



JONATHAN OTT SPEAKS...

Interviewed by Will Beifuss and Jon Hanna at the 1998 BPC *Salvia divinorum* Conference

Jon: Maybe we should start off by talking a little bit about the products that you've been working on?

Jonathan: Okay, well... When I was in Amsterdam for the PSYCHOACTIVITY conference, somebody asked me in an interview what my next book was going to be. And for some reason without even thinking about it I said, "I don't know if I'll write another book." And in general that's the way I work. I don't plan books and then write one. I get interested in something and do a little research on it, and then if a book comes out of it I suddenly know that. I find the ARIADNE's thread that tells me the book is there, and so then it's a process of following the thread and getting it out. Going into the labyrinth sort of. And that hadn't happened. And so I didn't in fact have a book planned. And so I just said that. But then in Uxmál I had met a Dutch woman—IRIS VAN DEN HURK—who's in the CONSCIOUS DREAMS organization; her brother started it, and she had proposed that we start a business together, and in fact that happened. And the business is called PHARMACOPHILIA. And so now I would have added to that interview, "I think I'll just live my last book for a while." (laughter) And so instead of talking about psychopharma-

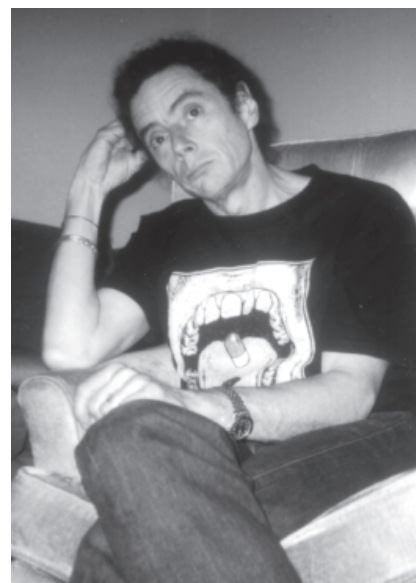
cological engineering, and theorizing, we're going to start doing it. And whatever we can do now, undercapitalized without a lot of resources. And our first product will be Pharmahuasca®. Those who are familiar with *The Entheogen Review* and other publications surely know that it's more or less a code-word for an ayahuasca analogue made with pure compounds, as opposed to plant extracts or teas or infusions. And there are possibilities of making them legally. The MAOI—the ayahuasca alkaloids— β -carboline, are not controlled anywhere to my knowledge except in Japan. As for the tryptamines, in Europe DMT is the only one that's controlled, unless you classify LSD and ibogaine as tryptamines, which certainly they are. But of the simple, what I call the short-acting tryptamines, DMT is the only one that is controlled. Not even bufotenine is controlled in Europe. And so that gives you quite a lot of latitude for different tryptamines that can be added. So we're going to make this as two separate pills, one of which is the NATURAL HERBAL RELAXANT, which is a minimal MAOI dose of β -carboline, and the other one is the NATURAL HERBAL TONIC, which is a minimal psychotropic dose of a short-acting tryptamine which is legal. And so one tablet of the one, plus one to three tablets of the other will



"...some people do want to vomit and they see it as an overall purification. I tend to see it more as a toxic side-effect of an overdose..."



"The real drug-problem is that we need more and better drugs."



"...it seems pretty clear to me that shamans are the pharmacognosists, or the natural-products scientists of the preliterate world."





give a three- to four-hour *pharmahuasca* experience.

Jon: Getting a little more specific, the β -carboline is going to be harmine HCl?

Jonathan: Rather, free-base harmaline.

Jon: And the tryptamine is 5-MeO-DMT?

Jonathan: Right.

Jon: Are there any plans for other tryptamines?

Jonathan: Yes. And also perhaps other dosage forms of the existing tryptamines, because my research lately has involved making psychonautic models of the visionary snuffs of South America, of which there are two basic categories: the *yopo/cebil* category is the Leguminous *Anadenanthera*. Most people know it by *yopo*, but the commercial activity now focuses on *cebil*, which is the Southern Andean species *Anadenanthera colubrina*—both contain bufotenine. I should say that *yopo* and *cebil* are seeds—they're made from leguminous seeds. And the other class besides *niopo*—not to be confused with *yoco*—is *epéna* or *nyakwana*, and various names from the Orinoco in the Northern Amazon.

These are made from a resin of a bark of various species of *Virola*, which are in the nutmeg family, Myristicaceae. And in the case of the nutmeg family, *Virola* snuffs, the major active principle is 5-MeO-DMT. Everyone's focused on DMT because we like DMT, and we're interested in it. But in fact, as far as traditional entheogens go, we can say only in the case of ayahuasca is DMT a major active-principle. In the snuffs it's a minor component in both cases. And 5-MeO-DMT is in fact about four or five times more potent than DMT. With bufotenine we still don't know—there's very little comparative pharmacology on that. So my research is focusing on the snuffs now, and I'm making psychonautic models of these snuffs with pure compounds. And we ultimately plan to introduce visionary snuffs as well.

Jon: That sounds great.

Will: What is the dosage of the harmaline and the 5-MeO-DMT on these first products?

Jonathan: Well, I'd rather not say because we're still doing a bit of final R & D on it, and we haven't quite fixed what will be the final dosage of it. The problem with the β -carboline is

that some people get nausea from higher doses, and with ayahuasca in the Amazon, as you both know, one common denominator to ayahuasca is ayahuasca stem—it's really the *only* common denominator. In some areas that's all that's used. In some areas it's just a cold-water, aqueous infusion of ayahuasca stem with no additives. In some areas it's cooked for up to the better part of a day, and may have a half-a-dozen additives at once, of which the best-known are the tryptamine-plants like *chacrana*, which is *Psychotria viridis*—DMT-containing. But tobacco, *coca*, *guayusa*—which is a caffeine plant—*Brugmansia*, even cacti; there are about a hundred different additives and quite a number of possible permutations. And so they call ayahuasca in the Amazon *la purga*, the purge, because it is purgative. If you take a high enough dose it causes nausea and vomiting. And, some people want that, and certainly in shamanism and in the ethnomedicinal context that's of key importance and it's really fundamental to this—much more than the vision-inducing plants are, which are more of use in diagnosis. But mainly the patients want the purgative effect, and it may well be therapeutic for them, in cases of intestinal parasites. But I find, and I think that probably your readers would agree with this, that in the ayahuasca analogue or *pharmahuasca* camp, people are more interested in the *visions* than in curing themselves of intestinal parasites (laughter) or vomiting, although some people do want to vomit and they see it as an overall purification. I tend to see it more as a toxic side-effect of an overdose of these β -carboline alkaloids. And in fact what we already know—that you only need something in the realm of 100 to 150 mg of β -carboline in a single dose—speaking of harmine and harmaline, which are the most active ones and the main components of ayahuasca plants—you only need that much to render tryptamines active orally. And I've always operated with the assumption that we didn't wish to take any more, because then you start getting these nauseous side-effects. And also the evidence is more-or-less compelling that the effects are pharmacologically contrary. While it does make DMT active orally, it makes it weaker than it is by any other route, because it seemingly works against it in the brain. And there are a couple of mechanisms that have been proposed to explain that. But it definitely is not a "potentiation" as far as the psychoactive effects are concerned. So we've worked on minimizing that dose, because you kind of walk that fine line where you want to make sure that it works for the great majority of the people, but you don't want to get into the nausea territory either. So that's a little bit tricky.

Jon: Will the tryptamine-containing pills possibly serve sort of a double duty; can you crush them up and vaporize them?





Jonathan: I hadn't really thought about that. They could be extracted, of course, from the pills. And we're certainly not going to do what they do in the pharmaceutical industry of actually conducting intensive R & D efforts to make that difficult for the consumer. We're certainly *not* going to bind them to ion-exchange resins, or mix in all kinds of crap so that you won't be able to purify them. But no, I hadn't actually thought about that. But yeah... that would be possible, to extract it from the pills. And it will be in the form of the free-base, and so that will be easy, because the binders and so-forth won't be soluble in the solvents that the free-base of the tryptamine would be soluble in, and so it would be a fairly straightforward thing to extract them from the pills. In fact, you're right—probably a lot of people would want to do that. I prefer the effect orally of the tryptamines to smoked all the way across the board with every one that I've tried, but I know that probably I'm in the minority there.

Jon: Going back to your comments about the nutmeg family. I remember reading in *The Ethnopharmacologic Search for Psychoactive Drugs*, there was some discussion about the nutmeg seeds *themselves* being more effective than the isolated myristicin-elemicin fraction. The thing that I'm thinking of now that we're here at the *Salvia divinorum* conference, is that there are a lot of terpenoid-type compounds in those seeds also. Do you know if anyone has looked at those for activity?

Jonathan: In the *Anadenanthera* seeds no, I don't know, but I don't think that that has happened. I don't know for a fact. Yeah, it is true that in the Northern part of Brazil where it

the *Virola*, which they call *nyakwana*, and the *Anadenanthera* snuff they call *hisioma*, which they have to trade for. But they very much prefer the *Anadenanthera* snuff because it is more potent, and also I think it's just easier to prepare. In the case of the *Virola* you have to strip the bark off of the tree, heat it so that it exudes this resin, scrape up the resin, and then dry that, powder it, and make the snuff. And in the case of the seeds you simply toast the seeds and crush them and you have the snuff. And so generally speaking, we know from the phytochemical study there are about 13 species of *Virola* that have been shown to contain tryptamines—mainly 5-MeO-DMT, smaller amounts of DMT, and also—which is also probably active—the mono-methyl equivalents, the mono-methyl tryptamine and 5-MeO-mono-methyl. And up until now we really don't have a lot of *data* on those pharmacologically, and they're other possible targets for future snuff/*pharmahuasca* products, even if there is some legal response to selling these things as legal products, there are an infinitude of new tryptamines that can be trotted out and tried in this kind of combination. We know that the *Virola* resins—even these prepared resins powdered up and so forth—are fairly low in tryptamines. And just the raw seed of *Anadenanthera colubrina*, the best strains—again they're using *A. peregrina*—but the best strains of *A. colubrina* from Northern Argentina, yield more bufotenine by weight than these prepared resins do of the *Virola*. And so it seems pretty clear to me that shamans are the pharmacognosists, or the natural-products scientists of the preliterate world. And they're really interested in what we would call alkaloids and pharmacological potency, and generally speaking they're fascinated by chemical technology, and they want easier access and more potency just as we do. They're just the same as we are, they're just in a different context.

Jon: There was a report in the 1996 *Yearbook of Ethnomedicine* by TORRES and REPKE, an analysis of one of the varieties of *Anadenanthera colubrina* seeds...

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borders with the Guianas and Venezuela, where live the Waiká people, of whom the Yanomamö are the most famous, they've used both types; they use the *Virola* snuffs, which grow in their ecosystem. And they're heavily into snuffs—they're not ayahuasca takers *per se*, but they use the snuffs very regularly, though some of the groups are undoubtedly familiar with ayahuasca. But *Virola* grows in their ecosystem, and they also use *Anadenanthera*, which grows in the Caribbean and in the savanna ecosystem, which is some distance from where they live. And they use much more frequently

Jonathan: Yeah, variety *cebil*, from Argentina.

Jon: One of which tested out at 12.4% bufotenine, with hardly anything else in it...

Jonathan: Right, exactly.





Jon: And I've spoken with a number of people who, using that *particular* seed, have had very pleasant visionary effects, not at all along the lines of what has been traditionally described for bufotenine, and also not along the lines of what other people who have tried other *Anadenanthera* seeds have told me about. With the *Anadenanthera* seeds it seems that there is a great variability in response. Some people have a terrible time, and other people appear to like it quite a bit. One person here at this conference has told me that it is his favorite tryptamine.

Jonathan: From having tried the seeds, or the pure compound?

Jon: Well, from having tried the seeds.

Jonathan: Right. Well, again, we're dealing with two different species. The *Anadenanthera peregrina*—the Caribbean species—is lower in tryptamines in general than *A. colubrina*. And also, the few people that I know, including myself, that have tried *A. peregrina* preparations, for some reason it really significantly burns like hell in the nose. And we're not just talking about a mild thing. When I tried one of these, and I'm afraid I don't know the exact composition—it may have had tobacco in it also, as it was from an enthomedicinal collection from an anthropologist—it was like a general, very significant painful burning that was experienced in the entire head all over the scalp. It was so painful that it just referred the pain all over the region. And it was literally like you wanted to bang your head into the wall to distract from it and make it go away. And I've only had just mild irritation from the *cebil* seed, which you would think would be a very similar seed. So there is some kind of real irritant possibly present in the *A. peregrina* that's not in the *A. colubrina*, or it has to do with how this particular snuff was prepared. But ROB MONTGOMERY had done it also, from just plain seed that he had collected in the savanna area there and just ground up himself, the *A. peregrina* seed, and had a similar kind of effect, and I don't think there was any additive except possibly a little ash. He described the sensation like "broken glass." So that could have something to do with it. Also, as you noted, REPKE and TORRES found that the highest-yielding strain, which was from the shaman's own private-stash tree that he had right next to his house, was some 12 or 13%, almost all bufotenine—there was only trace amounts of one other tryptamine—and that's really unusual. Anything over 10% of total alkaloid content is unusual to begin with, much less of a *single compound* without a range

of other similar compounds. I think there is one report in the literature of as much as 18% nicotine in a tobacco strain—that's the only thing I know that is even in the ballpark. With peyote, which is a virtual factory of alkaloids, the total alkaloid content is about 8%, and there are more than 50...

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Jon: What about opium?

Jonathan: The total alkaloid content is about 15% in the best strains, and it's mainly morphine, but in the case of peyote and opium you're dealing with many dozens of alkaloids, and in the case of peyote it's only about 30% of this 8% alkaloids that's mescaline, which is the main visionary compound.

So this is really unusual. But unfortunately you alluded to the traditional information that we have about bufotenine, which of course was placed in Schedule I from the very beginning, and in any case would be controlled whether it were in Schedule I or not, as it's a positional isomer of psilocin, and the law says "any salt, isomer, or salt of isomer." So it's already covered as an isomer—not even by the Analog law. But it was given by i.v. injection to prisoners at the OHIO STATE PENITENTIARY in 1955, and then in a New York mental institution by some real mad scientists in 1959. And they were actually injecting this into people's bloodstreams, which is really a dumb idea, because remember this is 5-hydroxy-DMT, so it's dimethyl-serotonin, because 5-hydroxy-tryptamine is serotonin. It's called serotonin from *sero tonin*—toning the blood, blood-pressure, because there are a lot of serotonin receptors in the bloodstream. It's not just a neuro-receptor. It would be like injecting serotonin, and they had definite cerebral crises—in one case they said their faces turned the color of an eggplant and the other they said that their faces turned the color of a plum. And of course these guys didn't try it on themselves; they were using captive guinea pigs. And in a really unethical way. So if we're talking about the memes that get spread about a certain compound, well this one re-





ally started off on the wrong foot because right away it was used in the worst possible way. And they were not able to establish visionary activity.

They did these studies because in 1954, in the *Journal of the American Chemical Society*, it was reported that the seed-pods of *Anadenanthera* contained DMT and contained also bufotenine—which alone had been found in the seeds. These compounds had been synthesized decades before, and it had never occurred to anyone to test them pharmacologically. And so suddenly, because of this snuff information—they knew that *A. peregrina* was made into a snuff, and so forth—these same scientists tried making a snuff out of the pure bufotenine first, but it didn't work. But they were doing also kind of a stupid thing—they were spraying it in water into the nose in a soluble salt; I think it was the oxalate salt of bufotenine. And SASHA SHULGIN has even said that he doubts that these compounds are active in the nose, but that's just not true. They're active as the free-base, but they're not active as soluble salts. And this is somewhat counter-intuitive, because for example, everyone thinks in terms of cocaine, and while the hydrochloride salt is very active in the nose, the free-base isn't so active in the nose.

Jon: Right, right.

Jonathan: But then when you chew *coca*, it doesn't do anything unless you add base. And so then in the case of the free-base, it is clearly absorbed well in the mouth. There's something screwy about the models, and I am not a membrane physiologist, but some enterprising graduate student should do a thorough study of different methods of chewing tobacco, *coca*, *qat*. *Qat* is an example of one that's *not* used with base, it's just chewed by itself. But tobacco generally is basified, so is *coca*, so is *betel*, and so a general study of masticatories and snuffs from the standpoint of pharmacodynamics of membrane transfer of alkaloids would be a real interesting subject, and I think it would turn up some things that go a little bit beyond the sort-of simplistic models that have been proposed for how that might work.

So anyway, to get back to bufotenine. Unfortunately, we don't really have much more to go on, besides the antics of the mad scientists. While a few people in a very sporadic way in the drug-scene have done their own bioassays here and there, no one's reported them. And so that's why my intention now is to do pharmacological modeling both on 5-MeO-DMT, which I've already started, and on bufotenine, and on DMT as well, because we have reason to believe also that ayahuasca

exists as a kind of a snuff-product as well. And what we call the "ayahuasca-effect," the MAOI plus tryptamine interaction, was actually proposed originally in the context of the snuffs by HOLMSTEDT and LINDGREN in the book you mentioned, *The Ethnopharmacologic Search for Psychoactive Drugs*, in 1967. They were reporting that because one analysis done by an Italian group of a snuff preparation found ayahuasca alkaloids—clearly signature alkaloids for the ayahuasca plant itself, in South America—harmine and harmaline. And also there was a museum-collection of snuff-plants that had ayahuasca stem as one of the plants that was added to the snuff. And so this was originally proposed because they had this assumption of, "Oh, well these things don't work in the nose, so you must need to add the MAOI, and then the combination of the β -carbolines from ayahuasca, plus these tryptamines in the snuff-plant, makes it active in the nose. Then later people forgot about that, and no one's ever gone back to try and model the snuffs. We just fixated on ayahuasca itself, and around the same time it was reported that ayahuasca brews contained DMT, and they'd already long been known to contain the β -carbolines. But it wasn't until 1965 that it was definitively shown that they contained DMT, and so then people fixated on that and everyone forgot about the snuffs. But it's time to go back to the snuffs, because we can render all of these tryptamines active in the nose as well, it's just a matter of finding the right way, and I think you will find... my prediction is that the pharmacology will show that the activity is somewhat intermediate between 'smoking' or inhaling the free-base vapor and taking it orally in some kind of MAOI combination. And also, it's been assumed blanketly across the board that these compounds are inactive orally. We know DMT is inactive orally, we know that 4-hydroxy-DMT, meaning psilocin, is quite active orally, but it seemingly is also a substrate for MAOI, because people are saying that if they take the mushrooms with a monoamine-oxidase-inhibitor—Syrian rue, or whatever—they get a better effect. And the only way I can rationalize that is by thinking, "Okay, they're getting better absorption in the stomach, because some of it is getting chopped-up by monoamine-oxidase in the stomach before it's absorbed."

But I think that 5-MeO-DMT is slightly active orally just by itself, without any monoamine-oxidase-inhibitor. And I suspect that bufotenine will prove to be active by itself, at least as much so as 5-MeO-DMT. So I'm working on modeling all of this: the pure compounds in snuffs, basically 5-MeO-DMT, bufotenine, and DMT, and also orally, combined with MAOI and without. And also sublingually—that's also a potential way to...





Jon: That's actually something that I was just about to ask. I've heard a few reports of 5-MeO-DMT dissolved in high-proof alcohol and held in the mouth as being active...

Jonathan: Oh yeah, it is.

Jon: I've tried that myself, and I didn't notice any activity, but it's possible that I just didn't...

Jonathan: What was the dose, do you remember?

Jon: I think that it was around 10 mg. You know, my scale weighs down to 10 mg, so...

Jonathan: Okay. I should mention—and this will be interesting to your readers—the Japanese now sell some really very well-made and sturdy battery-powered balances, that are about the size of a postcard, and they're wholly made for portability, and so forth. They're very stable, rock-stable. They're plus or minus 2 mg, and they will weigh out in carats, grains, ounces, or grams. Ten gram maximum, but it's the perfect balance for this kind of thing. And even in smart shops in Holland, they retail for less than \$500.00. But a gem dealer told me that in the U.S. you can get them for more like \$150.00, which puts it in the ballpark for the gem trade... they're used obviously by gem dealers to weigh carats and so forth. But this is the perfect psychonautic balance that overcomes this problem of not being able to weigh below 10 mg; plus or minus 10 mg obviously isn't good enough for this kind of thing. Plus or minus 2 mg is not as good as plus or minus 1 mg, but at least it's adequate for this kind of work.

One of the projects that I have in mind that I proposed to ROB MONTGOMERY, is that we develop a nice custom-made wooden case. In Europe glassware is really cheap, it comes from Eastern Europe—lab glassware. And you make a portable field-lab that would have one of these balances, it would

have basic glassware, a hand pump for doing vacuum filtration, a small distillation rig, a little gas bottle and something for heating, and also the same gas bottle—there are magnetic-stirrers that work by compressed air. Instead of having an electric thing, you just feed

compressed air and then that turns a little bar and that makes the magnet rotate inside your beaker. And so you could have all of this in a little portable field-lab. I mean a *real* chemistry set, that would cost about \$1000.00, say. And also small TLC tanks, little stainless-steel flasks for solvents that are like the booze flasks, this sort of thing. Set it up, and make it such that you would be able to market it for field-scientific research for botanists, for plant-chemists, and so forth. But the real target market would be basement shamans, who have a hard time getting this. Put it all in one nice portable package for them, where they would have their basic home-lab setup. I think it would not be, obviously, a huge money-maker, but you could sell many hundreds of such a kit and people would be really happy to be able to get it. And it's something that I would like to do just as a service to the public, and as another way of striking back at this absurd idea that chemistry is somehow by itself a shady endeavor and illegal. And the U.S. is really cutting off its own testicles by doing that, or shooting itself in the foot, because chemistry is a major part of our economy... a *major* part in both pharmaceuticals *and* industrial chemicals, *and* agrichemicals, and suddenly... I mean, you wish to encourage children to become interested in chemistry when it's something that your economy depends on, and you *don't* wish to make it shady, to where one can't even buy beakers from EDMUND SCIENTIFIC. Before at least you could buy basic lab-ware, and as far as I know now, there's no consumer-source of these things in the U.S., if you're not a chemical company. And people should step in and fill that gap. There's no law against selling glassware. And why should we meekly accept this thing? People should start up chemistry clubs, and so forth.

Jon: There are still a few mail-order companies, like HAGENOW LABS, that sell geared towards the amateur.

Jonathan: And they will sell on credit cards?

Jon: Yeah.

Jonathan: Because EDMUND SCIENTIFIC is the classic one—that's how I got my first lab equipment, I just bought basic beakers and flasks and whatever you could get from them. And maybe they still sell it, but I know that it's not in their catalog anymore. They don't have pages of that sort of thing, and they may not even sell it—I don't know that for a fact... I've also been told that COLE-PARMER in Chicago will sell to home addresses on a credit card, and they have the full gamut of scientific equipment, but I've never verified that for a fact.

While we were unable to locate the scale described above for the price of \$150.00, we did find the following for sale from <http://www.balances.com>:

Tanita Model 1210-50
10 g x 0.002 g
\$279.99

Acculab V-1 mg
120 g x 0.001 g (±2 mg)
\$440.00





Jon: Getting back to the *Anadenanthera colubrina* seeds. There were a few people here at the *Salvia divinorum* conference who went to the BPC event in Chile, and had tried the seeds in a variety of ways, and one person said that the best way to prepare the seeds was to soak them in water, and essentially

to be really careful before jumping to conclusions. So that's what I find often in discussions at conferences, and so I will play Devil's Advocate, and I will intentionally throw out things saying, "But wait a minute, did you consider this? Did you do that? How strong is this conclusion?" And generally speaking, they crumble pretty rapidly before that kind of questioning. And so that's what we need to help inculcate in this very valuable underground-chemistry movement, is a little bit more rigor. And really it's just about drawing conclusions. And also you need more rigor in the structuring of the experiments, because the amount and quality of information that you can get out of something has everything to do with the kind

I don't wish to be understood as disparaging basement-shaman activity or amateur science at all, because, the best science has *always* been amateur science in the true sense of the word—someone who really *loves* doing something...

take the seed-coat off, throw that away, and toast-up and powder the inner meat, and snuff that. They said they got really good effects from *that*. But they didn't get *any* effects when they just did the seed coat. To me that seemed a little bit...

Jonathan: Counter-intuitive...

Jon: Yeah, working from the idea that maybe these chemicals are insect repellants...

Jonathan: Right, that does seem counter-intuitive. Actually I did try that, but not in a systematic way. But it does also strike me as being counter-intuitive. And I wouldn't just assume that that question is settled. It would be better to examine that in more detail. And often times one of the problems... well, I don't wish to be understood as disparaging basement-shaman activity or amateur science at all, because, the best science has *always* been amateur science in the true sense of the word—someone who really *loves* doing something and isn't just paid as in a Sunday scientist who's paid to do it for a living. But one of the things that I find that generally distinguishes the untrained amateur from someone that has somewhat more rigorous background in this, is a tendency to jump to conclusions prematurely. And we have to be really careful to draw conclusions from experiments. And one of the things that's really valuable about scientific training is having a lot of chances to fail, and to find out how wrong you were about your conclusions. And being challenged by that, or having someone specifically set you up for that sort of thing. And it's very facile to draw conclusions, and to say, "Okay, that question's settled," and *especially* when you're using something as subjective as your own bioassay, you want

of question you ask. Whether we're talking the context of a bioassay experiment with *Salvia*... "What is your intention? What do you ask?" Well it's the same thing, whether you're trying to ascertain whether the seed-coat or the germ of an *Anadenanthera* seed is more active. It also has everything to do with how you structure the experiment, and the very specific way you ask the question makes a big, big difference in the quality of what you can get out of a few hours of this kind of inquiry.

Jon: Moving in a bit of a different direction, there's been a lot of controversy over the word "entheogen," and I would say undoubtedly that you're one of the strongest champions of this word. I've heard a lot of arguments for and against, but the argument that I heard against it that I wanted to ask your opinion on was that the traditional use by natives who were using these plants didn't have anything to do with "generating or becoming divine within." It was about visiting the underworld, or contacting dead ancestors, or communing with spirits. And so, at least with how Westerner considered "God," one could almost say that the traditional use of these plants doesn't have anything to do with God. Maybe it has to do with the angels, or maybe it has to do with the demons, or maybe it has to do with the plant-spirits... But, as far as these plants causing one to "become divine within," that this wouldn't really be so much of a concern for the traditional users.

Jonathan: Yeah, in the shamanic context, in some cases that's true. Yeah. That's a legitimate argument. I think I've noted that. I mean, I try to bring up the pros and cons when I review it myself. That you could argue that that's more of a later concept, as opposed to shamanic, the whole idea of *theos*





and of deity... But I take it to mean more of a general thing, spirituality *per se*, and plant-spirits being a manifestation of the same type of *theos*, or seeing the universe more as energy or spirit and less as matter. But obviously we'll never have a term that's satisfactory to everyone. The surprising thing to me is that *entheogen* has done as well as it has, and it seems to be definitely tripping off of everyone's tongue all of a sudden, and that's only, as you know, a phenomenon of the last five years. Perhaps since *Pharmactheon* came out. And *PIHKAL* and *Pharmactheon* within a couple of years of each other broke what was this sort of a log-jam... we had had about ten years of very little editorial activity in this field, and now all of a sudden there's a huge flood... these two big thick books that sort of smashed through the dam...

Jon: I remember the days when there used to be the “drug” section in TOWER BOOKS...

Jonathan: Yeah, right...

Jon: And then that vanished, and it was gone for years...

Jonathan: Right when REAGAN stepped in...

Jon: Yeah, and then finally it started coming back in...

Jonathan: And I know in my case, it was because—*PIHKAL* made me really realize this quite clearly... I had moved out of the U.S. in disgust when REAGAN got re-elected. I call it the REAGAN-BUSH Dark Ages. But it clearly coincides with that. And suddenly instead of a drug-book section in every book store, you had—if anything—a substance-abuse section, and all these crappy, pseudo-spiritual, half-assed neo-Christian books on how to get off of coke, and how to get off of booze, and all this sort of thing—which are all drearily the same, kind of, and I don't wish to disparage that offhand, and I'm sure there's quite a good market for such, and there are undoubtedly some good books there. But the point is there was obviously quite a demand for real drug books, there were several companies that specialized just in publishing this, and then from one day to the next, all of a sudden it was gone. And so what I realized was that the government was being wildly successful in their cheesy attempts to make this all go away, because they were forcing me, and others, to censor myself, ourselves. And I had gone into the “cover my ass” mode, to work on my career, and make sure that I kept my nose clean (so to speak) and stayed out of legal problems. And they had really forced

the issue that way. And so then when I read “The Confessions of a Psychedelic Alchemist” in *The Whole Earth Review*, where SASHA mentioned—I hadn't even heard of *PIHKAL*—but that they were finishing it and it was about to come out and so forth, that summer, which I think would have been the summer of 1991, and *PIHKAL* came out that fall, I think in October or November or something like that, without even thinking about it, I just took out of a box a manuscript that I had started in 1979 or '80, which eventually became *Pharmactheon*, and started working on it. I realized to my chagrin, fuck, they've made me censor *myself*, and here I've been not doing this thing for more than a decade that I should have done a long time ago. But ten years before I couldn't afford to publish it myself. I couldn't afford *even to work on something* without compensation. And there was no way to sell it, because they had effectively blocked access to the market. But now times have changed. And suddenly SASHA was launching into self-publishing, ROB had started ...OF THE JUNGLE, and it was possible to connect more directly with the market even if there *weren't* a drug-book section. And it's actually better for us this way. But of course now the “drug-book” sections are coming back anyway; at least they have them at CODY'S and MOE'S in Berkeley, and we're starting to see them more and more. And there are more and more “alternative” stores now that are filling this gap. Because this was also parallel to the consolidation of the book-market, that not only had the publishing companies—traditionally family-owned enterprises—become subsidiaries of multinationals, but the book trade was almost all dominated in the U.S. by chain-stores, and now there are four or five significant chains. In most markets you only have a “mall/franchise” chain-operation, which are just MBA marketing-planned schemes where they have a standard model of, I don't know, eleven hundred titles, and so many pin-headed

I had moved out of the U.S. in disgust when REAGAN got re-elected. I call it the REAGAN-BUSH Dark Ages.

categories. And there's just no place for books like this. But in a way that's to our advantage, because when you consolidate control over a mass-market to make more money, the product becomes blander and less likely to offend the average consumer. And so they're basically ceding large chunks of territory to anybody who wishes to step in and take it. And that's what we've seen in the U.S. That's one of the greatest things about the U.S.; informatics, access to information, and the dissemination of information. It's unlike any place on Earth. I mean, Europe is light-years different from the U.S.,





even though economically, socially, historically, there are all these parallels, and then the same kind of levels of endeavor, and so forth. But in terms of access to information, there's no place like the U.S. And that's why the U.S. has been so successful scientifically, and so successful in the communications industry and the entertainment industry and so forth. And so, basically all this technology is flourishing in the U.S. I read somewhere, maybe BOOKPEOPLE's catalogue or something, that every year in the U.S. there are 5000 new independent presses started up. Some of them may only exist to do one book, or soon fail. That's a remarkable thing. In Spain, which is the seventh largest book-market in the world, I think so far there have only been three or four or five independent presses at all, period, in all of history. And it's only now starting in Holland and in other areas. And this is a fantastic thing. And as you know, of course, your publication is squarely in this same category. And RICHARD GLEN BOIRE's books and the excellent *Entheogen Law Reporter*, it's just a snowballing, burgeoning thing. And it's a real Usan phenomenon, and something that needs to be imitated elsewhere, where they can really take a few pages out of our playbook, because this is the way to do it. You work *within* the system, you *use* the system, there's *nothing* wrong with the system! Everyone complains about the system. The system's *great*—it's just who's got their hands on the levers, how many hands, and so forth. But technology is leveling the playing-field more and more every day. It's happened in books already. It's now happening as we speak in music, and it will happen in film and television also. That you only need \$3000.00–\$5000.00 worth of home equipment and you're able to play with the big girls. And actually, the technology now *favors* the small operator because you don't have all this dead wood of a huge operation, and bureaucratic friction, and infighting. I think that the hierarchy and big business structures are the ones that are swimming upstream, against the current. More and more the concept of economies of scale are disappearing. And it's happening even in chemistry, and in pharmaceutical chemistry, which are the very essence of big factory, high-capital, high-energy-input, high-technical-expertise, and so forth, in that the same semiconductor technology is now being applied to minireactor vessels, that are actually ones etched-out on small substrates just like computer-chips. They're even projecting now, within a few years, that genomic sequencing will be dominated by credit-card-sized mini-sequencer-reactors, that are low-energy and these are readily mass-produced and will end up being cheap. And so even that kind of technology is going to go toward more decentralization, lower capitalization, it's more ecological, it's more economical, it's more energy-efficient, but above all *it's more*

anarchistic, and it's more accessible to JOE BLOW on the street. Anybody who's got the gumption and the ideas and the creativity can just step in and say, "Hey, I can do this too, and furthermore I can do it *better* than DOW CHEMICAL, or better than SANDOZ, NOVARTIS, or whatever they call it next."

Jon: Going back to the topic of book-publishing, you have something new starting up with ANTONIO ESCOHOTADO in Spain. Maybe you can tell us a little bit about that?

Jonathan: Yeah, we've started a publishing company in Spain called PHANTASTICA, like LEWIN's book *Phantastica*. ANTONIO ESCOHOTADO, who's a professor and well-known writer in Spain, and myself, and FELIPE BORRALLO, who's a book-seller in Barcelona—he has a bookshop in Barcelona—but he's also the president of ARSEC, which is the leading pro-*Cannabis* lobby in all of Spain. And so we're launching into publishing because I wish to concentrate my activities on Europe. Because I think that there's much better short-term prospects for political change in Europe. There these kind of things *are* taken seriously whereas in the U.S., my more than less radical perspective on science, history, or whatever else, tends to be beyond the pale, or not a topic of rational discussion, and there's no place in the Academy for this, period. But it's not the case so much in Europe, and especially in Spain. And so you *do* get press coverage, and they *do* take it seriously, and they don't just automatically dismiss it as of the lunatic fringe. And so for someone to come out as I do in *Pharmacophilia* and say "The *real* drug-problem is that we need more and better drugs," in the U.S. they just dismiss you as a nut. And that's good in a way, because then they don't even bother to see you as a force to be dealt with. They just assume, "Well, nobody's going to pay any attention to this crackpot." But in Spain, actually they say, "Oh wow, yeah that kind of makes... we should publish that and we'll see what happens." And I think in Spain the time has come where we have to call the officials on the carpet, and take the debate to *them*, and make *them* justify their policy, stand up and debate it scientifically. "How can you justify this expense, this waste of public funds, criminalizing large elements of the population, exacerbating the AIDS epidemic, the hepatitis epidemic?" and make them explain *why* they're doing this. *They're* the ones that are screwing up, not us. We're just doing civil disobedience, our sacred democratic *duty* when a government is miscreant, because we can see really clearly that they have a very evil, unethical, unecological, uneconomic, racist, flawed and failing policy. And it's high time for someone to say, "The emperor's got no clothes, and let's arrest him for indecently exposing himself, under the existing laws." Yeah, so we've





started up PHANTASTICA. We've published *Pharmacophilia*, which has been translated by ESCOHOTADO into Castillian, and then we're going to be publishing a book of his, and we're going to follow that with a book by ALBERT HOFMANN—his scientific book on ergot-alkaloids from 1964, *The Ergot Alkaloids* is the title—which has only been in a single hardcover edition in German with about 1000 copies made. I may also do publishing in English in Europe, and it's possible that I may just do all of my publishing there, even for the U.S. market, because the printing is actually cheaper, and it may even compensate for the difference in shipping costs. But in any case I was thinking of publishing my ayahuasca book also in Castillian, and possibly in English, for sale to the Dutch market, the British market, the German and Australian markets.

Jon: Are you working on a second edition of that?

Jonathan: Yeah. It's actually done, I just have to do the graphics and redo the tables. But yeah, I've done the same thing I did with *Pharmacotheon*. I've kept the same size and price, but it's being updated and I've added about 50 or 60 new references to the bibliography, and brought it all up to the current state-of-the-art. Of course there's been a lot of work since 1994. Just, for example, in the DMT-plant table... and I only include ones that are published in the scientific literature, not ones that are *not* published or just conjectured based on ethnographic *data*. But just in the DMT-plants in the five years since the first edition came out, now there are eight more plants that have been published that contain DMT or 5-MeO-DMT. So yes, I've brought that up-to-date, and it's also being reprinted in German by WERNER PIEPER. *Pharmacotheon* is already in Castillian, from another publishing house, and that's also being reprinted. And so it's gratifying to me that these books also have a market outside of the U.S., and I think the European market is vast. I also think it would be good for *The Entheogen Review* to get more exposure in Europe, and look for more subscribers there. I think that the market is pretty much evenly divided between the U.S. and Europe—that there's at least as many people, and probably more, in all of Western Europe that are interested in this field, as there are in the U.S. So it basically doubles the market, kind of. I've always tried to bridge the gap—as you know I write a column for MAPS of reviews of non-English books that come out, just hoping to get some translation activity going. Slowly but surely it's happening. ANTONIO's book, which is called *A Brief History of Drugs*—not the big three volume one but the shorter one—is now coming out in English. KEN SYMINGTON translated that, and it's being published by INNER TRADITIONS—they have a good publishing operation.

Jon: Yeah, they're excellent.

Jonathan: And INNER TRADITIONS is one of the real forward-looking companies in the U.S., in that not only to they have a good list of books in our field, but they are also publishing in Castillian in the U.S. I've been saying for a long time, "Hey, the U.S. is the third largest Castillian-speaking country in the Americas." Only Argentina and México have a bigger Castillian-speaking population than we do. We have 35 million. And that's about as many Castillian-speakers as live in Spain. Their's is 38 million, but you've got 6 million Catalanes and a few million Basques, and they all nominally speak Castillian. But they're really not Castillian speakers. We have 35 million *primary* Castillian speakers.

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