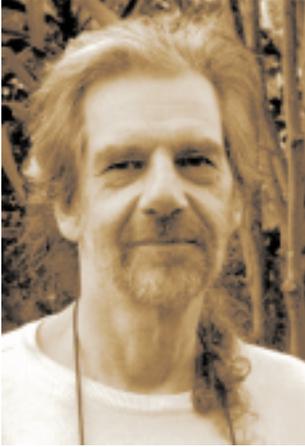


## Technology Appreciated By the **Psychedelic** Mind

Brummbaer



Brummbaer

brummbaer@brummbaer.net

www.brummbaer.net

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Now, if you imagine how many

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



"Timothy's Last Journey"  
by Brummbaer

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

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

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

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

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

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

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

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

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

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

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