the ayahuasca realm with indigenous Amazonian shamans guiding me, the deeper my respect for their knowledge has gotten. So, obviously, the more you really respect people, and actually look up to them, the more it enhances, well, at least my desire to be useful to them. In other words, it galvanizes me as an activist.

David: *Is what you're describing, what*

do you think is the most important thing that Western civilization can learn from indigenous shamanism?

Jeremy: Well, that's speculative. I'm enjoying arguing with your questions; that's what I think questions are for. I don't know what Western society can learn. I mean, for the moment, it's had a hooligan, vampire-like behavior, and it's sucked out what it wanted to suck out--mainly for material benefit--and just spat out the rest. Look at what it did to the Inca temples. It just melted them into gold. And look at how it's treated shamanism for the last five centuries. It said it was the devil's work, or balderdash, and then went on to label shamans as psychotics. We've taken the shamanic plants like tobacco, and look at what we do with them, we turn them into "drugs" that cause harm to health and create addiction. Look at what we've done to coca: turned it into a nasty drug.

So there's been this sort of, I don't know, ghoulish mercantile touch to what Western cultures have done to indigenous cultures. Yes, it's about time it changed, but let's see some action. I don't want to sit here speculating on the sidelines as to what we could learn. I want to incarnate learning. I want to see more people learning, and I don't want to be there saying, oh, if only we could do this, then maybe we could all change, and so forth. Enough already of this telling Western people what they could benefit even more from! Let's start thinking about reciprocity. Let's become lucid about the last five hundred years of history, and what we've imposed. Let's break with it, denounce our own behavior, and show something different.

David: *What are some of the primary things that you think people should be focusing on to help restore ecological balance on our planet?*

Jeremy: I'm not any kind of expert on how to re-equilibrate Western lifestyles; there's a whole bunch of people who talk about that. But I think that the more that we can move away from using hydrocarbons, and the smaller our personal imprints can be, the better. The less light bulbs and everything else that we use, the better. But, nevertheless, here we are having a conversation over a telephone, using tape recorders. The very existence of this conversation in text is the fruit

of the electric world. Because our world seems irremediably electric, there aren't any easy solutions.

But I think that the more of us that can sit with, let's say, both forms of knowledge, the better. In other words, technological knowledge, and let's call the other shamanic knowledge, for telegraphic sake. We're not going to be throwing out the baby with the bath water. We're not going to get rid of science and technology. On the contrary, it's too good to throw out. But, obviously, it needs complementing. It needs critiquing and controlling, let's say.

I think that, for example, one thing that's also really clear for me--but it's also a matter of opinion--is the view that nature is just an object, or a bunch of commodities that we can just exploit it as we wish, has led us to the ecological situation that we're in. I think that it's been a powerful way of coming to dominate nature, treating all those different beings as if they were objects. One can hold that gaze for 2,300 years, and that's what we've just done, but that doesn't mean that it's right. You can treat beings like objects, because, actually, beings are objects--but they're more than just objects, and treating them like just objects is nixing a whole important part of their existence.

So I think that getting away from the objective view of nature, and moving toward a deeper understanding of the other beings with whom we share the planet, would probably be a good move. And that would precisely be a combination of knowledges, using science and shamanism. I mean, in as much as you accept that shamans have some kind of dialogue in their visions with entities that represent other species on this planet, one could consider including them on bioethics committees.

David: *What are some of the most important lessons that you've personally learned from your ayahuasca experiences?*

Jeremy: Well, heck, the whole thing! I guess the first thing was that when I was a twenty-five year old whippersnapper from the suburbs, who had studied chemistry in high school, and thought I knew what reality was, the ayahuasca experience opened my eyes to the fact that there was a whole level of reality that

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one didn't normally see, that there was something that seemed associated with plants, animals, and the forest world--that had a mind-boggling, well intelligence about it. It taught me things, and showed me how stupid I was. It showed me how anthropocentric I was. In French, one says to "deniaisé," which means that it made me less stupid--fast.

It also made me see that there was something there that the materialist-rationalist perspective, which thinks it's so smart, actually didn't get and couldn't get. That kind of defined it, and that made me listen to the indigenous people even more. I just knew there was something there that flew in the face of our categories, and that needed more investigating. And by investigating ayahuasca one was clearly

investigating the indigenous approach to knowledge--but also plants and animals themselves, or nature. In other words, thinking about what it is to be a human being, and what it is to be a human being in the rainforest is to be immersed in this breathing, hooting, scratching environment that's clearly alive. I mean, if you think nature is stupid, all you got do is go into the rainforest at night and listen. It sounds like a bunch of loud electronic musicians. •

"Resonance 2" (page 25) by Salome Starbuck
 Oil on Linen, 42x68", \$16,000.00 for original painting, plus shipping
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 Phone: 505.988.4950. email: salomestarbuck@yahoo.com

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Shamanic Medicines & Eco-Consciousness: A Conversation with **Dennis McKenna, Ph.D.**

By Dennis McKenna, Ph.D. and David Jay Brown



Dennis McKenna,
djmkenna@mac.com

Ethnopharmacologist **Dennis McKenna, Ph.D.** is one of the world's experts in tryptamine hallucinogens. He received his doctorate in Botanical Science in 1984 from the University of British Columbia, and was a primary organizer and key scientific collaborator for the Hoasca Project, an international biomedical study of ayahuasca. McKenna has conducted extensive ethnobotanical fieldwork in the Peruvian, Colombian, and Brazilian Amazon, has helped to develop natural products into medicines, and is the author of more than 35 scientific papers. McKenna also coauthored *The Invisible Landscape* with his brother Terence. To follow are excerpts from a recent interview that I did with Dennis about ecology and psychedelics, followed by an excerpt from his essay "Ayahuasca and Human Destiny." The complete interview that I did with Dennis will appear in my forthcoming book, *Renaissance of the Mind*, and his complete essay, along with references, is available at: www.maps.org/news-letters –DJB

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David: *I'm curious about what type of relationship you see between psychedelics and ecology. Do you see psychedelics playing a role to help increase ecological awareness?*

Dennis: I do. I talk about this in my essay "Ayahuasca and Human Destiny." I think that this is probably what's going on, and it's not just with ayahuasca--it's with all of these psychedelic plants that are used in shamanic traditions. Rather than use the term "entheogen," which has one kind of connotation, or "psychedelic," which has another connotation, I prefer the term "shamanic medicine." The term hallucinogen doesn't fully describe these plants either, and, in fact, it kind of mis-describes what they're about. But I like the term "shamanic medicines."

In a sense, these are plants that are at the core of a set of indigenous practices, having to do with deliberately inducing altered states of consciousness, in such a way that one can learn from those altered

states. Whether, in fact, this actually involves supernatural realms, or some sort of super-consciousness, I don't know, but that is really what shamanism is about. And I think that what we're seeing in the millennia-old association between shamanic medicines, or psychedelic plants, and humans is essentially a symbiosis, a form of co-evolution.

This is nothing really that unusual in the plant kingdom. Plants and fungi make a large variety of so-called secondary molecules. There's an enormous chemical diversity of these secondary compounds, and they're not essential for life because they don't occur in all species. But in the species that do make them, they serve a function--and the function that they serve is basically a messenger function. In a sense, the secondary compounds are a language for the plants. It's the way that plants communicate with other organisms in their environments and maintain

their relationships. In some cases the communication is quite simple. It can be something like a repellent, or a defensive compound. But when you're interacting with organisms that have complex nervous systems, it gets a little more interesting, a little more complicated, and I think that bottom line on the evolutionary scale is that these plants are teachers.

This isn't really a scientific theory. It's more a personal belief, I suppose--but it's one that is verifiable to an extent. These plants are trying to teach our species about nature, and about how we fit into that. In some ways, you could say it's essentially a conduit to a community of species' mind. Or, if you subscribe to the idea that all of the species on the planet are organized into something like a conscious being, like Gaia, then these are the tools that let us communicate directly with Gaia, directly with that consciousness. This is done for all sorts of reasons, but partly, I think, to understand both nature, and the processes that go on within it.

For example, shamans use psychedelic plants all the time to understand the properties of other plants that they may use for curing or other types of activities. So there is a library of information out there, and psychedelic plants are kind of like the operating system that lets you access that and understand it. So I think that's part of the purpose of these things.

I think that the other part of the message--at least in my own personal experiences with psychedelics, and in many other people's--is that Gaia, if you will, through these plants, through these substances that seem so close to our neural chemistry, is trying to tell us to wake up, to realize the context in which we inhabit this ecology, and reorder our thinking accordingly. The message is that we're part of nature, and that we have to nurture nature. We have to be humble, and, as a species, we're not particularly humble. And we have to understand that we don't own nature, and nature is not there for us to exploit, deplete, and destroy. We have to rediscover a different attitude toward nature, a different way of looking at nature, and living in nature.

And I think that in indigenous cultures, where psychedelic shamanism plays a role, they don't really have a problem with this. This is why their cultures can be sustainable, and they can live in natural ecologies for long periods of time without really depleting their resources or spoiling their habitats. I think that the message, in some ways, has gotten more desperate. Or maybe it's our perception that it's more desperate, as Western culture has become more estranged from nature. And a

lot of very peculiar attitudes have cropped up in Western culture, that have now been propagated globally, which I think are very unhealthy and very threatening to the stability of the planet.

So if there is an intelligence resident in nature, that communicates to us through psychedelics, it's getting a little hysterical. It's like, hey pick up the phone and listen! There's important information that you need to hear. So I think that's where the connection comes with ecology, in connecting with this planetary consciousness, for a number of reasons. One of the things that psychedelics do--and this has been well elucidated through neurophysiology and neuroscience--is they activate (or perhaps in some way they suppress) those parts of the limbic system, those parts of the brain, that are involved with defining the boundaries between the self and the world. They dissolve those boundaries, and we invest a lot of time in defining who we are and what separates us from everything else out there--when, in fact, this is an illusion.

We know that we are all part of a continuum, and a model that's closer to reality is to realize that we are all one. It's not simply a cliché. In some ways, that's a more accurate understanding of how we are and how we fit in the world than the idea that we're just individual particles separated by barriers from everything else. And I think one thing that psychedelics teach, as many other spiritual traditions do, is that we're all one, and that it's an important lesson to learn--especially at this stage. We're not going to save the planet, we're not going to fundamentally change the way that we relate to nature, until we take that lesson, understand it, take it to heart, and try to express it in the way that we live and the

way that we think. Psychedelics teach many lessons, but at this historical juncture I think that this may be the most important one for our culture, and for our society.

I think that back at the end of the 60s, two things did more to change our perspective as a race, as a species--of who we are and what our place in the universe is--than probably anything else previously. One of them was psychedelics. The other one was going to the moon--or, more specifically, that first photograph of the Earth from space. I think that the first time that we were able to look at ourselves, in a sense, from out there and realize what a small planet we are--what a small part of the totality our supposedly very important affairs are--was a very humbling experience. That helped to put us into perspective, or, at least, in sum they did. I really think that those two things were what sparked, or initiated, what we might call eco-consciousness.

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An Excerpt from *Ayahuasca and Human Destiny*

By Dennis J. McKenna, Ph.D.

On a personal level, ayahuasca has been for me both a scientific and professional continuing carrot, and a plant teacher and guide of incomparable wisdom, compassion, and intelligence. My earliest encounters with ayahuasca were experiential; only later did it become an object of scientific curiosity, sparked in part by a desire to understand the mechanism, the machineries, that might underlie the profound experiences that it elicited.

As a young man just getting started in the field of ethnopharmacology, ayahuasca seemed to me more than worthy of a lifetime of scientific study; and so it has proven to be. Pursuing an understanding of ayahuasca has led to many exotic places that I would never have visited otherwise, from the jungles of the Amazon Basin to the laboratory complexes of the National Institute of Mental Health and Stanford; it has led to the formation of warm friendships and fruitful collaborations with many colleagues who have shared my curiosity about the mysteries of this curious plant complex. These collaborations, and more importantly, these friendships, continue, as does the quest for understanding. Though there have been detours along the way, always, and inevitably, they have led back to the central quest. Often, after the fact, I have seen how those apparent detours were not so far off the path after all, as they supplied some insight, some skill, or some experience, that in hindsight proved necessary to the furtherance of the quest.

Just as ayahuasca has been for me personally something of a Holy Grail, as it has been for many others, I have the intuition that it may have a similar role with respect to our entire species. Anyone who is personally experienced with ayahuasca is aware that it has much to teach us; there is incredible wisdom and intelligence there. And to my mind, one of the most profound and humbling lessons that ayahuasca teaches--one that we thick-headed humans have the hardest time grasping--is the realization that "you monkeys only think you're running things." Though I state it humorously, here and in other talks and writings, it is nonetheless a profound insight on which may depend the very survival of our species, and our planet. Humans are good at nothing if not hubris, arrogance, and self-delusion.

We assume that we dominate nature; that we are somehow separate from, and superior to, nature, even as we set about busily undermining and wrecking the very homeostatic global mechanisms that have kept our Earth stable and hospitable to life for the last four and a half billion years. We devastate the rainforests of the world;

we are responsible for the greatest loss of habitat and the greatest decimation of species since the asteroid impacts of the Permian-Triassic boundary, 250 million years ago; we rip the guts out of the Earth and burn them, spewing toxic chemicals into the atmosphere; at the same time we slash and burn the woody forests that may be the only hope for sequestration of the carbon dioxide that is rapidly building to dangerous and possibly uncontrollable levels.

For the first time in the history of our species, and indeed of our planet, we are forced to confront the possibility that thoughtless and unsustainable human activity may be posing a real threat to our species' survival, and possibly the survival of all life on the planet.

And suddenly, and literally, "out of the Amazon," one of the most impacted parts of our wounded planet, ayahuasca emerges as an emissary of trans-species sentience, to bring this lesson: You monkeys only think you're running things. In a wider sense, the import of this lesson is that we need to wake up to what is happening to us and to the planet. We need to get with the program, people. We have become spiritually bereft and have been seduced by the delusion that we are somehow important in the scheme of things. We are not.

Our spiritual institutions have devolved into hollow shells, perverted to the agendas of rapacious governments and fanatic fundamentalisms, no longer capable of providing balm to the wounded spirit of our species; and as the world goes up in flames we benumb ourselves with consumerism and mindless entertainment, the decadent distractions of gadgets and gewgaws, the frantic but ultimately meaningless pursuits of a civilization that has lost its compass. And at this cusp in human history, there emerges a gentle emissary, the conduit to a body of profoundly ancient genetic and evolutionary wisdom that has long abided in the cosmologies of the indigenous peoples of the Amazon who have guarded and protected this knowledge for millennia, who learned long ago that the human role is not to be the master of nature, but its stewards. Our destiny, if we are to survive, is to nurture nature and to learn from it how to nurture ourselves and our fellow beings. This is the lesson that we can learn from ayahuasca, if only we pay attention.

I find it both ironic, and hopeful, that within the last 150 years, and particularly in the last half of the 20th century, ayahuasca has begun to assert its presence into human awareness on a global scale. For millennia it was known only to indigenous peoples who have long since understood and integrated what it has to teach us. In the 19th century it first came to the attention of a wider

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that lets you access
that and
understand it.

world as an object of curiosity in the reports of Richard Spruce and other intrepid explorers of the primordial rainforests of South America; in the mid-20th century Schultes and others continued to explore this discovery and began to focus the lens of science on the specifics of its botany, chemistry, and pharmacology (and, while necessary, this narrow scrutiny perhaps overlooked some of the larger implications of this ancient symbiosis with humanity).

At the same time, ayahuasca escaped from its indigenous habitat and made its influence felt among certain non-indigenous people, representatives of “greater” civilization. To these few men and women, ayahuasca provided revelations, and they in turn responded (in the way that humans so often do when confronted with a profound mystery) by founding religious sects with a messianic mission; in this case, a mission of hope, a message to the rest of the world that despite its simplicity was far ahead of its time: that we must learn to become the stewards of nature, and by fostering, encouraging, and sustaining the fecundity and diversity of nature, by celebrating and honoring our place as biological beings, as part of the web of life, we may learn to become nurturers of each other. A message quite different, and quite anathema, to the anti-biological obsessions of most of the major world “religions” with their preoccupation with death and suffering and their insistence on the suppression of all spontaneity and joy.

Such a message is perceived as a great threat by entrenched religious and political power structures, and indeed, it is. It is a threat to the continued rape of nature and oppression of peoples that is the foundation of their power. Evidence that they understand this threat and take it seriously is reflected by the unstinting and brutal efforts that “civilized” ecclesiastical, judicial, and political authorities have made to prohibit, demonize, and exterminate the shamanic use of ayahuasca and other sacred plants ever since the Inquisition and even earlier.

But the story is not yet over. Within the last 30 years, ayahuasca, clever little plant intelligence that it is, has escaped from its ancestral home in the Amazon and has found haven in other parts of the world. With the assistance of human helpers who heard the message and heeded it, ayahuasca sent its tendrils forth to encircle the world. It has found new homes, and new friends, in nearly every part of the world where temperatures are warm and where the ancient connections to plant-spirit still thrive, from the islands of Hawaii to the rainforests of South Africa, from gardens in Florida to greenhouses

in Japan. The forces of death and dominance have been outwitted; it has escaped them, outrun them. There is now no way that ayahuasca can ever be eliminated from the Earth, short of toxifying the entire planet (which, unfortunately, the death culture is working assiduously to accomplish). Even if the Amazon itself is leveled for cattle pasture or burned for charcoal, ayahuasca, at least, will survive, and will continue to engage in its dialog with humanity. And encouragingly, more and more people are listening.

It may be too late. I have no illusions about this. Given that the curtain is now being rung down on the drunken misadventure that we call human history, the death culture will inevitably become even more brutal and insane, flailing ever more violently as it sinks beneath the quick sands of time. Indeed, it is already happening; all you have to do is turn on the nightly news. Will ayahuasca survive?

I have no doubt that ayahuasca will survive on this planet as long as the planet remains able to sustain life. The human time frame is measured in years, sometimes centuries, rarely, in millennia. Mere blinks when measured against the evolutionary time scales of planetary life, the scale on which ayahuasca wields its influence. It will be here long after the governments, religions, and political power structures that seem today so permanent and so menacing have dissolved into dust. It will be here long after our ephemeral species has been reduced to anomalous sediment in the fossil record. The real question is, will we be here long enough to hear its message, to integrate what it is trying to tell us, and to change in response, before it is too late? Ayahuasca has the same message for us now that it has always had, since the beginning of its symbiotic relationship with humanity. Are we willing to listen? Only time will tell. •

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out of the Amazon, one of the most
impacted parts of our wounded planet,
ayahuasca emerges as an emissary
of trans-species sentience...

So if there is an intelligence resident in nature,
that communicates to us through psychedelics,
it's getting a little hysterical. It's like,
hey pick up the phone and listen!



Salvia divinorum and Ecological Awareness

Ethnobotanist Daniel Siebert discovered the psychoactive effects of salvinorin A, the primary psychoactive component of the Mexican hallucinogenic plant *Salvia divinorum*, which is currently being studied for a variety of medical applications. Salvinorin A is considered by a number of researchers to be an attractive compound for pharmacological development because it is a selective and potent kappa-opioid receptor agonist with unique structural properties, strong effects on human mood, and low toxicity. There has been increasing scientific evidence that the pharmacological properties of salvinorin A and/or its chemical analogs may have applications as an antidepressant and pain reliever, as well as possibly treating some types of stroke, Alzheimer's disease, and stimulant drug dependence.

An Interview with **Daniel Siebert** by David Jay Brown



dsiebert@sagewisdom.org
www.sagewisdom.org

David: *Do you think that Salvia divinorum helps to increase ecological awareness and one's connection to nature?*

Daniel: In some sense. I think that when salvia is taken at moderate doses, people often find that they do feel tremendously connected with the natural world. People often describe that as a wonderful feeling, like an extension of their sense of self, where they feel that the ordinary boundaries that divide their sense of self from the world at large dissolve. They feel that their sense of self has expanded, and they feel at one with the natural world--especially when people take it outdoors in a natural setting.

There's this tremendous connection with the natural world. Birds fly by, and you feel like you understand what it feels like to be a bird. Things like that. Often people feel that there's a sense of life in the natural world that they were

Unfortunately, I think that most people experimenting with salvia these days are taking excessively high doses. Most people are smoking these highly concentrated extracts--that are widely available commercially--and are having really brief, extraordinarily intense, disorientating experiences that people are just baffled by. Often these intense experiences are entirely internal, because in high doses people lose all awareness of the physical environments around them. So, when people do it that way, I don't think that they're connecting with the natural world at all, except with their own internal natural world. To use salvia in a way that fosters a reconnection with the natural world, I think, it's best to take it orally, in an outdoor setting, away from cities, people, and those kinds of things. •

There's this tremendous connection with the natural world.

Birds fly by, and you feel like you understand what it feels like to be a bird...

Often people feel that there's a sense of life in the natural world

that they were unaware of before.

unaware of before. All of the plants seem to have an existential property. Suddenly they have the presence of individual beings, and sometimes this sense of aliveness extends even beyond living things--to where the mountains, the clouds, and everything seem like living entities. So, in that sense, yes it does foster a connection with the natural world, and, I think, a greater appreciation for it. But that's not something that it does reliably for everybody. It's something that seems to only be somewhat related.



Psychedelics and the Deep Ecology Movement: A Conversation with Arne Naess

By Mark A. Schroll, Ph.D. & Donald Rothenberg

The deep ecology
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and examining
the worldview
influencing our attitudes
and our behavior.

Arne Naess (1912-2009) founded the deep ecology movement in 1973 with his article "The Shallow and the Deep, Long-Range Ecology Movement: A Summary." (*Inquiry*, 16, 95-100.) "Shallow" in the sense that creating new technologies, discontinuing the use of fossil fuels, practicing conservation biology, and trying to live more simply—while important and necessary—only involves treating the symptoms. Shallow approaches, say Alan Drengson and Bill Devall, do not "go to the ultimate level in values and conceptions of the world." (Drengson & Devall, 2008)

The deep ecology movement suggests that the real starting point toward healing the social and environmental crisis begins' with self-confrontation, self-examination and examining the worldview influencing our attitudes and our behavior. Many have wondered if psychedelics played a role in Naess' vision of the deep ecology movement. I find no direct evidence of this, although, as you'll see in the following interview, he was profoundly influenced by his psychedelic experience. Naess' inspiration for the philosophy of deep ecology primarily arose from mountain climbing, Spinoza's philosophy and Gandhi's non-violent approach to social protest (Drengson, 2005), although his psychedelic experience may also have played some role.

Psychedelics and ecology nevertheless have a direct connection in Albert Hofmann's transpersonal experience in nature (Hofmann ix-x, 1983), providing Hofmann with the ability to recognize that his accidental ingestion of LSD was of similar psychospiritual origin (Schroll, 2005). Likewise, through a reexamination of history from 1943 to the present, Ralph Metzner illustrates that psychedelics served as the catalyst for a new culture of consciousness expansion. This new culture included the civil rights movement, the anti-war movement, the sexual revolution, the women's liberation movement, the ecology movement, and the upsurge of creative innovation in music, the arts, fashion and literature. (Metzner:

42, 2008) (Schroll, in press)

Naess, meanwhile, was not unfamiliar with psychedelic experience, and its influence on his ecological perspective can't be discounted. The following excerpt from an interview by Donald Rothenberg is reprinted here with permission. (Naess, A. & Rothenberg, D. (1993). *Is it painful to think? Conversations with Arne Naess*. Minneapolis, Minnesota: University of Minnesota Press, pp. 52-56.)

"Bitten by Wild Animals: A Conversation with Arne Naess" by Donald Rothenberg

Arne Naess: (Describing his experience of being introduced to LSD by a student) I had a marvelous experience but not overwhelming, and I said, "It's

not overwhelming.” She was provoked, and at a new session, she ordered a really fantastic dose of LSD, and there was a marvelous experience of paintings, the room and everything. . . . First of all, the room was curved and strange, and my own body seemed to be miles long.

Suddenly, I saw some of these paint-



Mark A. Schroll and Arne Naess, taken at the International Transpersonal Association conference in Killarney, Ireland, May 28, 1994 in the Great Southern Hotel. Photo by Kit Fai, Arne's wife.

I had a marvelous
experience....
you can...
deeply feel
things in areas
you haven't
felt before...

ings of Picasso. For the first time in my life, they made a real impact on me. I was also myself somehow painting a Picasso. That was fabulous. Then my guru--she was then a guru--said, “Maybe we should listen to music.” When I was about to say yes, I said to myself, “Why should I say yes? It's been such a long time since she said anything.” So, you have this time dilation, which is also interesting philosophically. But then listening to one of the favorites from the time of Bach, something Baroque, I got a very pleasant and good feeling from the music, but not very different from the usual. Later I thought, “There's a difference--you can, from this narcotic, deeply feel things in areas you haven't felt before, but where you have gone there deeply before, it wouldn't help you.” It wouldn't help me in music, I thought, but it would help me to understand art.

Donald Rothenberg: *So what do you think you learned philosophically from this?*

AN: Well, again it was a confirmation of a kind of possibilist view. There are universes that are with certain chemicals and then there are other universes that are with chemicals of different

kinds. But then I must relate that there was a big crisis in the evening, because the telephone rang. My guru pointed at the telephone and said, “Careful, reality there. It's reality.” It was my last day in Berkeley and I thought it might be something having to do with an examination or with my job, and if I didn't answer the telephone, they would come. Very few knew my telephone number, so I said I must take the phone; I didn't understand how I could move to the telephone, but that seemed to be completely easy.

So I grabbed the telephone and I listened, and there was talk about somebody being bitten by a wild animal in South America, and it was an old woman's voice. And I said, “I am in the United States. I am not bitten. Somebody else is bitten,” I was confused. And then, suddenly, I was clear and I understood it was a student who had not delivered his final essay because he had been bitten and was in the hospital. This was his mother, and she asked me if he could send it later or something, and I said, “Yes!” with unnecessary joy. She probably couldn't understand why I was so delighted! That was OK, but this portion of LSD was so very powerful that I felt later in the night that there was no way at all I could get out of this house and make it to the airport.

DR: *This was the last night of your stay?*

AN: Yes. So at three o'clock in the morning, I called up one of the real delightful students I had, saying, “I am completely stoned and I don't know how I can clean up the stove. Can you come at seven o'clock in the morning?” “Yes, yes!” he said, and he came and arranged the house and took me to the airport. And there was something strange: some kind of film on the plane about the Soviets putting LSD into the water supply. I have never met anyone else who has heard of such a movie. . . .

DR: *Didn't you bring some LSD back to Norway?*

AN: Yes. I took it up here to Tvergastein. It was impossible for the students to see me go back to Norway without a little LSD. So I had a session with Jon Wetlesen in the wintertime, going naked around the cottage, which was a delightful thing, on LSD. But I remember I was going to cut some wood with an ax, and



Photo of Arne Naess and David Rothenberg. Photo courtesy of Mark A. Schroll.

he said, "No Arne, you shouldn't use an ax, please don't use an ax!"

But that was an innocent time, when all the bright students used such things, and they stopped using it when, for instance, they tried to get a job. They would immediately cut their hair and be completely straight for a little while. But when weak students with problems, psychological or otherwise, started, everything went wrong. They got hooked and there were tragedies upon tragedies. But in '68 it was still a thing of innocence and strong persons could get away with it. Now, of course, we are more cognizant of the dangers. •

Final Thoughts on Psychedelics and Ecology

In sum, psychedelic experience provides us direct access to universal archetypal truths that transcend the boundaries of culture and the limitations of spacetime. Psychedelic experience allows us to encounter visionary mystical insights about the human condition, Gaia consciousness and/or deep community and cosmic unity. Psychedelic experience is a fundamental awakening to self-realization (and Arne Naess talks about self-realization being an aspect of personal philosophy--which he called Ecosophy-T--within the

deep ecology movement). Psychedelic experience is not the culmination of personal growth and transcendence; it is instead the beginning of the questioning process. Psychedelic experience is the root and ground from which our investigation of the big cosmological picture begins. Psychedelic experience is the tree from which the fruit of myths and metaphors of consciousness grow. Eliminating psychedelic experience violates the open scientific inquiry of radical empiricism. Without psychedelic experience religion ossifies into ritualistic symbolism without somatic significant understanding. Psychedelic experience is the very essence of transpersonal psychology and the primordial tradition. Recognizing this will require us to examine our personal and collective shadow and the reasons for why we are here.

Further discussion of entheogens and ecology can be found in:

Schroll, M. A. (2007). "Wrestling with Arne Naess: A Chronicle of Ecopsychology's Origins." *The Trumpeter*, 23 (1), 28-57.

References for this article can be found on the MAPS Web site: www.maps.org

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Psychedelics Can Serve as Catalyst for Deep Ecological Consciousness



David Lawlor, M.A., Ph.D. candidate
lawlorphoto@yahoo.com

The song
melded with
the sound of the water
until they were
one harmonious tone
broadcasting the poetry
of the unified totality
of nature.

P**erched atop a log in the forest** no more than a half-mile from my home, I decided to take a walk. Traipsing down the winding but well-manicured path back to the open meadow prefacing the forest's entry it was impossible not to notice what a glorious day it was: the sun beamed radiant, birds recited an infinite chorus, the tops of towering redwoods swayed tenderly in the wind, and somebody was singing.

How odd, I thought, why would somebody be singing on a Saturday morning at the forest's entrance?

I stopped and listened intently. The words being sung were impossible to decipher, but they wafted through the air with an entrancing lyrical beauty. I looked around, but failed to spot the source. A few more steps through the meadow—ears perked, eyes scanning, still nothing. Then, I stopped walking, peered down as if on command, and saw the small creek gurgling beside me. The song melded with the sound of the water until they were one harmonious tone broadcasting the poetry of the unified totality of nature.

Why I should daily walk down the street outside my home and not feel intimately connected and wholly enamored with each blade of grass, every blackberry bush and each inch of soil is difficult to understand. After all, I have read a miniature library worth of books concerning the deep ecology philosophy and environmental psychology. I have studied the sense of place phenomenon, examining why and how people feel connected to the Earth. I have read The Upanishads and tried to understand quantum physics, both offering the notion of singular unity—the inescapable interconnection of all entities. And yet, it was eating three grams of tiny brown mushrooms collected at a beach dune just a few miles from my front door that facilitated my feeling intimately and wholly bound up with the natural world.

“Anyone can sweep up around the ashram for a dozen years while congratulating themselves that they are following a path to enlightenment,” Terrence McKenna once told an interviewer. “It takes courage to take psychedelics—real courage. Your stomach clenches, your palms grow damp, because you realize that this is real—this is going to work. Not in 12 years, not in 20 years, but in an hour!”

It is precisely the immediacy of psychedelics McKenna notes, coupled with their ability to catalyze and facilitate experiences of a transpersonal nature, which makes them a fascinating area of study in terms of the relationship between human beings and what we commonly refer to as the environment. As my own experience in the forest illustrates, psychedelics have the potential to alter human perceptions of the natural world and consequently

transform humanity's relationship with the environment.

The Norwegian philosopher Arne Naess coined the term deep ecology when in 1972 he delivered a lecture titled "The Shallow and the Deep, Long-Range Ecology Movement." Naess's goal was to establish a movement grounded in personal exploration and deep questioning about the most basic tenets of what it means to be a human being in a world of nonhuman beings. Naess's deep ecology philosophy is a way of thinking about the world, relating to it and interacting with it. As such, it employs two primary principles or ultimate norms: self-realization and biocentric equality. By self-realization, Naess does not refer to narrow, ego-realization in the traditional Western sense of the term, but rather to a realization of the self within a greater self; or, the self within and contained by the Self. The principle of biocentric equality espouses that all entities on Earth possess intrinsic worth, moving away from notions of anthropocentrism or human chauvinism.

The philosopher and ethicist Warwick Fox refined Naess's framework in his 1995 book *Toward a Transpersonal Ecology*, concluding that Naess's fundamental notion of deep ecology is best articulated as a transpersonal ecology wherein human beings realize identification and unity with the natural world via transpersonal experience. Identification and unity are achieved during a transpersonal experience, Fox says, by maintaining as expansive a sense of self as possible. This expansive sense of self goes beyond one's egoic or biographical sense of self to encompass all entities on Earth, thus forming a definition of self that includes rivers, grasses, gophers, other humans, mountains, trees, banana slugs and the whole lot of the natural world. Barring a desire for self destruction, human beings who are able to realize the unified totality of nature and extend their sense of self to include all entities on the Earth as Fox and Naess suggest, are much less likely to be complicit in its exploitation and ruination.

So, if one were to maintain as expansive a sense of self as possible during a transpersonal experience with the goal of realizing a deep or transpersonal ecology,

could psychedelics serve as a catalyst or facilitating agent? It is indeed the case that a deep or transpersonal ecology is an altered state of consciousness and psychedelics indeed have the ability to very quickly facilitate an altered state of consciousness with an exceptionally high degree of efficacy. It stands to reason then, that those with the intentioned desire to achieve a deep or transpersonal ecological consciousness could benefit from the use of psychedelics as catalyzing agents that facilitate transpersonal experiences and enable one to more readily maintain as expansive a sense of self as possible.

There is no shortcut to achieving a deep or transpersonal ecological consciousness. While psychedelics consistently and expeditiously catalyze transpersonal experiences, during which one can harbor as expansive a sense of self as possible, with the desire of realizing a deep ecological consciousness, simply ingesting a psychedelic and sitting in a forest awaiting inspiration is unlikely to affect a permanent alteration in one's relationship with the environment. A deep or transpersonal ecological consciousness is arrived at through long contemplation and repeated experiences with the natural world—like walking beside a gurgling creek in a forest—a point Naess returns to again and again in his writing. It is the potential for psychedelics to facilitate these contemplations and experiences leading to the realization of a deep ecological consciousness that is especially fascinating and warrants further study. •

David Lawlor earned his M.A. in Social Science with an emphasis in Environment and Community in 2008 from Humboldt State University in Arcata, CA. His master's thesis is available online and titled "The Prospect of Psychedelic Use as a Tool in Realizing a Transpersonal Ecology." He lives in Arcata, Calif. where he works as a writer and editor.

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Psychedelics, **Deep Ecology**, and Wild Mind



Dale Pendell
dale@botanikos.com
www.dalependell.com

In 1969, in an essay in *Earth House Hold*, Gary Snyder wrote that “Peyote and acid have a curious way of tuning some people in to the local soil.” While exceptions abound, some of the more salient characteristics of the psychedelic revolution that blossomed in the 1960s and continue to this day are an embracing of things “natural,” including natural foods, natural childbirth (and breast-feeding), an easy acceptance of nudity and the human body, and, for many, a return to Earth-centered living. Many favored the outdoors as a place to open their minds in the new way, and interest in vision quest and traditional nature-based lifestyles followed.

In traditional cultures less shielded from the natural seasons and the cycles of birth and death, the powers of the wild are everyday occurrences. People lay offerings at springs, or perform dances to acknowledge these powers and to maintain an exchange. For the industrial culture of the twentieth century, it took the tremendous power of visionary plants and chemicals to open many minds to what had been obvious to most human cultures for millennia.

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Hard-headed rationalists and cynical materialists often found themselves humbled by a looming mountain, a stream flowing on bedrock, or by a wild animal that stepped out of its camouflage to say hello. Many hold these liberating experiences as the most important in their lives and have never returned to the old paradigm. In seeking to understand such soul-moving events, people have rediscovered what human societies for thousands of years have acknowledged: that we are a part of a great living fabric, and that certain wild plants, animals, or places are endowed with something that we might call presence, or energy, or resonance. This feeling of special resonance or presence is usually glossed as “the sacred” by Western intellectuals, though no one is certain what that actually means. Such recognition has led many beyond the re-

source management ethos of conservation to what has been called “deep ecology.”

Being tuned in to the local soil means being at home—the root of “eco.” As trivial an example as orange peels highlights the difference between the tourist and someone who can feel that he is standing on the bones of his mother. Anyone who has spent much time in the back country has seen orange peels thoughtlessly tossed along the trail or at the base of a rock. People who would otherwise be careful about packing out their trash leave orange peels because they are not “trash” (though they wouldn’t do the same in their own living rooms). But “presence” has to do with what was there before we came—call it power, or beauty, or suchness—it has nothing to do with our ideas of what is trash and what is not-trash.

Encounters with the wild always have an awe-inspiring quality—that is their nature—but most of us are conditioned from birth to block out these experiences. One of the great gifts of visionary plants and substances is that these cultural filters are temporarily suspended, so that the wild has free access to mind. The downside, of course, is that everyday mind, with filters back in place, may dismiss the experiences as hallucinatory, forgetting that the filtered interpretation is also hallucinatory. That is, the very special and extraordinary quality of the visionary experience itself tends to allow us to relegate the profound insights of that experience to the visionary realm only, as if it were separate and not a part of “reality.”

In his book *A Zen Wave*, Robert Aitken presents two haiku of the Zen poet Basho. The first goes:

*Wake up! Wake up!
Be my friend
sleeping butterfly.*

Basho is not on psychedelics, but he is intimate with the butterfly. There is a joy and playfulness that form a shared reality—the oneness is the reality. The other poem goes:

*The morning glory!
This too cannot be
My friend.*

Aitken's point is that Basho also recognized the absolute independence and separateness of the other being. That's deep ecology! The many beings, the many rocks and crevices and waterfalls and streams, all exist in and of themselves, entirely without reference to the human world and human uses. At the same time, all of it is linked together in an indissoluble web.

The true mythologies of a culture are the stories that everyone accepts as true, without question. While the cosmological systems of other cultures are easily dismissed as myth, one's own never are. For us, that myth includes the belief that there is an “objective” physical world that exists wholly independently from the self—from mind or consciousness. It's even called “the Reality Principle,” as theistic an appellation as one could come up with. To free the mind, to recover that wildness that is equally jaguar and peony, leaf rustle and dew on a spider web, requires both insight and training.

On psychedelics, even “ordinary” experiences can be hair-raising. That is a clue for us to the true nature of the wild—that the wild doesn't end or begin at a fence, and that wild mind is something that we know about from our own experience. If psychedelics can help with that realization, they are truly, in the best and most ancient sense of the word, sacred. Mind is wild by nature. Presenting wild mind, sharing wild mind, is benevolence. •

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it took the tremendous power of visionary plants and chemicals
to open many minds to what had been obvious
to most human cultures for millennia.

Huichole Peyote Dance and the Inspiration for Biosphere 2



By John Allen

www.synergeticpress.com

john@biospheres.com

An incredible unification
of lifestyle and
metaphysics
occurs during the annual
peyote dance
ceremonies of the
Huichole Indians...

John Allen conceived and organized the building of the Biosphere 2 project in Arizona, the most ambitious environmental experiment of our time. Biosphere 2 is a miniature Earth under glass and the world's largest laboratory for global ecology ever built. His memoir *Me and the Biospheres* was recently published by Synergetic Press. (This Spring Synergetic Press will also be publishing a new book by Ralph Metzner and Ram Dass called *Birth of Psychedelic Culture*.) To find out more about John's work see: www.synergeticpress.com

An incredible unification of lifestyle and metaphysics occurs during the annual peyote dance ceremonies of the Huichole Indians in the Sierra Madre mountains of Northwestern Mexico. I was allowed to participate in the annual ceremonies of this remote group that recur in a stone-enclosed sacred area, which features two stone buildings. One building is for a fire that is kept going 'eternally' (said by some to have been going for five thousand years) by banking over the coals between the ceremonial times. The other one is for a great collection of eagle feathers (under whose pervasive dream enhancing influence I was allowed to sleep).

Most of the hundred or so observing Huichole who attended the dancing came from some distance away, though a few lived in the immediate area with some dry land subsistence farming. Now the young men mostly work far away, often on the coast. Collecting the peyote buttons requires a long walking expedition by the participating dancers over rugged mountains and into the central Mexican plateau, their ancestral lands. This journey links them intimately with their history and extended bioregion. I was told by several natives of their historic battle of 1738, when they won rights

from the conquerors to continue their way of life and metaphysical contact with the universe.

I met this high morale purposeful party--after making a two day walk and mule ride with my two extraordinary guides--under a great oak tree a couple of kilometers outside the ceremonial center, just as they returned from this expedition. They had rested and were changing into their dancing costumes. They cut a few branches from the mighty tree to provide fuel for an economical but steady fire in the central ceremonial building. The dancers had been trained in a highly complex fast-beat choreography by the three dance masters, who had prepared themselves to direct this amazing performance for several months by certain ascetic practices.

After full costuming, this returning party made a joyous procession into the stone-walled enclosure. The army had killed the deer throughout a vast area recently, in an attempt to stop these events, but a courageous Mexican had managed to restore some of the regions' deer population. However, it was still small, so calves were substituted for the actual sacrifice. The deer had been maintained and revered for millennia by this culture as a key component of their ecosystem

and ceremonies.

The dance continued for three days and nights. The dancers rested at intervals of about two hours. Buckets of peyote juice hung in strategic locations and everyone imbibed as they wished. The dance of forty or so dancers, plus some musicians, were not only complex (beyond Broadway) but astoundingly beautiful; they demanded maximum skill and endurance.

Dust is prevalent in this bioregion, and one aim of the dancers is to raise as much dust as possible. The three marakame sat still on their handmade stools in the center. At first I couldn't figure out how anyone breathed, but then my doors of perception swung wide open and I saw pockets of air drifting. Of course! Our universe is discontinuous and miracles occur in its intervals. What a teaching; what a way transmit it. The marakame and dancers were adepts in breathing in as a pocket of air floated by and breathing out as the dust swirled. Impeccable rhythms of everyone's breathing, dust clouds, pulsating music, blood beat dancing, alternating day and night with rests staring into the fire, brilliant entrances of stars or sunshine when the dancers rested from raising up a storm of dust, produced a gorgeous substantiation of this way of life. This was not 'a trip'; as the days passed it became clear that it was, like the Eleusinian Mysteries must have been, a revelation of a mystery: a workable standard of how to live a life.

Those who had gone to work as labor on the coast, disguised heroes, visibly reintegrated during the three days with their bioregion, kin, and initiates. Weariness, wariness, and grimness visible disappeared from their faces. From standing around as somewhat disillusioned observers they became part of an active psychic-physical network of response.

One complete regression to a psychotic state occurred in the sacred building, but three alert guardians and their commanding 'war chief' quickly and brilliantly integrated unraveling a death hold on a young woman into a real life dance of deliverance and redemption. This was a dangerous, brilliantly detailed, conscious action that even a Paracelsus would have found difficult to emulate. All participants acted as if Husserl's bracketing and Gurdjieff's self-observation with non-reacting were part of their normal state; in no way did their great work stop its presence and its revealing bodily, bioregional, and cosmic truths in the midst of this happening. It was integrated into this all inclusive reality.

This event--as well as one in the Amazon, and one in the high deserts of New Mexico, under similar masters



Photo of Biosphere 2 by Gonzalo Arcila.
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and with similar level of participants--gave me a physical and emotional feeling for the biosphere to match and augment my intellectual and scientific vision gained from Vernadsky's Biogeochemistry and Historical Geology that had led me to starting the Biosphere 2 adventure. Here also existed Biospheric teachers of equal majesty and truth. The Marakame understood Biosphere 2 and asked for a small model to store with their sacred treasures, each denoting some particularized understanding of the epiphanic wholeness in which we are privileged to play a part.

Could this be achieved without peyote or equivalent real-time sacrament to raise the human organism to its capacity to make a workable synergy of reason, feeling, sensation, and will that coordinates its life with bioregion and cosmos? Frankly, I don't think so. However, accomplishing this takes individual masters and a collective, history rich culture that exalts creating a dynamic harmony through dance, vision, and music, to integrate these faculties into life-enhancing and intellect-clarifying experiences; then they clearly can be transmissible for millennia. I don't think any medical model can accomplish this total result though, as already proved in practice, properly formulated and practiced, they produce much good

in individual cases of repression and frustration. My best wishes certainly go with MAPS and its brave and thorough efforts to accomplish this needed work.

Nor have I seen that a religious model for using these plants based on a Western European-Middle East system can do as much as the Amerindian way, though certainly experiences in Brazil and the United States demonstrate that a goodly amount of harmony and improved relation to bioregion can be transmitted in such synthetic faiths under a master leader.

My admiration for the AmerIndian masters is profound, and for the tribes who have supported the leaders at great cost to themselves in a material-political sense. It will take a world of much more existential freedom than now exists in the ruling political structures for the century of hard, informed, and impeccable experiencing and experimenting to take place, needed to create an equally thorough and effective tradition around the planet in some modern technical surroundings. Although I never got the chance to participate in the Harvard and New York experiments in this direction, Timothy Leary's accounts in *High Priest* and *Flashbacks*—which were based on physio-psychological science—show a promising start in this direction, but that work was forcibly cut off before it had a real chance to develop. •

Ecology, Technology, and **Biosphere 2**



By Mark Van Thillo
Planetary Coral Reef Foundation
laser@pcrf.org
www.pcrf.org

I was sixteen
when I had my first
psychedelic experience...

Then and there
my life changed.

I often wonder about the mystery of how I found my way to the building of Biosphere 2 (a 3.15 acre miniature world under glass), and in becoming its co-Captain for the first two year inaugural mission. The mystery certainly lies in my experience at a young age with the psychedelic culture. An experience that taught me to see that there is no difference between ecology and technology.

I was sixteen when I had my first psychedelic experience--a teenager roaming the streets of Antwerp, Belgium. Then and there my life changed. The sky became me, and I realized that my home was greater than my family and country. I left Belgium shortly thereafter to travel to India, in pursuit of knowledge and to travel distant lands. That same journey--fueled with an aching desire to understand the biosphere, and the incredible capacity of the human being to become part of the biosphere--led me to the foothills of the Catalina Mountains in Arizona. There the beginning, just the dream of Biosphere 2, was unfolding.

I see the biosphere and modern life as a combination of--a beautiful synergy between--technology and life. The heightened state of awareness allowed me to perceive the conditioned mind at the same time as the complex web of life. It dissolved the separation between men and nature, and, in some cases, it exposed parts of the invisible world. Biosphere 2 became my experimental platform to learn about how ecology and technology work together, and to understand the role of human beings in this total system.

Eight of us were sealed inside Biosphere 2 from September 26, 1991 to September 26, 1993. During that time our task was to remain within the sealed structure and participate as co-creating, intelligent stewards of this emerging life system. We grew our own food, lived with a drastically different atmosphere, drank water that was condensed from

cooling systems, used ecology to process our wastes, managed a half acre farm with goats, chickens and pigs, supported a coral reef with mangrove marsh, a rainforest with cascading waterfall, and an acacia savannah and cactus desert with primates, lizards and frogs. We communicated with friends and family outside using telephones, as well as a primitive email system called dialcom. On comparatively rare occasions, we participated in meetings through the glass window.

My responsibility was to manage the maintenance of the technical systems. I could seek advice from outside experts, but trouble-shooted repairs on my own using a shop with tools and supplies in the Biosphere 2 basement. My day-to-day life centered around the well-being of the technics. Underneath the living systems (rainforest, savannah, desert, marsh, ocean and agriculture/farm systems), lay

a humming, noisy technical maze of pumps, controls, alarms, fans, rain systems, tanks and computers. This was my world and I was right at home.

My life had been all about acquiring practical hands-on technical skills. I learned from my grandfather about the craft of plumbing and electrical systems, and moved on from there to becoming a ship's engineer where at anytime repairs occurred far from shore and ingenuity was critical. During the construction of Biosphere 2, I was involved from the beginning, and joined the hundreds of workers to build the system--piece by piece. I could see the technological world of Biosphere 2--named the "technosphere"--in my mind's eye. I knew the boundaries of cement and steel, and could visualize the pipes and wires and machinery involved to simulate the workings of a natural environment.

I was a part of this man-made living eco-technic biosphere. By participating daily in its construction and living inside for two years, I had become part of its very fabric. It was the greatest learning experience of my life and by the end of the eight years (1986-1994), I could see in detail the "technosphere" inherent in the biosphere. Biosphere 2 had been my teacher--it had fulfilled my dream at sixteen to explore the reality of how the

biosphere worked. I was fully participating within a day-to-day practice of being at one with ecology and technology.

The Biosphere 2 technosphere was designed hand-in-hand with a myriad of ecosystems. Technology was there to benefit and support ecology--one could not exist without the other. This was the theory and *raison d'être* for the biosphere 2 project. It was called by the founders, the art and science of Ecotechnics. Aesthetics was required to simulate the natural processes of wind, rain, currents and waves. Science/engineering had to produce the necessary functions. Together, the aim was a seamless appearance of reality as we know it. All man-made parts and machines were integrally a part of all living, breathing, flowing movement and expression of life.

When I saw the coconut trees on the beach of Biosphere 2 waving gracefully in the breeze, I simultaneously saw the giant air handling systems that were powered to create these winds. When reveling in the lovely red and yellow flowering canna lily produced using the byproducts of human/animal waste in our wastewater recycling system, I also saw the roots of the plant acting like pumps to bring oxygen below the surface to break up these waste products. The plant's roots are designed

Mark Van Thillo inside Biosphere 2 looking out over Biosphere 2. He is in the library at the top of the tower. Photo by Peter Menzel. Permission by Mark Van Thillo



to act like a pump. Living systems are the best example for efficient and productive technological innovations.

As well, the future of our biosphere requires that we become more intelligent and encourage an expanding technological world that integrates with ecology and does not destroy the environment. By that I see a world where technology supports ecology, and creates systems that are economically and socially viable and sound. For example the most successful corporations will become those that have pioneered alternative Green energy systems, ecological wastewater treatment systems, ecological (not petrochemical fertilized) agriculture systems, computer information systems and satellites that photograph the Earth to provide real-time imagery for all people to become stewards of our Earth's biosphere.

When I look at what technology provides me in this present moment, it is always about providing life opportunities to do more. Yet most technology is accomplished at the expense of life even though we need soil, plants and clean water and air to thrive. The psychedelic revolution expresses over and over how we are all one. Indeed, our future requires that new businesses both create technological systems that work with the environment as well as use the wisdom of nature to create intelligent eco-friendly engineered systems.

"Dare to dream" and "dare to do." This was a driving ideal at Biosphere 2 that kept us going to innovatively create a new world and not give up when things seemed impossible. I dare to dream that we can shift our mode of operating to create an intelligent future where the technosphere is part of the biosphere in an evolving, co-creating, life-affirming new world. The psychedelic revolution will help us dare to step into that future and see the extraordinary potential that is ours to create. •

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of Biosphere 2 waving gracefully in the breeze,
I simultaneously saw the giant air handling systems
that were powered to create these winds.

Photo of Biosphere 2 by C. Allan Morgan. Permission of John Allen.



Accessing **Ecoconsciousness**: The Potential Role of Psychedelics



Shena Turlington
shena.turlington@gmail.com



When a Native American child is ready to enter adulthood, he is sent into the wilderness on a vision quest to connect with spirit, seek answers to problems on the physical realm, and learn his direction in life. He spends days attempting to induce altered states of awareness through fasting, chanting, meditation, and very often the ingestion of psychedelics. He returns feeling freed from the fear of death with a new understanding of the natural form of all things, a sense of personal purpose, divine realization, and a heightened awareness of the four elements and ecological relationships. This is one of many forms of rites of passage performed in indigenous traditions using the aid of hallucinogens to perform healing, gain insight into complex situations, and obtain guidance for moving through life transitions.

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Through thousands of years of working with sacred plant medicine, the indigenous have found numerous benefits through inducing altered states, including the healing of emotional and physical ailments, gaining knowledge from animal and plant guides, communicating with nature and spirits, and increasing inner states of peace and balance. When the shamans are faced with difficult problems such as widespread drought or the necessity to make decisions in times of war, they consult the natural intelligence which has been inscribed in the surrounding ecology over millions of years. For the American Indians sacred knowledge is accessed through peyote, for the Amazonians through ayahuasca, for the Africans Iboga, for the Mesoamericans psilocybin mushrooms, and for the Andean Indians San Pedro. Throughout the world the use of psychedelics has been documented in ancient traditions, from Buddhism to Mayan tradition.

In modern culture we lack the benefit of a structured system of ceremonies, rituals, and rites of passage to assist us in confronting difficult situations and feel-

ing a sense of inner purpose. Lacking a guide through the transition from childhood to adulthood, adolescents increasingly feel lost, constantly searching for a personal mission and wondering what they want to do with their lives. One in five teens now experiences depression, accompanied by feelings of apathy and purposelessness. The absence of opportunities to learn from nature impacts us at all stages of life, depriving us of the benefits of natural therapy, deep understandings, and increased inner peace.

In addition to the shift in cultural perceptions of how we relate to nature, we are impacted by the geographical shift away from the wilderness and into cities. While today fifty percent of our global population lives in the urban environment, the United Nations estimates ninety percent of future population growth will be concentrated in cities. Megacities are exponentially growing in Asia, Africa, the Middle East, and Latin America, with the equivalent of a new Los Angeles predicted to appear every three months over the next 25 years. With the onslaught of rapid urbanization, how can we

attempt to stay connected to nature and have access to the wealth of knowledge it provides? Without exposure to the natural environment we lose our understanding of deep interconnection, awareness of a common thread, and a sense of responsibility and care for the planet.

It is generally accepted that our current state of ecological crisis is a direct result of this growing lack of interconnection with, and resulting apathy for, our surrounding environment. Even with recent victories over apathy through increased awareness, beyond awareness there is a growing need for action. And there is something significant to be said for 'right action', as the modern solutions of ecological control and domination through science and technology do not seem to be rectifying the situation. More vital than scientific understanding of the looming global crisis is the drastic need for environmental stewards to change it.

Many types of ecological philosophy, such as deep ecology and transpersonal ecology, discuss this conundrum, proposing that facts and logic alone cannot enlighten us on how to integrate with nature: ecological wisdom must come through 'deep experience, deep questioning, and deep commitment'. The core belief of deep ecology is that the biosphere will not flourish alongside humans unless we regain an ecocentric perspective and recognize our symbiotic relationship with the Earth. This occurs through a dissolving of boundaries between self and nature, and the realization that humans are a part of the environment, rather than separate from it. This is supported by the findings of the Nature Inclusive Measure (N.I.M.), developed by St. John and MacDonald (2007) to assess the effects of a "nature inclusive self concept" on the ecopsychological self.

St. John and MacDonald found a significant correlation between a person's degree of nature inclusiveness, mental well-being, spiritual well-being, and an expanded self-boundary, showing that those who identify with or feel "at one with nature" scored higher on particular scales measuring these attributes. Moreover, they discovered a second factor of "nature stewardship," based on a person's active pro-environmental behavior such as participation in environmental organizations, clean-up, and recycling, emerged to also be highly correlated with the nature inclusiveness measure. It seems that transcending a restricted sense of personal boundaries to include nature and the surrounding environment not only enhances a sense of psychological well-being, but also increases the likelihood of a person to actively participate as a caretaker of the Earth. The question that remains is how can we achieve this sense of expanded boundaries? With our increasing separation from nature, where do we find the 'deep experience' that leads to self-realization, eco-consciousness, and recognition of an interconnected state of being?

Psychedelics perhaps offer the opportunity to regain that connection with nature and act as a conduit for

communicating with plant spirit, even when the physical access to the environment is unavailable in the densely packed urban world. In addition to the nature-orientated experience commonly reported by users of psychedelics--such as interactions with plant, rock, and tree personalities, encounters with spirit animals, and the recurring presence of the fractal patterns of nature--studies have shown that use of psychedelics is connected with a long-term sense of expanded self-awareness, dissolving of boundaries, concern for others, and concern for the environment. In a MAPS-funded study, Lerner and Lyvers (2006) compared the values and beliefs of psychedelic drug users with those of non-users, as well as users of non-psychedelic illegal drugs (e.g. marijuana, amphetamines). They found that users of psychedelics had an increased sense of oneness with God and universe (expanded self boundaries), as well as increased concern for the environment, empathy, creativity, and ability to cope with stress. I would conjecture that if psychedelic users were evaluated on the scales used with the N.I.M. study, we would see similar correlations to the use of psychedelics as were seen with a nature inclusive self-concept.

The psychedelic users and nature-inclusive self-identifiers of both studies were found to hold similar values, such as respect and care for the environment, empathy for other living beings, expanded self-awareness, increased sense of spirituality, and sense of intrinsic well-being. Following the belief that those with similar values would likely follow similar action, psychedelic users with expanded self-boundaries are likely to exhibit the qualities of active Earth stewardship. Indeed, it is common to see individuals return from a vision quest or psychedelic journey with an increased affinity for nature, belief in animism, and desire to care for the Earth. They often feel they have been gifted with a new level of understanding, ancient wisdom, and clarity in purpose, and feel empowered to act in accordance with this new way of being.

By embracing the ancient use of hallucinogenic substances as a valuable way to access a part of ourselves that is able to communicate with nature, perhaps we can continue to gain the gifts of wisdom and insights provided by the natural environment even without the ability to be constantly immersed in it. We have seen an increasing emergence of spiritual groups from within the urban environment, such as the Santo Daime, healing collectives, urban-based vision quests, and other communal groups seeking to access the elements of nature that provide insight and healing. There is no doubt that with the increasing population, destruction of nature, and loss of valuable habitat, there is great necessity to reconnect with a deeper sense of purpose and to reinforce the importance of caring for our environment. By finding ways to access the eco-consciousness, inner consciousness, or superconsciousness, we can become better stewards of the Earth and learn to heal the surrounding ecosystem while healing ourselves. •

The Anthropocosmic Vision of **Psychedelic Environmental Ethics**



Sam Mickey
sam_mickey@yahoo.com
California Institute of Integral Studies

As public awareness of the global ecological crisis has risen in recent decades, many theorists and activists have begun articulating the challenges of environmental ethics. While the field of environmental ethics has deep roots in the philosophical and religious traditions of the world, the field can be said to have officially started with Richard Routley's frequently anthologized 1973 essay, "Is There a Need for a New, an Environmental, Ethic?" Answering affirmatively, Routley and many others defended the value of nature against the narcissism and chauvinism that pervade the destructive attitudes, beliefs, and practices with which humans relate to nature.

Many environmental ethicists have shown that the ecological crisis is due largely to human-centered or "anthropocentric" ethics, whereby the human (anthropos) has acted as if it has special privileges and values that are absent from the plants, animals, elements, and ecosystems of the natural world. Humans have placed themselves at the center of all value, and the rest of the planet has been marginalized and reduced to a mere means for achieving human ends, a mere heap of objects for humans to use and consume.

To counteract anthropocentrism, many environmental ethicists have proposed non-anthropocentric theories and practices, wherein the center of value is not placed on the human, but on living organisms (biocentrism) or on whole ecosystems (ecocentrism). Although biocentric and ecocentric environmental ethics oppose anthropocentrism and its manipulative and exploitative relations to the environment, these non-anthropocentric perspectives tend to foster misanthropy and social irresponsibility by marginalizing humans and ignoring social problems of poverty, sexism, racism, and injustice.

Psychedelic research presents an alternative to the dichotomy between anthropocentrism and non-anthropocentrism. This alternative is the anthropocosmic vision, which sees meaning and value emerging from the intimate intertwining of humans and the world (kosmos) in the seamless fabric of Being. Whereas varieties of anthropocentrism and non-anthropocentrism perpetuate dualisms that dissociate humans from the world, anthropocosmic perspectives envision a complex and flowing whole, where humans and the world are entangled with one another in co-creative correspondences, such as the correspondences that connect the maternal womb with other manifestations of generative openness (e.g., cave, house, chapel, biosphere, galaxy, cosmos).

The word "anthropocosmic" has been used by various twentieth-century scholars of phenomenology (Gaston Bachelard, Paul Ricoeur, and Gabriel Marcel) and of religious studies (Mircea Eliade, R. A. Schwaller de Lubicz, and Tu Weiming), and it has been applied to ecological issues by scholars in the emerging field of religion and ecology (Mary Evelyn Tucker and John Grim). The anthropocosmic

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vision has also been articulated by Alex Grey in lectures on sacred art and architecture, including a lecture I attended in October 2007 at an Entheocentric Salon held in San Francisco.

With various accounts of the profound role of psychedelic experiences in his visionary art, Grey provides an indication of the way in which psychedelics can facilitate experiences of anthropocosmic relations and thus transform ecological consciousness and conscience. For instance, in a psychedelic journey in 1976, Grey experienced with his wife Allyson a vision of the fundamental structure of reality, which they each subsequently painted. His expression of this vision appears in *Universal Mind Lattice*, which depicts a field of interconnected flows of energy, wherein the human body has dissolved, becoming a fountain and drain through which these flows pour. Grey's psychedelic journey disclosed an anthropocosmic vision of the complex and flowing unity of Being, in which the human and the world are intimately intertwined. *Universal Mind Lattice* is part of Grey's series of *Sacred Mirrors*, which reflect the multiple levels that compose our anthropocosmic relations, including material, biological, psychic, and spiritual systems, the underlying latticework in which these systems are embedded, and the elemental void from which the lattice emerges.

Furthermore, Grey's anthropocosmic vision appears in many other paintings. In correspondences of Earth with womb, galaxies with eyes, and universal latticework with the veins, nerves, and psychospiritual energies of humans, Grey frequently shows macrocosm and microcosm in mutual reflection and interpenetration. He conveys the ecological implications of such correspondences in his depiction of the divine mother Earth in Gaia, where Gaia, represented as the tree of life, is connected to the grid of the universal latticework. On one side of the tree, human power and greed are transforming Gaia into a technological wasteland, and on the other side, humans understand their roots in the natural world and have created a civilization that lives harmoniously with Gaia.

The anthropocosmic vision of psychedelic environmental ethics is not restricted to Grey's work, but is affirmed by many others who have witnessed the power of psychedelics to amplify the interconnectedness of humans and nature. For example, in *LSD: My Problem Child* (2009, recently republished by MAPS), Albert Hofmann describes how his experiences with LSD resemble his childhood experiences of "euphoric moments" in nature, and how the effects of such "magic drugs" happen at "the borderline where mind and matter merge" (pp. 30, 165). Other examples abound. In her mushroom veladas, Maria Sabina sings of being a hummingbird, whirlwind, wolf, mushroom, Jesus Christ, eagle, water, and more. John Seed, a practitioner of deep ecology, often mentions the importance of psychedelics for his efforts to help people reconnect with their ecological and evolutionary identities. Stan Grof's psychedelic psychotherapy contains numerous accounts of anthropocosmic identification with cells, plants, animals, Gaia, and the cosmos, including an account in which Grof learned the evils of fossil fuels and petrochemicals by becoming petroleum during a series of ketamine sessions (*When the Impossible Happens*, 2006, p. 262).

The anthropocosmic vision overcomes the narrow perspectives of anthropocentric and non-anthropocentric environmental ethics. By catalyzing engagements with the anthropocosmic relations that compose one's set and setting, psychedelics can catalyze responsibility for oneself and one's environment, responsibility for the entanglement of human well-being and suffering with the well-being and suffering of nature and of all beings inhabiting the world. Ultimately, this means that the values and practices of psychedelic environmental ethics cultivate a comprehensive sense of care, which attends to the infinite multiplicity of beings dwelling in the complex and flowing latticework of Being. •

The Ecologic Niche of Psychedelic Plants



Kim A. Dawson
kadawson@shaw.ca

Why is there overlapping
biochemistry between
certain plants and human
brains? One proposal
is that there is an
evolving ecological niche,
one that is necessitated
by an ecosystem whose
survival is threatened.

Plants of the Gods, written by Richard Evans Schultes and the late Albert Hofmann is probably the best illustration of the ecological relationship between psychedelic plants and human civilizations. Of the ninety-one hallucinogenic plants beautifully illustrated and characterized in the book, the authors detail fourteen that have had profound significance for human beings. As they state, “Plants that alter the normal functions of the mind and body have always been considered by peoples in nonindustrial societies as sacred, and the hallucinogens have been ‘plants of the gods’ par excellence” (preface, p.7).

In his *Entheogen Chrestomathy*, Thomas Roberts notes in his review of *Plants of the Gods* that the early cannabis plant was viewed as a gift from the gods. In Indian and Tibetan history, there were deep mythological and spiritual beliefs about the plant. Bhang was thought to deter evil, bring luck, and cleanse sins. Indra, god of the firmament, had a favourite drink that was made of Cannabis, and the Hindu god Shiva commanded that the word Bhangī must be chanted during sowing and harvesting of the holy plant.

In light of the theme of this *MAPS Bulletin* on ecology and psychedelics, the central hypothesis I want to propose is that, like DNA connects all life on Earth to a common biochemical code, the psychedelic plants are a class of living beings which have a relationship with human consciousness through the common root of psychoactive chemicals they share with the human brain. These psychedelic and/or entheogenic biochemicals have an ecological niche that is to bring the person’s attention to the significance of the person’s intrinsic connection with the natural world or cosmos in its largest sense.

The plant chemicals which evoke these

experiences of connection are so similar in their root to neurotransmitters found in the human brain that the relationship is no mere coincidence. Instead, it is reflective of an adaptive synergy between specific plants and those humans who are open to the message and compelled to pass it along.

While this is only one of many such root similitudes, the indoleamine neurohormones, such as serotonin and melatonin, are best known for their role in regulating states of consciousness. They are, in addition, prime examples of the overlapping chemistry of psychedelic plants and the human brain.

The basic structure of the indoleamine neurotransmitters are the same two-rings that are found in the alkaloid d-lysergic acid amide naturally found in morning glory seeds. These seeds are thought to have been used by Aztec priests during sacrifices and by present-day Mayatec curanderas (healers) to discern information about their patients’ illness or as an aid in divination of the location of missing objects. R. Gordon Wasson has presented evidence linking the indoleamine psilocybin found in “magic mushrooms” to rites dating to 300 A.D. and these

mushrooms are called “flesh of the gods” by the Chichimecas of Central America (Miller, 1983).

There are clearly many such parallels that can be drawn between the psychedelic plant world and the neuronal pathways in the human brain, such as muscarine in the mushroom *Amanita Muscaria* and the muscarinic neuronal pathways in the human brain. Or, the endogenous DMT in the brain and the N,N-DMT found in *Psychotria viridis*, a shrub with small red fruit and long, narrow leaves that are mixed with *Banisteriopsis caapi* to make the ceremonial Ayahuasca tea.

What is the role of these substances in the human brain? What is their role in plants? Why is there overlapping biochemistry between certain plants and human brains? One proposal is that there is an evolving ecological niche, one that is necessitated by an ecosystem whose survival is threatened. At its most basic adaptive level, if the plant helps the human to recognize the fundamental biochemical connection of all life, and the place of the human in the global ecosystem, the human is more likely to foster an environment that is more conducive to both plant and human survival.

From Darwin's *Origin of Species*, when two populations are isolated from each other, for example, by a mountain or body of water, they have specific niches and corresponding adaptations to their own environments. Occasionally, some individuals travel across the natural boundaries, encounter new environments, and develop new adaptations in order to survive. If these new adaptations are passed on to the next generation, a new species can evolve.

I want to propose that psychedelics are very much like a boat crossing an ocean dividing neighboring and quite radically different environments. In the old world, the plant and human environments look

very different. Once the boat has crossed the ocean, a whole new world opens up in which plant and human environments merge into a unified cosmos of life in which compassion for the ecosystem shared by both old and new worlds is greatly magnified.

The psychoactive plant substance acts like a synergetic key which circumvents thinking based on separateness and returns consciousness to biochemical unity that was familiar before the doors of the mind were closed by the limiting, linear social norms of the old world. Once across the ocean, a whole new world of adaptations is needed, where compassion for all life (though overwhelming) is a sign of both helpfulness and necessity.

One of these adaptations is an appreciation for the ultimate source of the psychedelic that is the sacred plant. When this adaptation is brought back to the “old world,” one result can be a greater appreciation for our impact on the natural world in which we live along with a renewed vigor for life. In this way, through the relationship of psychedelic plant and psychedelic brain, the old world can transform into the new.

The relationship between psychedelic plants and human brains is no mere coincidence but is reflective of an adaptive communication by specific plants with humans who are open to recognizing humanity's intrinsic connection with our common and sacred home. •

References for this essay are available on the MAPS Web site: www.maps.org

Kim Alan Dawson was originally trained as a biopsychologist and is now in private practice as a clinical psychologist in British Columbia, Canada.

The psychoactive
plant substance
acts like
a synergetic key
which circumvents
thinking based on
separateness and returns
consciousness to
biochemical unity...

Another Green World: Psychedelics and Ecology

In the same way that we garden plants, teacher plants like ayahuasca seem to garden us, when we imbibe them.

I tend to view the naturally occurring psychedelics as emissaries from the larger community of life, bearing elder-species wisdom. As the herbalist Morgan Brent has proposed, it is almost as if the vegetal world assigned certain plants to be the diplomats and teachers to our young and confused species, to help put us on a different path than the one we have chosen, racing to ecological decimation and self-extinction. How else to explain the consistent messages received in mushroom, ayahuasca, iboga, and peyote visions, of a world out of balance, of the need to take responsibility, of the vast empathic sentience of the Gaian mind?

In the same way that we garden plants, teacher plants like ayahuasca seem to garden us, when we imbibe them. During shamanic sessions, people often get direct messages about how to transform their lives. Sometimes, their explorations lead to radical revelations and of their attachment to mediocre diets, relationships, jobs, and so on. In many cases, they eventually take the advice, and purge these negative influences from their lives.

There seems to be a link between the loss of shamanism and initiatory experience in the West, and the genesis of a human culture able to treat nature as something alienated, outside of itself. The recovery of psychedelic awareness in the 1960s coincided with the birth of the environmental movement, and perhaps helped to inspire it. Believing in an objective world of material facts whose apparent reality was constantly reiterated by mass media and science, modernizing humanity lost access to the primordial and participatory modes of awareness known to indigenous cultures. We denied our innate knowledge of our reciprocal relationship with the natural world that not only surrounds but also constitutes us, as even the interior of our bodies are dense microbial environments.

My first mushroom trips in college helped to decondition me from my socialized personality and called into question my naïve assumptions that the civilization surrounding me was enduring and inevitable, that the air-conditioned nightmare of the American empire would continue forever. Later journeys confirmed this understanding, stripping away layers of acculturation. In West Africa I underwent initiation into the Bwiti tribe,



Daniel Pinchbeck
daniel.pinchbeck@gmail.com
www.realitysandwich.com

Photo by Phillip Jones Griffiths

taking iboga, their visionary sacrament. I was taken through a life review during that trip. It seemed as if a benevolent spiritual intelligence was guiding me, revealing how my negative and compulsive behavior patterns were formed by patterns set in my childhood. I was also given the faith that these patterns could be changed, that the splinters in my soul could be removed one by one, if I found the will to do so.

Gregory Bateson famously coined the term, the “ecology of mind.” Along with the outer ecology we see in nature, there is an inner ecology that consists of our thinking process and emotional tendencies. It seems that that our inner and outer ecology reflect

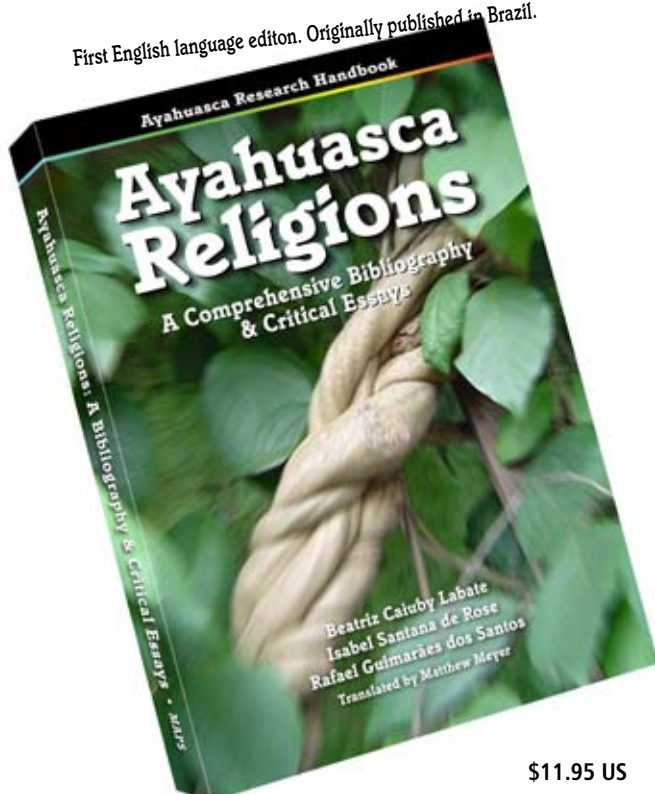
and reinforce one another. On the macro level, our current society is a projection of the collective thoughts and ideas developed by past generations.

In order to change our society from imminent doom, we need to clear out the old garbage and evolve new pathways of thinking and feeling as quickly as we can--to revamp our mental and emotional ecology. Psychedelic substances--visionary plant teachers--seem to play a crucial role in this process. Several books have come out recently revealing the importance of psychedelics in the development of the personal computer and the Internet. Many crucial insights in biology and physics were psychedelically inspired. The almost stereotypical psychedelic gnosis of interconnectivity, unity of all being, and infinite fractal unfoldings may indicate the potential for a quantum leap in human consciousness, to a new stage of awareness that transcends and includes previous levels or what the philosopher Jean Gebser called “consciousness structures.”

I suspect that psychedelics play a part in the process of our species evolution – a movement from one structure of consciousness to the next. One hypothesis is that we might be on the threshold of a shift from the biological and physical phase of our evolution to the psychic phase. Whatever comes next, any future for our species will be ecologically strict, and the gnosis we gain from communing with our botanical elders can provide us with crucial insights. •

RECENTLY PUBLISHED BY MAPS

First English language edition. Originally published in Brazil.



\$11.95 US

Ayahuasca Religions: A Bibliography & Critical Essays

By Beatriz Caiuby Labate, Isabel Santana de Rose
and Rafael Guimarães dos Santos

Translated from Portuguese by Matthew Meyer

"Easy to read, concise, and multidisciplinary, *Ayahuasca Religions – A Comprehensive Bibliography & Critical Essays*" is an admirable book and a valuable tool for those interested in contemporary ayahuasca uses. Packed with information and knowledge, it suggests numerous leads to follow. It marshals the literature with an internationalist spirit, and also provides a precious historical perspective on a complex phenomenon. People interested in ayahuasca will gain from using this book."

– Jeremy Narby, Ph.D., anthropologist, author of *The Cosmic Serpent, DNA and the Origins of Knowledge and Intelligence in Nature*, and co-editor with Francis Huxley of *Shamans Through Time*.

"*Ayahuasca Religions – A Comprehensive Bibliography & Critical Essays*" is the most extensive compilation of information available to date on the studies on the ayahuasca religions in Brazil and around the world. This book systematizes the various research projects around the topics of history of the religions, biomedical investigations into their effects, and the contemporary dynamics. This is an essential reference work for anyone interested in these internationalizing religious traditions."

– Michael Winkelman, Ph.D., Associate Professor in the School of Human Evolution & Social Change Arizona State University, co-editor of *Psychedelic Medicine* and co-author of *Supernatural as Natural*.

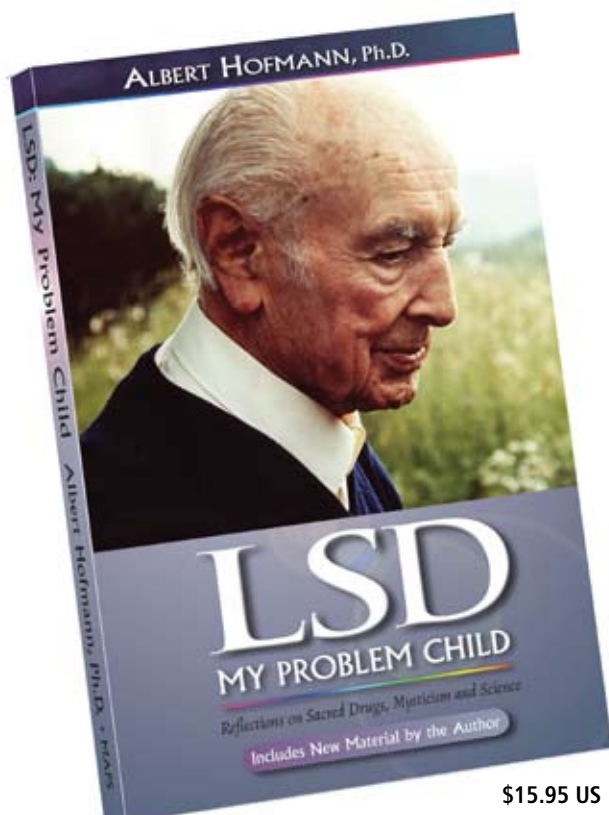
LSD: My Problem Child Albert Hofmann, Ph.D.

Third edition, published Spring 2009, includes new material by the author and 16 pages of color images.

THIS is the story of LSD told by a concerned yet hopeful father, organic chemist Albert Hofmann. He traces LSD's path from a promising psychiatric research medicine to a recreational drug sparking hysteria and prohibition. We follow Dr. Hofmann's trek across Mexico to discover sacred plants related to LSD, and listen in as he corresponds with other notable figures about his remarkable discovery. Underlying it all is Dr. Hofmann's powerful conclusion that mystical experience may be our planet's best hope for survival. Whether induced by LSD, meditation, or arising spontaneously, such experiences help us to comprehend "the wonder, the mystery of the divine in the microcosm of the atom, in the macrocosm of the spiral nebula, in the seeds of plants, in the body and soul of people."

Now, more than seventy years after the birth of Albert Hofmann's problem child, his vision of its true potential is more relevant, and more needed, than ever.

100% of the profits from the sale of this book will be devoted to psychedelic psychotherapy research.



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Awakening the Spiritual and Mental Ecology



Michael and Violet Divine
michael@tenthousandvisions.com

Deep Ecology is rooted in a perception of reality that goes beyond the scientific framework to an intuitive awareness of the oneness of all life, the interdependence of its multiple manifestations and its cycles of change and transformation. When the concept of the human spirit is understood in this sense, its mode of consciousness in which the individual feels connected to the cosmos as a whole, it becomes clear that ecological awareness is truly spiritual. Indeed the idea of the individual being linked to the cosmos is expressed in the Latin root of the word religion, religare (to bind strongly), as well as the Sanskrit yoga, which means union. – Fritjof Capra

To return to
a place of balance
is to understand the
natural world as an
interdependent whole
and to understand our
own minds in the same
way and see that there
is no separation
between our minds
and the world.

That which we commonly refer to as “self” is but a microcosmic holographic echo of the grand complexity of our macrocosmic reality. In this tiny little corner of reality where we perpetually insist on carving out a space for ego, we can experience the interconnected, mutually dependent facets of our mental processes as they seek to find balance and harmony with all of the other facets of our mind. Can this be considered the ecology of the psyche? To some extent, yes. Just as the natural harmony of the planet is dependent on all of its parts working together in a balanced manner, a unified mind functions efficiently and healthily when it acts in harmony with its self and the body that contains it. Somehow along the course of time, the human mind/ego convinced itself that it was separate from this unified universal whole and, in doing so, has pushed the planet into extreme unbalance. To return to a place of balance is to understand the natural world as an interdependent whole and to understand our own minds in the same way and see that there is no separation between our minds and the world. By ferreting out the places where we are not in alignment with this ecological we can live healthy, balanced lives.

...to try to live
 a harmonic,
 ecologically balanced
 life we need to take
 many small steps
 to get there and
 examine all of
 our intentions,
 our actions, and
 the echoes
 of those actions
 all along the way.

Michael Divine created the image
 "Awakening to Beauty,"
 see inside front cover.

As an artist, I have been granted a path whereby I can, for better or worse, spend a fair bit of time gazing inwards. One specifically long and heavy winter comes to mind in which I had immersed myself in this exploration of mental states. In doing so, my appreciation for the natural beauty of my surroundings had taken a back seat. The long rainy Southern California winter, with its skeletons of trees and skies blanketed with grey, had helped me turn inwards. Yet, as spring swept in and the clouds lifted, a slew of purple, yellow and white wildflowers sprang up across the fields where I lived and, in the freshness of the sun, they danced and sparkled. Their bright blooms had a similar awakening effect on my own mind; acting as a mirror to my mental blossomings. After months of diving through the inner mental chasms--addressing what needed to be addressed, hoping to create a more unified and whole mental state--the winds changed, the sky cleared and the beauty of the world looked me in the eye.

Coming up for a breath of fresh air from the deep sea diving called "working on our shit" can be like taking our first breath. Oh, we say, this is what it's like to breathe. This is what it's like to see beauty. This is what it's like to be connected. We tend to miss the mountains, the trees, the flowers, and the whole realm of natural phenomena when we are submersed in that underworld of mental spelunking. In fact, we tend to miss this dance of interconnectedness most of the time. With our lives of appointments, schedules and entertainment, we have, it seems, done everything we can to distract ourselves from the really raw truth that we are totally disconnected to ourselves and our world. When we lift our heads, taking note of all the rising and falling patterns of life, we can witness the interconnectedness--this vast system of checks and balances that is the netting of both our inner and external worlds. This is to discover the ecology of our human mind and how much a microcosm it is of the world around us. From the dirt beneath our feet to the stars in the sky, all of these interdependent bits and pieces and the identities we attach

to them make up our concept of a place in time and space. Similarly, each of our ideas and identities form an inner world and the sense of I that inhabits it. When our mental storms clear and the clouds break, perhaps, in that awakening, there is some sense of enlightenment.

However, winter doesn't become spring simply by the snap of a finger, Rome wasn't built in a day and, likewise, our minds generally don't just instantaneously awaken. Even for those who claim instant enlightenment the seeds were already planted, intention was set, etc. So to try to live a harmonic, ecologically balanced life we need to take many small steps to get there and examine all of our intentions, our actions, and the echoes of those actions all along the way. If we are lucky then, during that process, we may begin to notice just how interconnected life is. Then, we can have a functioning inner ecosystem in which all of the parts and pieces are working together in a healthy and balanced manner. Nature has presented us with countless tools to help us work with this process. From the wisdom of our own bodies, accessed through meditation, yoga, tai chi, and other activities to psychedelic tools to the oceans of wisdom contained within our minds and in the interplay of our world: everything we need is here already, it simply takes awakening to the possibilities and actively engaging in the transformative process. •

Conversations with an **Amazonian Shaman**



Louise Reitman
Louise@maps.org

We are now
largely mired in
the legacy of a strange
and malignantly
materialistic system,
with a history of slavery,
oppression and
colonialism.

I recently moved from New York City to an off-the-grid mountain cabin, nestled in the redwood forests of Northern California. It's extremely isolated, with grand vistas to behold and abundant wildlife. The beauty of the wilderness is profoundly peaceful. Minimizing the technology in my life, and immersing myself in nature, has been clarifying, relaxing, nourishing, and meditative.

I've come to realize that a lot of the modern conveniences that most "First Worlders" take for granted (innumerable, overflowing markets and stores, electricity, speedy transportation, and widespread technological innovation), as well as all the luxuries that are available to those who can foot the bill, are afforded at the cost of disturbing ecosystems, destroying indigenous peoples' homes and cultures, and supporting a worldwide system of vast inequality. We are now largely mired in the legacy of a strange and malignantly materialistic system, with a history of slavery, oppression and colonialism. I was poignantly reminded of this fact whilst attending a meeting in San Francisco that addressed the current demolition of the Amazon Rainforest by multinational companies. I was invited by my landlady, a social activist who has a cabin near mine; she had been hosting an indigenous Ecuadorian shaman on our property for a few weeks, who I had the chance to talk to. Flavio, the shaman, had come to the states to represent thousands of indigenous people displaced by encroaching oil, gold and coal refineries, and was to be the keynote speaker at this meeting, which was hosted by several American-based, ecological activist nonprofits. Flavio opened his speech by playing a wooden flute that his grandfather had taught him to play. After the song, he related an all-too-familiar tale of being violently pushed off the land and relocated to slums, where he found himself impoverished, starving and unsure of the future. Flavio told me that the jungle was his pharmacy and supermarket. He said that he used ayahuasca, which had been introduced to him by his grandfather, a skilled shaman, and it allowed him conference with the plant world and his ancestors.

a psychedelic person...
 would be apt
 to treat his or her self,
 and the surrounding
 world, with ecstatic
 reverence and
 compassionate
 consideration.

Terence McKenna explained:
Shamanism is the use of the archaic techniques of ecstasy that were developed independent of any religious philosophy--the empirically validated, experientially operable techniques that produce ecstasy. Ecstasy is the contemplation of wholeness. That's why when you experience ecstasy--when you contemplate wholeness--you come down remade in terms of the political and asocial arena because you have seen the larger picture.

I hope more people will embrace a shamanistic, psychedelic mode of living, treating the Earth, its creatures, and other people with ecstatic reverence and compassionate consideration. I, for one, want to learn from Flavio--after all, Flavio and his ancestors have been living sustainably since prehistory in the jungle, passing down knowledge about how to utilize and appreciate the jungle's bounty. In the First World, acceptable habits promote reckless destruction, although often out of our immediate awareness. I feel helpless and sad when I think about Flavio's plight, especially in light of my privileged inhabitation in a beautiful unmarred forest.

I think Albert Hofmann put it most eloquently when he wrote:

I share the belief of many of my contemporaries that the spiritual crisis pervading all spheres of Western industrial society can be remedied only by a change in our worldview. We shall have to shift from the materialistic, dualistic belief that people and their environments are separate, toward a new consciousness of an all-encompassing reality, which embraces the experiencing ego, a reality in which people feel oneness with animals and nature and all of creation.

A psychedelic experience allows a person to release themselves from their egocentric reality and thoroughly and viscerally contemplate innumerable other realities, including the reality of nature: animals, plants, and the elements. If more First Worlders used psychedelics, I believe our culture could halt its destructive pursuit of materialistic luxury.

Unfortunately, however, a majority of the reigning government forces in the First World aim to suppress mind-altering substances. Why are the First World governments so opposed to psychedelic states of consciousness? The pattern of suppression is obvious: from the Spanish Inquisition in Mexico during the 1500s, persecuting those who ate psychedelic mushrooms, to the squabbles over peyote use by Native Americans by the fledgling American government in the nineteenth century, to the current War on Drugs. The revocation of peoples' freedom, and wanton waste and pollution, is preferred over the experience of a non-ordinary state of consciousness. This is probably because psychedelics, when used thoughtfully, empower a person to challenge authority and tradition.

I believe that the disparity between the lifestyles of the First World and the Third World can, essentially, be attributed to their differing climates. This idea solidified when I asked Flavio what he liked the least about America. His answer--the cold, which he found nearly intolerable. Many Third World countries are tropical in climate, with flora and fauna that provide plentiful and variable forms of sustenance. There, psychedelic plants grow abundantly, as compared to the First World countries. Although tropical storms pose a threat, in general, since the weather is always warm, sturdy shelters and provisions for harsher seasons are not necessary.

For those living in inhospitable and cold climates, manipulation of the environment is necessary for simply withstanding the elements. I think that this mindset has just gotten out of hand, or has just turned sour, or something--because the pursuit of materialistic comforts seem to monopolize most First Worlders' time, taking precedence over preserving wildlife and cultural diversity. It's obvious, as evidenced by the amount of prisons, the unbalanced distribution of wealth, increasing desertification, and the cancerous leeching of the First World off other countries, that a drastic intervention needs to be implemented. It seems clear to me that this intervention is the psychedelic experience. •

Symbiosis of the **Post-Human Identity** and the Biosphere



Portrait of Sara Huntley by Ariel Brown

Sara Huntley

huntley.sara@gmail.com

Sara Huntley created the beautiful botanically-inspired artwork that appears with this article.

—DJB

A sense of “other” is a pervading aspect of human cultures. It marks the border of the self—carving out our individuality from the collective—and it haunts us with a feeling of alienation from the world around us. Throughout history, the notion of “other” has caused much suffering in the world. Our separation from nature and other species—not to mention the human distinctions of class, race, and gender—have fragmented our sense of self and our ability to empathize with one another.

Our current attitude toward animal and plant life—as well as the Earth itself—is radically anthropocentric. Humanity acts as if it owns the Earth, justifying this because it is “other,” and the intelligence of other sentient beings has been subjugated, negated, and diminished. A whole dynamic construct of nature has been alienated from humanity as a result of this notion. However, for millennia, plant-induced psychedelic experiences—which break down cultural conditioning—have informed humanity about our relationship to the environment, allowed shamans to communicate with other species, and cleansed our lenses of perception.

One of the many ways that animals communicate with one another is through chemical signals, such as pheromones. I sometimes wonder, what if psychedelic plants are having some kind of dialogue with the human psyche through our brain chemistry? It appears as if our sense of identity becomes connected with the mind of the “plant teacher,” whose flesh we have consumed. What if our archetypal experience of the “other” is an artifact of our ancient merging with these different forms of consciousness? What if there is a deeper kind of biological intelligence that psychedelics have the capacity to bring us into communication with?

There have been some remarkable instances in which scientifically-trained minds have utilized the cognitive effects of psychedelic compounds to reach creative new insights within their fields of expertise. The case of Francis Crick, and his discovery (with the aid of LSD) of the DNA double-helix structure, comes to mind, as does the work of Kary Mullis. Mullis is the biochemist who won the 1993 Nobel Prize in chemistry for his development of the polymerase chain reaction (PCR), which revolutionized the study of genetics. Mullis has stated that LSD helped him to develop PCR. I find it fascinating that both of these



"Sacred Garden" by Sara Huntley. huntley.sara@gmail.com

Sara Huntley 2009

LSD-inspired scientific developments were in the area of genetics, which is fueling our species' budding ability to manipulate biology--and we continue to make stunning new leaps in our understanding of the genetic language of the biosphere every day.

In some sense, we are incredible organic chemical computers, and it has become evident in the past few years that our aspirations on the technological level are on a collision course with our current biological identity. As medical science advances, it's becoming clear that we will soon be able to manipulate our own biology. It won't be long before we cross over a boundary that will redefine us as a species. Our emerging biotechnologies will help us to evolve beyond the purely biological entities that we were born as, into augmented beings, incorporating newly-grown organs and nanotechnological enhancements.

In modern culture it seems that whenever humanity enters a new biological or technological terrain it is feared, and portrayed as monstrous and evil. Mutants and cyborgs are seen as abominations of nature and something that erodes the human identity. The characters on *Star Trek* known as "the Borg" are one of the first and most prominent examples that come to mind. The Borg are a cybernetic alien race with a hive mind, who assimilate other species and cultures, and they are portrayed as being utterly void of individuality. The concept of losing one's self to their collective mind is portrayed as terrifying. Although this is an extreme example, it demonstrates the fear humanity has of the archetypal "other." However, in more recent popular culture we have seen the exploration of the "other" in technological terms become more neutral. Though fictionalized, our culture appears to be slowly warming up to the idea of relating to artificial beings.

The dynamic between ourselves, the biosphere, and our technology are inescapably intertwined, and we have to reevaluate, redefine, expand upon, and augment our perceptual constraints in order to relate to the "other." This means putting yourself in someone else's paws, seeing the world from the micro-perspective of an amoeba, or empathizing with an artificial intelligence (A.I.) software program. Sophisticated A.I. software and extremely realistic virtual realms will soon be in steep competition with external reality. There will soon come a time when you will no longer be able to tell if the voice on the other end of the phone is human or not, and your average customer service call might become a Turing test of sorts.

Because this super technologically-advanced future is going to happen whether we are ready for it or not, it would probably be wise for us to use our fear of the unknown as auxiliary energy to cope with our new evolutionary challenges. Although our fear is meant to protect us from the unknown, it would probably be a good idea to try and overcome our limitations, so that we can see outside the narrow confines of our anthropocentric per-

spective. When we integrate our sense of identity with the "other"-- whether it's other races, species or our environment--we foster empathy, and help to forge a conduit of understanding and mediation. Once we start broadening our understanding of the varieties of consciousness and intelligence, we will begin a dialogue with previously alien intelligences. Alien intelligences could be as close to us as our house pets. Making this first contact starts right here, naturally, not out in the stars.

Globalization has taught us much about human nature and culture in the past few decades; just imagine how much more there is to learn from other organisms and the greater biosphere. Shamans have been identifying with the spirits of various animals for millennia in their mythologies, medicine, and folklore. They call upon these spirits in times of need. This is a moment in our planet's history when we urgently need to listen and learn from our global family of organisms.

In this new age, information will be just as valuable as material resources, and the only way to understand an ecosystem, and distill information about it, is to preserve it in its natural state. Conservation is a multidisciplinary activity, a situation where passionate opinions will have to force compromise. There will be good and bad ideas, so let us not forget that evolution, by its nature, weeds out the bad ideas. In a quickly changing world, we need to remain flexible and adaptable. To do this we have to help foster diversity among ourselves and the ecosystems that we try to steward.

We are moving into a post-human era, and we will need a post human culture to support it. Psychedelics offer us a new perspective from which to view our own culture, outside of the limiting constraints imposed by the meta-program "other." I think that psychedelics have the potential to help us integrate our pre-existing qualities with our post-human identities. I also think that they can help us relate to other species, the intelligence residing within nature, and even artificial minds of our own creation. Unless humanity becomes more symbiotic with the rest of the biosphere, this new future won't be possible and our very existence is threatened. Our current paradigm has proven unsustainable, and this rift between humanity and the biosphere demands our attention and our respect. There is much healing that we are obligated to take a part in, as we cannot force ecological systems to abide by our will. We must adapt our technologies, and learn to work in harmony with nature to survive. •

"Sacred Garden" by Sara Huntley. huntley.sara@gmail.com

Prisma color on archival paper. 9x12"

MAPS will have the original for sale with artist to receive 50% of the \$2,500 sale price. Prints available at \$500 each.

To Touch Truth: Toward a Consciousness of Connection



By Lily Ross
dharmabum21@gmail.com

...we walk
upon this Earth
as foreigners,
pioneers of destruction,
the poison people.

It seems these lands are forgotten even by we who build our homes upon this sacred soil. We do not live here, rather we reside within the weathered walls of our wandering minds, eyes closed, not looking in, but blind.

Alive?

Maybe merely breathing. And barely. Surrendered to our own invisibility, unseen and silent, we walk upon this Earth as foreigners, pioneers of destruction, the poison people. Having forgotten what it is to be whole, we stumble within the softness of our own home.

And yet these bountiful beautiful lands beckon to us, invite us to remember that its breath and ours are one. Singing soft songs of Earthly insight, wind whispers a warm welcome to the home of our hearts. With each step we are forgiven, if we can manage to forgive ourselves; open to our world as we open exhausted eyes and remember what it is to see.

The children of this Earth are witnessing a unique moment in planetary history; steeped in the magnificence of creation, it is a moment marked by our species' struggle for survival. These times call for a consciousness of unity still unseen by this world, albeit resting within the realm of possibility, held delicately in the daring hearts of dreamers and visionaries.

It is a reality veiled only by the fear that arises in such tumultuous times. For to impact the momentum of this environmental crisis demands a conscious commitment from communities, families and individuals – a global awakening. It is an interesting challenge in a time when consumerism, war, and an ideology of separateness and domination mark the mainstream culture of the Western world. To be fully present with the overwhelming truth of these times requires that we awaken to the woven web of being, the intricate interdependence of all we have defined as separate. We must remember that we ourselves are an expression of nature, conscious creatures of constant creation, given the gracious gift of this moment to be alive and wholly experience this reality.

We must remember what it is to be whole.

For millennia the power structures within civilization have worked to silence and dominate the natural world. In stifling our connection to the wild within and diminishing our sense of connection and empathy to the worldly wild, civilization has attempted to sustain itself in this failing experiment of industrialization. This behavior is suicidal, rooted in a deep seeded ideology of separation and superiority to the natural world, and lends itself to the exploitation of an environment experienced solely as a resource. What this moment in human history calls for is a deep remembering that to destroy this environment equates to the destruction of our species.

Let us listen and respond to this crying call to consciousness; a relocating of our individual selves within the body, a growing sense of self-awareness. For it is through this that we may remember the power sleeping dormant within the

source, the same whole. In that knowing we are inspired in her service and our own healing, and we feel the extent to which those two are one and the same.

Consider the role of psychedelics as the key to a door that does not truly exist, for the barrier between our mind and our body, our body and our world, is merely an unconscious construction of an overly empowered ego. To take this key into our hands, and our hearts, empowers us to step into a world we believed to be so distant, and to realize that it is in our power to dissolve that door. We can choose to live consciously in a timeless tapestry of revelations and relationships. For psychedelics are a sacred medicine which, when used in an appropriate context with mindful intention, may move us toward a consciousness of connection, and a remembering of the love that unifies us all. •

Lilly Ross is a student at the California Institute of Integral Studies

We Know

We know, in that moment, that this Earth is an extension of our being
and that we are an extension of hers... In that knowing,

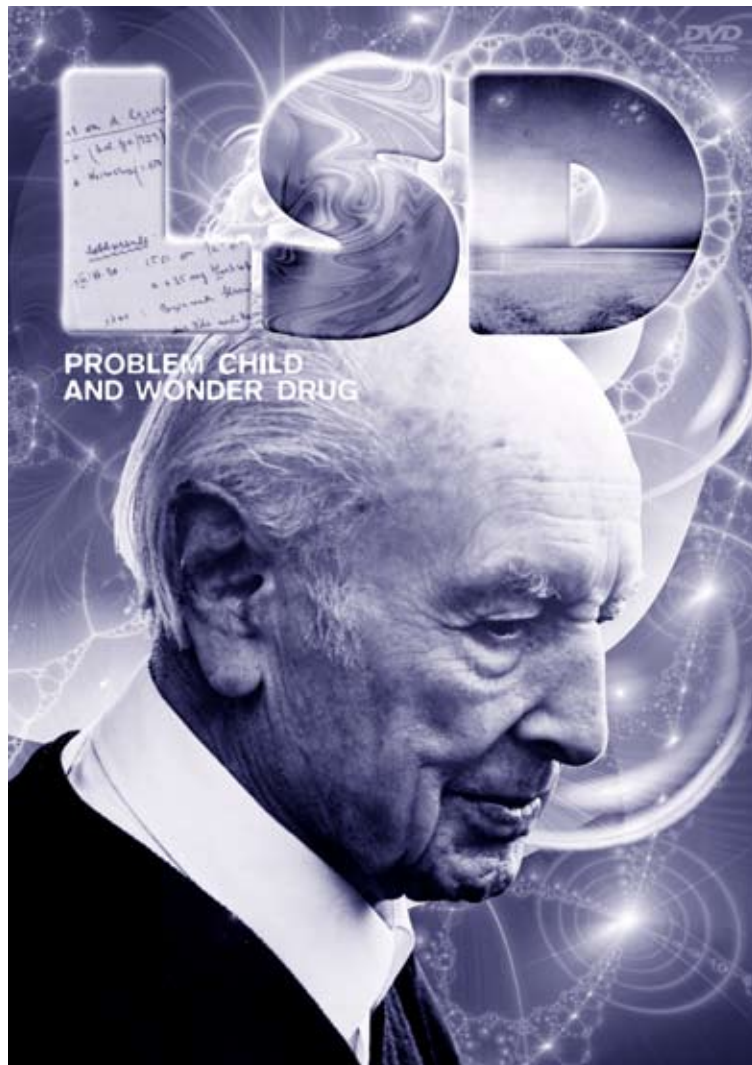
dreaming creatures that we are, and intimately experience the unity of all things. There are songs in the stones that speak of wholeness. Let us give voice to those who have been assumed into silence so that we may know that the stones sing for us all.

To touch wholeness, oneness, as many report experiencing in the cosmically rooted dance of psychedelic consciousness, and to fully feel that wholeness with the entirety of one's being, inspires a deep caring and compassion for all that is, has been, and will be. We know, in that moment, that this Earth is an extension of our being and that we are an extension of hers; that we are of the same

we are motivated to serve her and heal ourselves,
and we feel the extent to which those two actions
are one and the same.

With best wishes and cordial greetings!

Albert Hofmann



A documentary film about the International LSD Symposium held on the occasion of Dr. Albert Hofmann's 100th Birthday.

Basel, Switzerland,
January 11–13, 2006

In January 2006, 80 speakers and 2000 participants gathered for the three day International LSD Symposium held in Basel, Switzerland to celebrate Dr. Albert Hofmann's 100th birthday, and to hear the father of LSD speak first hand about his life, his discovery and his thoughts on the psychedelic experience. It was also an occasion for leading doctors, researchers, artists and thinkers in the psychedelic field to present their work. By documenting this historic symposium, *LSD: Problem Child and Wonder Drug* articulates the scientific, medical, artistic and spiritual issues at the core of the psychedelic debate. While experienced psychonauts will inevitably be touched by the words and demeanour of Dr. Hofmann, the DVD is also ideal for introducing inexperienced friends, parents and colleagues to the reasons why psychedelic experience cannot simply be ignored.

Released on the MAPS website on
Bicycle Day: April 19, 2009

LSD: Problem Child and Wonder Drug captures the fascinating story of LSD as it is eloquently spoken by Dr. Albert Hofmann, the 100 year old sage-scientist who brought it into the world. With interviews and presentations by Rick Doblin, Alex Grey, Ralph Metzner, Carl Ruck, Goa Gil and others, this historic message from the father of LSD is a timeless relic and an immediate source of inspiration.

"This is an important film. It is a comprehensive document of the various effects of LSD and of their meaning. The film is a good document of the uniqueness of LSD"

– Dr. Albert Hofmann

"This is a very good film."

– Anita Hofmann (Dr. Hofmann's wife for 70 years)

"(This DVD) is a valuable document about my father and about his work as scientist and philosopher."

– Andreas Hofmann (Dr. Hofmann's son)

Purchase the DVD on the MAPS website now, and 50% of the proceeds will go toward furthering what Dr. Hofmann called his "heart's desire": psychedelic research.

www.MAPS.org/catalog
www.LSD100.com



Rick



Valerie



Josh



Randy



Jalene



Ilsa



David



Noah Juan

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

Josh Sonstroem, Accounting and Information Technology, 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.

Randolph Hencken, M.A., B.S. Communication and Marketing Director, earned his Master of Arts in Communication, and his Bachelors of Science in Business Administration from San Diego State University, where he focused all of his graduate studies on drug policy issues. He was the founder and president of the university's chapter of Students for Sensible Drug Policy, and he interned for the Drug Policy Alliance in San Diego. Formerly he was the program coordinator at the Ibogaine Association in Mexico.

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.

Ilsa Jerome, Research and Information Specialist, earned a Ph.D. 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.

David Jay Brown, Guest Editor, earned his master's degree in psycho-biology 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

"**Noah Juan Juneau**" is the nom de guerre of graphic designer and long-time friend of MAPS, Mark Plummer, who has been providing graphic design services to MAPS since 1990: designing posters, logos, books & publications for MAPS & others in the entheogen tribe. You may contact Mark through MAPS.

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.

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Each *MAPS 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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for Psychedelic Studies, Inc. (MAPS)
309 Cedar Street, #2323,
Santa Cruz, CA 95060
Phone: 831-429-6362
Fax: 831-429-6370
E-mail: askmaps@maps.org
Web: www.maps.org

MAPS (Multidisciplinary Association
for Psychedelic Studies, Inc.)

309 Cedar Street, #2323

Santa Cruz, CA 95060

Phone: 831.429.6362

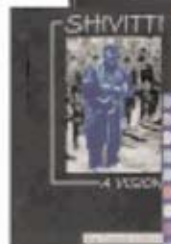
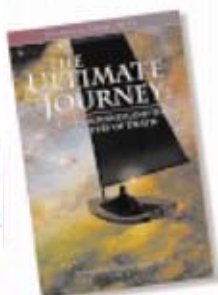
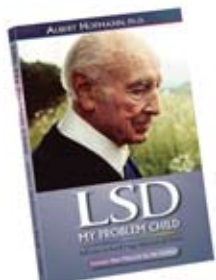
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