

The Weird Naturalism of the Brothers McKenna: Esoteric Media and the Experiment at La Chorrera

ERIK DAVIS

Rice University

erik@techgnosis.com

When Terence McKenna and his brother Dennis performed the so-called “Experiment at La Chorrera” in Columbia in 1971, they staged what became one of the most legendary and storied trip tales in contemporary psychedelic culture. This paper diagrams the matrix of Jungian alchemy, Marshall McLuhan, and science fiction that underpinned the protocols and conceptual apparatus of the Experiment. These ideas are tied to McKenna’s early unpublished text *Crypto-Rap*, which is briefly summarized as an example of “weird naturalism.” In essence, it is argued that Terence and Dennis McKenna “esotericized” media theory into an occult apparatus of resonance, sympathy, and apocalyptic ontology.

On February 6, 1971, a handful of young Americans left the gritty Columbian river town of Puerto Leguizamo for the remote jungle village La Chorrera. They were embarking on a mission that could be described at once as hippie escapism, an ethnobotanical expedition, and an errant metaphysical *derive*. The instigators of the voyage were Terence McKenna and his younger brother Dennis, both of whom would come to leave significant marks on Western psychedelic culture, both above and underground—Terence as a popular and influential raconteur, celebrated for his captivating mushroom-fueled speculations and apocalyptic obsessions alike, and Dennis as an ethnobotanist and neuropharmacologist who studied ayahuasca and other Amazonian psychoactive preparations.

In 1971, however, the McKennas were just a couple of intellectually precocious and highly imaginative young psychonauts mutually obsessed with bot-

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any, alchemy, science fiction, Marshall McLuhan, and mind-bending drugs. The experience they were about to stage in the jungle—an epic Sci-Fi psychedelic operation that came to be known as “the Experiment at La Chorrera”—would change the direction of their lives, help inspire the domestication of *Psilocybe cubensis* mushrooms in America and, through Terence’s widely distributed psychedelic raps and rants, kickstart the millennial return of the Mayan calendar that became the 2012 phenomenon. Within the memorial lore of contemporary Western psychedelic culture, the Experiment could be justly cast as the mother of all trips.

In addition to the McKennas’ unpublished journals, we have three written accounts of the McKennas’s Columbian adventure. In 1975, the two brothers published *The Invisible Landscape: Mind, Hallucinogens, and the I Ching*, a formidable and arcane monument of speculative weirdness that includes two chapters on the concepts, protocols, and after-shocks of the Experiment. In stark contrast to the abstract tone of that text, Terence McKenna stretched out in his 1993 book *True Hallucinations*, an evocative and playful narrative that indulges in descriptive exuberance and many funny lines. Dennis’ solo contribution was the memoir *The Brotherhood of the Screaming Abyss: My Life with Terence McKenna*, which he self-published, not coincidentally, in 2012. That was the year that Terence, who died in 2000, had selected as the most likely date for the apocalyptic culmination of the historical process whose secret structure, which he came to call the Timewave, was his central revelatory take-away from La Chorrera.

This relative wealth of accounts cannot blind us to the inevitable problems that arise between experience and account, something we are additionally cautioned about through the various descriptions of the Experiment that Terence provided. Here, however, I will avoid the vexed question of “experience” in preference for a more modest map of the discursive network that shaped and to some degree constituted those experiences. I am interested, first of all, in the diagram of texts, cultural mores, cosmological perspectives, and empirical practices that led them to the jungle in the first place, and that subsequently enabled them to build the specific protocols for the Experiment.

However, to use a distinction that our discussion itself will trouble, I am also interested in the natural as well as cultural side of the equation. For alongside its appropriation of occult, electronic, and fictional discourses and practices, the Experiment also stands as a supreme example of “weird naturalism,” in which the orientation towards the fantastic holds fast to a materialism at once biological, metabolic, and alchemical. While the McKennas relied heavily on the recombination of cultural materials, which in their case

combined esoteric and especially alchemical sources with science fiction and media theory, they were also committed to a loosely Jamesian radical empiricism that combined with some manner of commitment to materialist explanations that at the very least were informed by scientific rhetoric. This weird naturalism authorized the McKennas' innovative attempt to cobble together an "abstract machine" able to constellate the enigmatic Other of powerful psychedelic metabolism—what the radical psychotherapist Felix Guattari calls those "incorporeal domains of entities we detect at the same time that we produce them, and which appear to have been always there, from the moment we engender them" (Guattari 1995, 17). In this paper, I want to briefly diagram the relays and components of this abstract machine.

The medium is the molecule

The specific object of the McKennas' Columbian quest was an indigenous, DMT-containing concoction of *Virola* sap known as *oo-koo-hé*, which the brothers had read about in a recently published Harvard Botanical Museum paper by the Amazonian ethnobotanist Richard Schultes. While various DMT-containing snuffs were known to exist throughout the Amazon, *oo-koo-hé* was that rare *Virola* preparation that was orally active, which implied that it provided a more slowly metabolized and consequently less overwhelming journey into the bejeweled wonderlands of smoked DMT, with the McKennas were already familiar with from their Berkeley years. The McKennas already knew about the DMT-containing brew *yagé*, which they learned about from William Burroughs, who had come to the same depressing Columbian river town in the 1950s to find. But the McKennas were more interested in the *oo-koo-hé*, in part because of a peculiar detail offered by Schultes' Witoto informant: the *oo-koo-hé*, he claimed, allows you to "see and converse with the little people" (Schultes 1969, 232).

This last line "rang a bell" with Terence, one of those resonances that sound the uncanny networks of correspondences that drive both the psychedelic spirituality and comparative esotericism of the sixties and seventies. McKenna knew the lore of the little folk through his reading of *The Fairy Faith in Celtic Countries*, a collection of folkloric accounts of fairies gathered by the independent scholar, Theosophist, and Tibetan Buddhist popularizer W. E. Evans-Wentz in the twenties. Evans-Wentz's text also proved to be of pivotal importance to the UFO researcher Jacques Vallee, who heavily influenced Terence with his argument, in the 1969 book *Passport to Magonia*, that the bizarre behavior associated with UFOs and their occupants may have less to do with outer space than whatever braided strands of culture and conscious-

ness led to the often strikingly similar narratives and images of fairy lore. These suggestive acts of comparison were, in Terence's head anyway, magnified by his repeated empirical impression that the DMT space was inhabited by creatures he memorably characterized as "self-transforming machine elves."

Arriving at La Chorrera, a paradisaical bug-free oasis near a gushing cataract, the crew discovered to their amazement that the cow dung strewn throughout the cattle pastures abutting the village hosted a riot of *Stropharia cubensis*, the "magic mushroom" species now known as *Psilocybe cubensis*. With no sense of dosage, the crew immediately started munching pairs of mushrooms. In his journal entry of February 23, Terence describes his "gentle and elusive" trip in terms that waver between the animistic and cosmic. On the one hand, the mushroom is benevolent and, like peyote, "teaches the right way to live." On the other, the mushroom is depersonalized, a "transdimensional doorway" left open by even more spectral and opaque Others (McKenna 1993, 40, 41).

This "technical" sense of the psychoactive flora as a medium rather than a messenger was underscored a few days later, when the addition of smoked shavings of *Banisteriopsis caapi* to their mushroom explorations gave rise to a phenomenon the crew dubbed "vegetable television." However far they believed themselves to have come from civilization, in other words, they brought their technological frameworks with them. The mushroom was a medium, a portal, a lens. Recognizing the Witoto's indifference to the mushrooms in their midst, Terence makes a very telling remark in his February 23, 1971 journal: "This particular mushroom species is unclaimed, so far as I know, by any aboriginal people anywhere and thus is neutral ground in the tryptamine dimension we are exploring" (McKenna 1993, 40).

At first glance, this statement is both unwarranted (the Mazatec at the very least used *cubensis*) and domineering—the arrogant thrill of the colonialist, delighted to stumble upon undiscovered terrain or a raw material unexploited by the benighted natives. We should underscore how far Terence is here from the stereotypical Rousseauian hippie-seeker, searching the landscapes of exotica for a wise master or noble savage. For Terence, the plant and not the man is the "teacher," which is why he just wanted to get his hands on the goods directly and to examine them (and the "dimension" they open) on "neutral ground."

Whatever its merits, Terence's gesture towards natural science's objective gaze and rhetorical degree-zero suggests that the Columbian quest was a romance of science rather than a search for mystical religion or even shamanic enchantment. Here we should recall how the chapter headings and subtitle for *True Hallucinations*—"Being an Account of the Author's Extraordinary

Adventures in the Devil's Paradise"—allude to nineteenth-century natural history narratives.

How to characterize this weird naturalism? Terence's psychedelic "science" requires the probing vector of empirical "exploration" to turn within, and to affirm extraordinary subjective experience as data about a realm or dimension. At the same time, such experiences have, in Terence's view, a co-creative effect, since these cultural accretions partly construct the dimension encountered. Notice that Terence grants that the indigenous relationship with plants is a real claim that has real effects, effects that go beyond the usual understanding of cultural narratives as subjective, psychically localized projections onto an outside "natural" phenomenon. Instead, Terence implies that cultural practice, in mediating a particular species of psychedelic material, changes the phenomenology of that "medium" for all future consumers of the material—even for those outside and even unaware of that cultural "set."

Psychedelic phenomenology is therefore inseparable from a realist anthropology of the human imagination. In an unpublished early text, to which we will momentarily turn, Terence had already declared that "Objects, thought, dreams, hallucinations, metaphors and memories—all are real" (McKenna 1969, 20). As such, the extraordinary events of psychedelic subjectivity become framed within a natural (rather than supernatural) matrix, one characterized by multiple "planes of experience" or "phenomenological modes"—modes that Terence connects, not so much with mystic, Neopagan or even shamanic universes, but with the mathematical and science-fictional discourse of "other dimensions." And it is precisely this tension that marks the Experiment as particularly *esoteric* rather than religious or spiritual or mystical. For we have come to recognize that modern esotericism derives its peculiar frisson from precisely its location and construction as a mediating matrix between science and matters of the spirit.

Crypto-Raps

Here we need to turn back the clock a bit to uncover some of the sources of the McKennas' weird naturalism. When Terence arrived at Berkeley in his 1965, his roving and arcane intellectual sensibility and predilection for minting "funny ideas" was already well established. At Cal, Terence joined an experimental college run within the university by the political philosopher and education reformer Joseph Tussman. Plato was a big part of the highly engaged curriculum. The philosopher would come to actively influence McKenna deeply even as the young man found his own way into the trendier currents in contemporary thought, discovering many writers who

would fundamentally shape his later ideas, including Mircea Eliade, Husserl, and Marshall McLuhan.

Terence gained a modest campus following as well, as people began to gather at his flat—already filling up with his first library of esoterica, Western magic, and Eastern mysticism—just to hear his freaky pot-fueled raps. As Dennis explained, “Unlike most people, who get high and grow quiet, cannabis...only made him more articulate, more talkative, and more able to weave his enrapturing narratives”(McKenna 2012, 147). This sort of stoned conversational wool-gathering, with its labile conversational modes, is absolutely central to the spiritual and cognitive life of the McKennas, as well as the wider counterculture. Though the frequent triviality of pothead “insights” is itself a constitutive feature of cannabis lore, insights are nonetheless made and reported. Moreover, there are important characteristics of cannabis thinking that would play out throughout Terence’s conceptual life, which was frequently spent stoned.

One of the principle characteristics of such “cannabis consciousness” is the rich growth of associational links between different domains of knowledge and perception. In his 1980 ethnology of American pot users, William Novak cites one particularly Terence-like subject. “When I’m high, the ideas just keep on coming. Sometimes I wonder whether marijuana actually creates these ideas—or whether, perhaps, it functions more like a magnet, drawing together the various iron filings of thought from different parts of my mind (and perhaps elsewhere) and bringing them together at the same time and place”(Novak 1980). The analogy here is hardly accidental, and draws from a rich tradition of magnetic and related “technical” metaphors in understanding the psyche.

The American religious scholar Robert Fuller links in turn this “magnetic” action to the experience that users often report of connecting the same sensory data to two or more distinct sets of concepts. Fuller argues that this appreciation for “multiple perspectives” in turn informed the “unchurched spirituality” of the postwar era and its underlying pluralistic and eclectic embrace of alternative worldviews (Fuller 2000). Cannabis not only bathed wild new ideas about mysticism, myth, and religion in convivial credibility, but staged the resonant and playful dance of comparison between ideas, lending a spontaneous, even Socratic dimension to these collective conversations. As Novak noted, “for some, marijuana has served as a teacher whose principal lesson has been that life holds multiple forms of reality” (Novak 1980).

After completing the Tussman program in 1967, McKenna left Cal and hit the global hippie trail. Like many of his wandering peers, McKenna’s

generational existentialism led him to see exotic, difficult travel as a vector of both personal authenticity and what Ben Brazil describes as an “idiom of fantasy” (Brazil 2104). He wound up in the Seychelles, where he holed up and wrote his first book, a short visionary rant called *Crypto-Rap: Meta-Electrical Speculations on Culture*. A fascinating and often erratic combination of radical social criticism, psychedelic esotericism, and Sci-Fi media theory, *Crypto-Rap* crystalizes McKenna’s first Berkeley phase, and lays down many of the conceptual circuits that would help construct the Experiment at La Chorrera, as well as establishing some of the major themes of his later public career.¹

Cannabis, which Terence defines in no uncertain terms as “psychedelic,” also informed *Crypto-Rap* in a curiously literal manner. As Dennis relates, when Terence arrived at the Ile au Cerf, he decided to plant a bed of cannabis seeds and write until both the book and the crop had reached maturity. This intertwining of text and psychoactive biology, however, had an almost recursive effect, as one stream of mind-craft bled into another. When the cannabis was ready, Terence got totally stoned and decided that what he had written was terrible. And so he kept smoking, day and night, as he rewrote the text over a month of extended stay on the island.

No publisher was interested in the manuscript, which Dennis accurately characterizes as “the kind of book that an intense, angry young intellectual, fueled by psychedelics and radical politics, would write in the waning years of the 1960s” (McKenna 2012, 177). And *Crypto-Rap* does include histrionic lines like “Stop the bullshit, the warmachine, the hatemachine, the death-machine” (McKenna 1969, 67). But for all his revolutionary fire, Terence rejected Marxism and the New Left as well as the pastoral ideals of the “hip community” associated with the Haight. What interested Terence was technology. “Sacrality, return to nature, and introversion is not an answer at all... We cannot turn away from our science and our technology—we must purify ourselves so that we can magically and intuitively apply these things for the force of Good” (McKenna 1969, 117).

Terence called his own radical ethos “crypto-anarchism,” a sort of eschatological fusion of psychedelic experience, esoteric traditions of consciousness transformation, and the radical technological possibilities of media, whose developments Terence understood largely through McLuhan. For McKenna, McLuhan provided a literate and historically-informed discourse that did not reject technology, but insisted on its active and reflexive role in the construc-

1. As of this writing, *Crypto-Rap* remains unpublished per the author’s wishes. For one afternoon, the McKenna estate graciously provided me limited access to a copy of the original typed manuscript. I have opted to include page citations to the original manuscript.

tion of reality and human perception. “Man is modeled by his symbols and his tools,” Terence wrote. “Both are forms of media” (McKenna 1969, 26). Which in turn are forms of hope, for if human reality is recursively dependent on media technology, then the technological transformations of the latter would necessarily shake up the possibilities in the former. For McKenna, as for many fellow freak travelers, this meant that the new media were stirring up states of mystical consciousness and revolutionary communion hinted at and described in esoteric texts East and West.

McKenna’s use of McLuhan provides wonderful evidence for how McLuhan’s ideas and rhetoric, with their imaginative punch and visionary, even apocalyptic undertow, were superficially easy to assimilate into the druggy, mystical, and revolutionary discourse of the youth culture (not to mention an advertising industry salivating over the groovy new crop of consumers).² With the emergence of electrical media and cybernetic computers after World War II, Terence argued, the “eschatological rapport with the alchemical idea of the Spiritus Mundi”—the World Spirit—was re-established after centuries of interruption (McKenna 1969, 87). As such, crypto-anarchism represents “a mysticism of electric culture,” the mercurial manifestation of an “electrically collectivized humanity” (McKenna 1969, 56).

As such, this mystical alchemical mediation remains, for all its arcane allegorical resonances, fundamentally technological and material. Indeed, the crypto-anarchist program that McKenna offers at the end of his text includes a number of very specific engineering goals: global standards for electronic components, the development of holography, a computerized library capable of cybernetically automating scholarship, and an “All Media Recorder” that would enable the recording and sharing of individual experience. While these technological visions are not totally surprising coming from a hardcore science fiction fan, McKenna also tied them to a radical countercultural metapolitics that outflanked Timothy Leary’s later, seventies shift towards “Psi Phy” futurism by many years.

At the same time, *Crypto-Rap* is also saturated with esotericism, including some important early influences that largely disappear in Terence’s later raps. For one thing, *Crypto-Rap* carries on an extensive and reasonably well-

2. Drugs also inspired McLuhan’s pronouncements. In his 1969 *Playboy* interview, McLuhan characterized hallucinogens as “a means of achieving empathy with our penetrating electric environment, an environment that in itself is a drugless inner trip.” Using the same sort of “mystical” language adopted by many LSD users, McLuhan declared that LSD mimes the “all-at-onceness and all-at-oneness” of the new media environment of saturated information (McLuhan 1969).

informed engagement with the “uncorrupted and unfragmented tradition of gnosis” contained in the Tantra Shastras, which he read through Herbert Guenther, Arthur Avalon, Lama Govinda and Evans-Wentz. At the same time, and with the great exception of the *I Ching*, McKenna’s heart lay in the West, with the traditions of hermetic gnosis, Neoplatonism, Renaissance magic, and alchemy. Drawing on a distinction originally made by André-Jean Festugière, McKenna insists on the distinction between the anti-material pessimism of gnostic dualism and the pro-cosmic orientation of hermeticism and alchemy, expressing, unsurprisingly, a distinctly “tantric” (and hedonistic) preference for the latter.

One of the central esoteric tropes of *Crypto-Rap* is the Neoplatonic One, a “nexus of logic and intuition” that McKenna contrasts with various versions of the Many. In an Eliadean twist that informs his later apocalypticism, McKenna also links the emanated multiplicity of the many to the sweep of mundane history:

All history, the fall of light in a Van Eyke[sic], the dreams of Luther, Rome burning—all is about the One; its drive to appear in the material matrix, and the mercurial shifting of that matrix as it refuses to mirror the One, its scattering and reflecting, playing out the vast worlds of Maya. It is the stilling of that surface and its perfect mirroring of the One that makes all things become possible to the perceiver. (McKenna 1969, 42–43)

The notion of history as the tension between the many and the One helps us understand the magnetic topology, if you will, of one of Terence’s core ideas: that a kind of realized object, a perfected culmination of the “material matrix,” might fulfill history by merging with the One. And Terence meant *material*. In another text written by a young head in the late 1960s, the phrase “stilling the surface” might refer to the active calming of the mind through practices like yoga or *zazen*. But here this stilling is operationalized in a technological form.

Elsewhere in the text, Terence becomes even more specific: the ultimate machine, the philosopher’s stone at the end of time, needs to be “solid state.” In contrast to vacuum tubes or electro-mechanical devices, the moving electrons in a solid state device are entirely confined to the fixed materials that make up the apparatus. The transistor, the first breakthrough solid state device, was invented a year after Terence’s birth and a decade later bloomed into the first integrated circuit, which kickstarted the miniaturization of digital computers. As a technology nerd, Terence knew about these developments, but his insistence on “solid state” also derives from his love of Arthur

C. Clarke's 1956 novel *The City and the Stars*. In the novel, the homeostatic city of Diaspar is run on a largely hidden Central Computer that has reached what Clarke describes, in a brief précis on the evolution of technology, as the "ideal of the perfect machine." This ideal was important enough for Clarke to italicize it in the text: "*No machine may contain any moving parts*" (Clarke 2001).

This technical vision of machined perfection, with its literalized instantiation of the unmoved mover, was then "esotericized" by Terence through exposure to McLuhan's analogical media theory. For McLuhan, who favored an analogical mode of interpretation inspired by the allegorical exegesis of medieval grammarians, the formal, visible, and structural characteristics of a given medium directly shape and inform the internal "content" carried through the medium—a hermeneutic McLuhan collapsed into the famous slogan "the medium is the message." In some ways, this is a recognizably "esoteric" style of interpretation, resembling the notion of an analogic "signature" that expresses itself through a variety of objects and processes.

From this perspective, all electronic media share something of electricity's particular material-hermeneutic signature, which McKenna associated with mercurial flux and the creative feminine. Electricity needs a form or body, however, and for this flip side of the polarity, McKenna looked to solid state components. In one passage, McKenna argues that the "Two sulphurs" described in some alchemical texts can be seen as, on the one hand, "the shakti-like mercurial element, the electrically circulating gnosis of the One," and, on the other, "the heavy, Saturnine and Shiva-like, earthy cybernetic component" (McKenna 1969, 88).

Even as McKenna overlays electronic, alchemical, and tantric polarities, he makes a crucial operational distinction between technological and esoteric expression. McKenna argues that, in the past, eschatological consciousness depended on human psychology constellating around rituals, metaphors, and symbolic systems. Technology, on the other hand, holds out the possibility of creating a kind of post-metaphorical media that might transcend culture as such. "Electrical solid state eschatologies however, by investing the symbol in an electro-material matrix having no moving parts, creates a self-sustaining symbol that is not dependent for its purity upon the transmission of a ritual or an ideology" (McKenna 1969, 133). In this way, crypto-anarchism is able to instantiate, or "electrically numinize," older magical metaphors into operational hardware.

Resonant frequencies

On the evening of Feb 28, 1971, the McKennas and their friends settled back in their hammocks after consuming a pile of nineteen fresh fungi. As they phase-shifted into their trip, Dennis noticed an otherwise inaudible buzzing in his head. Terence asked him to imitate the noise, but Dennis demurred. Then, as Terence tells it,

the drizzle lifted somewhat, and we could faintly hear the sound of a transistor radio being carried by someone who had chosen the let-up in the storm to make his or her way up the hill on a small path that passed a few feet from our hut. Our conversation stopped while we listened to the small radio sound as it drew near and then began to fade.

What happened next was nothing less than a turn of events that would propel us into another world. For with the fading of the radio Dennis gave forth, for a few seconds, a very machine-like, loud, dry buzz, during which his body became stiff. After a moment's silence, he broke into a frightened series of excited questions. "What happened?" and, most memorably, "I don't want to become a giant insect!" (McKenna 1993, 53)

This blast of high weirdness kickstarted the Experiment proper, unleashing a flood of conceptual production in Dennis, much of which drew from and significantly modified ideas first generated by Terence. This production led to both an outlandish psycho-cosmo-bio-pharmaceutical model of psychedelic action, as well as the specific protocols of the Experiment that they subsequently undertook. This event also lent the McKennas the core theoretical, technical, and expressive element of their protocol: *resonance*.

Recognizing the importance that resonance plays at La Chorrera, Dennis provides a formative example in *Brotherhood of the Screaming Abyss*. During high school band practice, his instructor demonstrated the principle of sympathetic resonance: plucking the pitch (or frequency) of A on a bass string caused nearby strings tuned to A to vibrate as well. Resonance here means two systems entering into energetic relationship mediated by frequency, a mutual oscillation that, once begun, allows the second string to continue to sound even if the first string is dampened (McKenna 2012).

The phenomenon of resonance operates in many different physical systems, among molecular particles, in neural tissue, and in a host of electronic technologies, and can therefore be seen as one of the fundamental figurations of a cosmos that vibrates about as much as it does anything else. But resonance also resounds within symbolic, philosophical, and phenomenological frameworks. The term derives from *resonantia*, the Latin "echo," and one thing

that physical resonance echoes is earlier magic doctrines of sympathy, which Kocku von Stuckrad identifies as “a fundamental motif of esoteric discourse” (Stuckrad 2005, 19). Among the Pythagoreans and Stoics, the doctrine of *sympatheia* establishes linkages between different parts and planes of the cosmos, and it also undergirds the famous correspondence between macrocosmos and microcosmos established in the hermetic doctrine “As above, so below.”

This essentially erotic model of the cosmos, centered on attractive conjunctions and networks of intimate relations, re-entered European thought through fifteenth-century Florence to eventually become part of the modern magical underground as well as a significant topos for Romanticism and “alternative,” non-allopathic medicine. This resonant legacy took a particularly fascinating turn in the nineteenth century, when the scientific investigation and theoretical description of the electromagnetic spectrum laid the ground for a shift in esoteric language. Practitioners of mesmerism and hypnotism spoke of the necessary rapport or “sympathy” between operator and subject, while Theosophists began painting and describing astral “vibrations,” a term that itself would be recoded by later New Agers as “frequency.”

In both theory and psychophysical practice, contemporary esoteric and New Age practitioners often operate within a humming realm of “energies,” “vibrations” and “frequencies” that simultaneously follow physical wave dynamics while eluding the measurement devices that normally detect such field fluctuations. As such, they are frequently discounted as pseudo-science. But sometimes, as with the McKennas, a zone of indeterminacy opens up, where the systems that begin to resonate themselves cross multiple fields of physics, sound, symbol, performance, and phenomenology.

As the musicologist Veit Erlmann argues in his book *Reason and Resonance*, even the physical phenomenon of resonance presents a challenge to the rationalist underpinnings of modern philosophy. With its notorious ocular bias, rationalists typically characterize the mind as a kind of mirror capable of capturing accurate representations of the outside world while remaining fundamentally separate from that world. Resonance, as in the resonating strings of a harp, is a phenomenon of conjunction, adjacency, sympathy, and of the blurring of the boundary between subject and object (Erlmann 2010). For Erlmann, this dichotomy between the resonating string and the mirror of reason lies behind McLuhan’s distinction between a premodern “acoustic space” of oral communication and a linear modern world based on literacy and visual images. Pointing to contrary traditions like Romanticism and twentieth-century phenomenology, Erlmann instead characterizes resonance, not as an echo of McLuhan’s “‘prescientific’ magic,” but as a fully contem-

porary feature “inextricably woven into the warp and woof of modernity” (Erlmann 2012, 15).

McLuhan would actually agree with Erlmann here, since he saw and described electronic and electromagnetic media in terms of a paradoxically resonant modernity, an archaic reverberation resounding through contemporary technology. Crucially, McLuhan developed his resonant thoughts most acutely in terms of the particular device that at least indirectly catalyzed Dennis’s giant insect experience: radio.

In *Understanding Media*, McLuhan underscored the connection between the radio—which relies on the physical phenomenon of resonance to select frequencies—and the metaphoric reverberations of the term. “The subliminal depths of radio are charged with the resonating echoes of tribal horns and antique drums,” he wrote. “This is inherent in the very nature of this medium, with its power to turn the psyche and society into a single echo chamber” (McLuhan 1964, 299). Radio created “depth involvement for everybody” by echoing and resonantly distributing the power of the previously most important extension of man: human speech. By intimately and immediately delivering the human voice into the listener’s head, radio created a condition where “hearing is believing.” As such, resonance implies an immediate sense of involvement and intimacy that draws multiple individuals into a shared, potentially Dionysian participation mystique.

Behind McLuhan’s claustrophobic and colonialist language is the specter of Hitler’s radio performances, and the widespread concern, among Anglo-American intellectuals both during and after the war, that the fascist ability to mobilize irrational and seemingly “mythic” identifications on the part of the German masses was directly tied to the almost spectral power of the broadcast human voice. McLuhan also pointed to Orson Welles’ famous 1938 broadcast of “The War of the Worlds” as an example, though science-fiction usually took second place in his account to more esoteric formulations of unseen forces, such as astrology and clairvoyance (McLuhan 1969). “The effect of radio as a reviver of archaism and ancient memories is not limited to Hitler’s Germany,” he wrote, perhaps providing the words for what Terence would much later refer to, more hopefully, as “the archaic revival” (McLuhan 1964: 306).

In the diary entry he wrote the day after he first made the buzz, on February 28, Dennis compares his inner sound to a faint radio signal, describing it as “something like chimes at first, but gradually becoming amplified into a snapping, popping, gurgling, cracking electrical sound.” (McKenna 1993, 68). Such sounds are a regular feature of psychedelic trip reports, especially in response to high doses of tryptamines like psilocybin and DMT (Strass-

the “antennae” created through the similarly resonating harmine alkaloids let loose from the ayahuasca vine they nibbled. By imitating this sound with his voice, its harmonic frequencies would be cancelled out, causing the harmine-psilocybine-DNA complex to drop into a stable, superconducting, hyperdimensional state—with apocalyptic results.

The considerable challenge of understanding what the heck Dennis was talking about is in no way assuaged by directly citing Dennis’ journals. Nonetheless, it is worth doing so here in order to note the tone of the language and its reliance on the physics of resonance as a passage between acoustic, electromagnetic, and psycho-cosmic domains.

When the ESR tone of the psilocybin is heard via tryptamine antenna, it will strike a harmonic tone in the harmine complexes being metabolized within the system, causing its ESR to begin to resonate at a higher level. According to the principles of tonal physics, this will automatically cancel out the original tone, i.e., the psilocybin ESR, and cause the molecule to cease to vibrate; however, the ESR tone that sustains the molecular coherency is carried for a microsecond on the overtone ESR of the harmine complex. This leaves the momentarily electrically canceled and superconductive psilocybin suspended in a low energy electromagnetic field generated by the harmine ESR. In so doing, it will regain its original, but now superconductivity amplified, ESR signal, which will permanently lock it into a superconductive state.

(McKenna 1993, 70)

This superconductive condition would produce a standing waveform, a visible translanguistic object or fluid hologram, that would—again through resonance—begin to broadcast the information stored in the DNA. “The result will be a molecular aggregate of hyperdimensional, superconducting matter that receives and sends messages transmitted by thought [and] that stores and retrieves information in a holographic fashion in neural DNA” (McKenna 1993, 71). This information would, in turn, become interactively available to their no-longer-quite human minds. Extending the eschatological speculations of *Crypto-Rap*, this posthuman assemblage of biological, electromagnetic, and acoustic forces would result in a “solid-state hyper-dimensional circuit” capable of defeating the tyranny of Time and initiating all of mankind into “galactarian citizenship” in the “hyperspatial community” (McKenna 2012, 256).

How are we to understand this fantastic apparatus? One key is the term that the McKennas often used to refer to the object: the Stone, as in the stone of the philosophers. During the run-up to the Experiment, as the McKennas and their friends were exploring the mushroom trances, one of the crew had a

vision of an “elf-like creature” rolling a polyhedron whose every facet opened like a window onto a distant time or place. Terence connected this vision to the *lapis philosophicus* and his long exposure to the alchemical studies of Carl Jung, a connection that in some sense initiated the La Chorrera crew, imaginably at least, into an esoteric current of material metamorphosis. “I could feel the golden chain of adepts reaching back into the distant Hellenistic past, the Hermetic Opus, a project vaster than empires and centuries; nothing less than the redemption of fallen humanity through the respiritualization of matter.” But in order to really grasp the golden chain, he and Dennis also had to twist it, to render old alchemical dreams into a specifically contemporary science fiction vision: “the image of the philosopher’s stone as hyperdimensional jewel-become-UFO—the human soul as starship” (McKenna 1993, 77).

Though claiming that he had “never seen or imagined” the lapis in this manner before, Terence was not the first to make space opera from the highly polyvalent hermetic symbol of this “stone, which is no stone.” In his prescient 1959 book on UFOs, which the McKennas were very familiar with, Jung linked the *lapis* to the mandala, a symbol of the individuated Self whose upwelling from the collective unconscious he directly linked to the forms and behavior of flying saucers. Jung’s cosmic pulp-culture act of comparison directly contributed to the McKenna’s belief that the end result of the Experiment would be the creation of “the ultimate technological artifact,” an apocalyptic device similar to “starships, time machines, crystal balls, magic mirrors” (McKenna 2012, 135).³

As the literary critic Seo-Young Chu argues, “Every science-fiction world is a metaphysical conceit literalized as ontological fact within a narrative universe” (Chu 2010, 12). If one of the features of science fiction as a genre or semiotic engine is this concrete literalization of metaphor, then we can say that Terence and his brother rhetorically constructed their science fiction apparatus from a literalizing fusion of Jungian alchemy and McLuhanesque media theory.

Indeed, Jung’s alchemical corpus can even be read, with a certain violence, as a kind of media theory. In *Psychology and Alchemy*, which Terence had devoured as a teenager, Jung argued that even as the alchemists explored the transformative chemical potentials of matter with their retorts and sublimations, they were also staging a parallel psychic process of unconscious projection through their experiments. “Everything unknown and empty is filled

3. Note here the roping together of “science fictional” and “esoteric” devices, which can be seen as the necessary fusion (and confusion) of technologies that penetrate space and time with those that mediate different ontological orders of reality.

with psychological projection,” Jung explains. “It is as if the investigator’s own psychic background were mirrored in the darkness. What he sees in matter, or thinks he can see, is chiefly the data of his own unconscious” (Jung 1953, 218).

Though the McKennas would roundly ignore this psychologizing observation in the aftermath of the Experiment, it is important to note that Jung was not—as his more recent critics sometimes forget—interested in “spiritual alchemy” alone. Instead, he believed in the mobilization of psychic processes through laboratory practices and a confrontation with enigmatic or anomalous psyche-stimulating matter (Jung 1953). And there is another way in which Jung’s alchemical notions helps illuminate the Experiment: whether considered as a mystical or physical operation, the opus is not proscribed according to a standardized ritual or procedural form. Instead, it requires an “experimental” attitude towards the unknown potentials of metamorphic matter, an experimentation that very much includes a necessarily singular conceptual assemblage. “Every original alchemist, as it were, builds himself a more or less individual edifice of ideas, consisting of the dicta of the philosophers and of composite analogies to the fundamental concepts of alchemy” (Jung 1953, 277).

As we can see with the protocols developed by the brothers, such constructions are not just conceptual but semiotic and procedural, as much a work of mediation as of material inscription. Here McLuhan’s technological allegories meet Jung. In Jung’s idealist account, the investigator’s psyche, or imagination, makes up the “necessary medium” of the work, but it also serves, somewhat paradoxically, as its “cause and point of departure.” Jung describes this looping process in the language of visual projection, with the camera-mind’s images “mirrored in the darkness.”

Defending his claim that some early alchemists were aware of this process of psychic projection, Jung pointed to the “Liber Platonis quartorum,” a text contained in the seventeenth-century *Theatrum Chemicum* but of considerably older origin. Here we find the insistence that the operator must himself participate in the work (“oportet operatorem interesse operi”), a self-referential gesture captured by the alchemical symbol of the ouroboros and condensed in the artifact that the “Liber Platonis” author suggests as the ideal vessel of transformation: a human skull. More direct is the early modern cry of the alchemist Gerhard Dorn, also cited by Jung: “Transform yourselves from dead stones into living philosophical stones!” (Jung 1953, 256).

But is this transformation merely psychological, or also biological and metabolic? In accordance with their weird materialism, and against the ideal-

izing tendencies of Jung, the McKennas wanted to construct a “biophysical technology” that would enable them to build the apocalyptic lapis, as Dennis put it, “out of our own bodies” (McKenna 2012, 134). This respect for the productive forces and agency of matter partly reflects the hedonic approach to consciousness expansion that marked their generation, which saw no conflict between spiritual and metaphysical pursuits and the exploration of pleasures, intensities, and corporeal, even erotic energies. More fundamentally, this visionary materialism encoded the brothers’ profound respect for the transformative effects of certain anomalous alkaloids, molecules whose metabolic action in the human body is inextricable from the ontological wager of visionary posthuman encounter.

Channel hop

Dennis’ more-or-less automatic burst of technical writing, scribbled under the guiding hand of the Teacher, also offers strong support to Wouter Hanegraaff’s suggestion that the Experiment must be seen, at least in part, as an instance of modern channeling. As Hanegraaff explains, channeling remains a poorly understood phenomenon, but it can be characterized from a social scientific view as an automatism that features inspired or articulated communication from sources outside the self providing spiritual guidance and education. Unlike spiritualist mediums, with whom they overlap, channelers rarely make contact with the dead, and in this sense the practice is more harmonically aligned with esoteric and occult traditions of intercourse with angelic, demonic, or other praeternatural intelligences.

There is, in addition, no shaking the technological overtones of the term *channel*, which seems to emerge in its esoteric sense in the nineteen-fifties, in the middle of the first century of McLuhan’s electromagnetic civilization. Indeed, one distinguishing characteristic of modern channeling is precisely the “technical” quality associated with the term by the UFO contactees who first employed it, and who were keen to distinguish their emerging cosmic ontology from the supernatural probes of spiritualist mediumship (Melton 2001). Though this language shows the heavy influence of Theosophy and its esoteric discourse of “vibration,” ufology also came to place more central focus on the technical apparatus itself. In the early postwar years of the contactee movement, figures like George King and George Van Tassel emphasized the quasi-electromagnetic factors involved in their communications. Van Tassel spoke of “vibration reception” and the need to be “tuned in” in order to receive “transmissions”; some other contactees achieved communication through radio-telegraphy (Van Tassel 1952; Williamson 1963).

Getting back to Dennis' hyperspace circuit diagrams, we should note that some early contactees channeled technical designs for machines that also frequently relied on analogues of conventional wave physics. In the mid-to-late fifties, when he also organized the influential Giant Rock Spacecraft Conventions in Landers, CA, Van Tassel built the still-extant Integratron from instructions received from the space being Solganda. Though never activated, the barn-sized structure relied on a Multiple Wave Oscillator to generate ultra wideband EMF signals capable of "resonating" with and thereby rejuvenating human cells. Other contactees received plans for unusual media that would, in turn, improve more conventional communication *techné*. In *The Saucer Speaks*, George Williamson tells the possibly apocryphal tale of an early fifties ham radio operator who received channeled instructions for a new antennae, a "screwy kind of skywire, like nothing in the books" (Williamson 1963, 26). With his new device constructed, he was rewarded with a conversation with a Martian.

The hypothesis and protocols driving the Experiment at Lo Chorrera are far denser and more sophisticated than most contactee lore, especially as they are formulated in 1975's aggressively arcane *Invisible Landscape*. But as Hane-graaff suggests, they belong within this current of channeled tech. Perhaps their most significant addition to this current is that, in addition to wave vibration physics, the hyperdimensional cosmic circuit of the McKennas also has a metabolic and pharmacological basis.

This doesn't make their language and concepts any more coherent, and perhaps less so. In his 2012 memoir, Dennis acknowledges that while many of his La Chorrera specs resemble scientific jargon, they are in fact "nonsense." With decades of serving as a trained professor of ethnobotany and a commercial research scientist, Dennis speaks here with the well-earned voice of reason—a voice that I suspect may have been clamoring in the reader's head these last few pages as well.

The voice of reason, again, is the mind in the mirror, the mind whose very capacity to render account of its knowledge of the natural world rests on the clear separation between subjects and objects. But the younger Dennis' discourse also speaks with the voice of resonance, a feature of material and psychic existence that—both for the polyvalency of the term and the phenomenological fusion it represents—erodes the crisp boundaries between subject and object, mind and nature. Though this language may get in the way of science, the machine that it diagrams here is still *a machine*, a weird or science-fictional apparatus that, as it were, diagrams and orchestrates resonance and transversal conjunctions across a multiplicity of domains, including imaginative and possibly cosmic ones.

Examining Dennis' nonsense, Hanegraaff stresses its science fiction: it "sounds exactly like the type of technological jargon familiar from the Star-trek [sic] series, which is at the origin of the 'warp' terminology as well" (Hanegraaff 2009, 299). But this only begs the larger question: what is science fiction? And what do we do with it when we find it within the esoteric protocols—what Peter Sloterdijk would call the "anthropotechnics"—derived from extraordinary psychedelic experience? (Sloterdijk 2013)

Here we are helped enormously by Seo-Young Chu's theory of science fiction. Chu's argument inverts Darko Suvin's influential description of science fiction as a nonmimetic discourse that produces its effect of "cognitive estrangement" through the construction of at least moderately plausible imaginative extrapolations. Instead, Chu argues that SF is more like realist fiction, remaining a form of mimesis and representation. What has changed, however, are the sort of objects represented. In contrast to the ordinary objects encountered in realist fiction, like chairs and tables, the mimetic representations found in science fiction are anomalous but real objects—like cyberspace or black holes—that "are nonimaginary yet cognitively estranging" (Chu 2010, 3).

Chu's estranging and elusive objects very much resemble the "hyperobjects" described by Timothy Morton, which he defines as objects—like climate change and relativity—that are so vast and tangled in space and time that they severely challenge our normal modes of reasoning about or picturing them (Morton 2013). In Chu's view, then, science fiction is not a specific genre but a general mimetic strategy that attempts "to perform the massively complex representational and epistemological work" of making inaccessible referents available to our understanding. As such, she suggests that surrealism could be seen as a mode of SF whose referent is "the phenomenon of dreaming," while gothic horror is SF that bodies forth "the occulted-yet-irrepressible unconscious" (Chu 2010, 9).

Both Terence and Dennis took the discourse of science fiction seriously, as both a speculative engine and a representational interface for engaging cosmic alterity. But if we read Dennis' circuit diagram as a science fiction in Chu's sense, what elusive *object* is it attempting to represent? I would suggest that, beyond the immediate intensity of the mysterious buzz, Dennis' diagram could be said to provide a mimetic SF representation of the psycho-physiological-cosmic dynamics of the high-dose tryptamine trance itself. Once again, the medium is the message. And the message, driven by a compound metabolically perturbing the human nervous system into creative symptomology, is a naturally, or naturalistically, weird one. In the psyche-

delic trance, relatively stable patterns of waking cognition are derailed into a Guattarian “chaosmos” of energetic, perceptual, cognitive, temporal, and ontological rhythms and intensities (Guattari 1995).

Many sensory and perceptual aspects of psychedelic experience evince an iterative, reverberant, and vibratory character. This is most obviously perceived in audio-visual phenomena that are often described as trails, stutters, and “fractal” patterns, many of which can be rather easily assimilated to the semi-formal language of frequency and signal processing. The independent researcher James Kent has described a number of these effects in his book *Psychedelic Information Theory*, a deeply researched, largely level-headed but un-refereed independent scholar’s attempt to account for psychedelic phenomenology along neurological lines.

For Kent, psychedelics destabilize the top-down control that maintains the continuity of waking consciousness across multiple neural oscillators. “When the modulatory driver maintaining global oscillator coherence is interrupted, uncoupled oscillators will naturally fall into synchrony with [the] most energetic periodic drivers in the environment” (Kent 2010, 51). This openness to environmental feedback not only produces cross-sensory or synesthetic effects but helps explain the often powerfully entraining effects of external drivers, including many shamanic (and contemporary electronic dance music) techniques. Dancing, drumming, singing, chanting, rocking back and forth all act as periodic drivers, as might “small radio sounds” moving through the distant night.

The McKennas’ plans for the solid-state philosopher’s circuit-stone can thus be seen, in part, as a science fictional attempt to model the impossibly complex interference patterns and oscillating resonance effects that energetically characterize high-dose psychedelia, at least from the phenomenological inside. But Dennis and Terence were not just speculatively diagramming circuit-board descriptions of cosmic pharmacology. Instead, they were preparing to *activate* those schema within the metabolic and possibly ontological theatre of experiential phantasmagoria. If they had developed a sort of program, they intended it to run it within their own phenomenological laboratories. As Dennis writes, “The goal wasn’t simply to test the hypothesis but to fabricate an actual object within the alchemical crucible of my body” (McKenna 2012, 246).

To articulate the creative dynamics of such a metabolic ontology we need more than the language of neural oscillators and resonance effects. Instead, we need a way to recognize and articulate the specific creative tensions, anthropotechnical procedures, and cognitive scripts that stage, construct,

and crystallize extraordinary experience in real time, and on the fly. In other words, Dennis' turn to the warp of science fiction represents more than a tripper's hazy appropriation of a TV show in order to mimic the authoritative discourse of science. It also represents the selection of a mimetic module for a bootstrap program of psychedelic constructionism: an enunciation of weird naturalism as both a genre of wayward representation and a material-semiotic practice of catalyzed cosmic wonder.

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