

II Apavada Darsana, Truth by Constant Refutation of the False

Verse 6

If one alone has reality, how can one experience another's beingness? To say that the real is in the real is tautology; to say it is in the unreal is contradiction.

1/30/6

Nataraja Guru's translation is notably different this time:

If one alone has reality, another in it how could there be? If existence is posited in existence, tautology comes; and if non-existence is so asserted, contradiction comes.

While Nitya is making a good point, it seems to me that Nataraja Guru's translation is closer to the spirit of what Narayana Guru is trying to say here. The Guru has already proved to everyone's satisfaction that there is only one reality, not two as in God and man, and not multiple as in only specific items are real and nothing else, a la scientific materialism. He's now dialectically rounding off his point from the opposite direction: if there's only one Absolute, how can something else exist? If you insist there is something else, then it's a contradiction. If you insist that there're two realities, each of which is the Total, it's tautological, because they must be the same reality but somehow imagined to be different.

We talked some about tautology and contradiction in a more general sense, because the majority of philosophical and religious

speculation falls into one or the other of these categories. How do we know the Bible is the word of God? Because it says so right in the Bible itself! Surprise! We believe something because it's what we think, and we think it because we believe it. It's only because so many complex sentences are strung around basic notions like these that we don't see the self-validating nature of them.

Many materialists are convinced that since so much of religion is pure tautology, there is nothing true other than what is presented to the senses. That means they are also basing their beliefs on the same specious arguments. Few are brave enough to shrug off conditioned thinking and arrive at a direct confrontation with truth. Even in the Gurukula, where this problem is well known, we tend to cite the authority of one of the Gurus and feel satisfied with that. Such faith-based contemplation lets us off the hook.

Nitya wrote about Carl Jung as a modern scientific thinker who went to the very fringes of knowledge, far beyond where most others pulled back in fear. Yet he ultimately, citing the need to retain his scientific objectivity, retreated from giving up his small self-identity in order to merge with the greater Self. When we read about it, it sounds like a failure, but that's because we don't even realize that we have already given up at a much earlier stage of the process. We would rather be comfortable with our womb-like beliefs than to "dance beneath the diamond sky with one hand waving free, silhouetted by the sea," as St. Bob puts it.

Nitya's Brihadaranyaka Upanishad (henceforth BU) commentary has this to say about the apparent terrible death from which we shrink: "This honey of immortality is such that when you die as a relativistic individual in the phenomenal world you die to falsehood, ignorance and death, and you stand shining forth as the ever-existent, the eternally luminous, and the truth of truth, never again to be affected by the stain of duality." (I.570)

The whole game remains: how to discriminate the real, the Absolute, the Golden Thread, from the multiplicity of what may be considered unreal because it so disguises the real that we forget it's there. The very first thing I read today when I curled up in a chair with the BU commentary of Nitya's and a cup of coffee was:

In all this, the knowledge which is concretely expressed also remains unseen as an immanent substance of reality all the way to the toes and fingertips. When a sword is in its sheath, the sword is not seen; only the sheath is seen. Fire is hiding in a tree from its roots to the leaves at the tip of its branches. Even so, the Self of a person is immanent in an individual, but we distinctly see only the breath that he breathes, the words that he speaks, and a number of behavioral actions when he behaves. When we breathe, we know the vital breath and not the Self. When we see, we experience our eyes and not the Self. When we hear, we experience our hearing faculty and not the Self. When we think, we experience only our mind. These names are all assigned to the functions of the various faculties. As we are always engaged with one sensory or mental activity at a time, we have only a fragmentary knowledge about our sentience. A unitive or unified knowledge does not easily come to us because of our piecemeal knowledge. The one and indivisible knowledge of the Self remains transcendent from specific manifestations. So the Self can be seen, known, and experienced only by meditating on the totality of the Self, called *brahman*. (I.602)

Two other quotes surfaced in John Spiers' book, *What Shall I Read?* which will be reviewed in the next Gurukulam magazine. These are from two Chinese Buddhists, Hui Neng from the seventh century and Huang Po from the ninth:

Hui Neng, on a very common mistake made by more than Buddhists:

“When you hear me speak about the Void, do not fall into the idea that I mean vacuity. It is of the Utmost importance that we should not fall into that idea, because when a man sits quietly and keeps his mind blank he would be abiding in a state of the voidness of indifference. The illimitable Void of the Universe is capable holding myriads of things of various shapes and forms, such as the Sun and the Moon, and the stars, worlds, mountains, rivers, rivulets, springs, woods, bushes, good men, bad men, laws pertaining to goodness and badness, heavenly planes and hells, great oceans and all the mountains of Mahameru. Space takes in all these, as does the voidness of our nature. We say that Essence of Mind is great because it embraces all things since all things are within our nature. When we see the goodness or the badness of other people, and are not affected by it nor repulsed by it, nor attached to it, then the attitude of our mind is as void as space. In that we see the greatness of our minds.” (99-100)

Huang Po adds:

“Your true nature is something never lost to you even in moments of delusion, nor is it gained at the moment of Enlightenment. It is the nature of the Bhutathata (Such-beingness). In it is neither delusion nor right understanding. It fills the Void everywhere and is intrinsically of the substance of the One Mind. How, then, can your mind-created objects exist outside the Void?” (100)

Relating to earlier discussions, from the Brihadaranyaka Upanishad: “Most communications which come to a person are uncritically made by people of little understanding. One does not lose much by paying no heed to non-authoritative pronouncements.

This field also includes newspapers, published books and periodicals, radio and television broadcasts, and the enormous quantity of propaganda and advertisements.” (481) It is crucially important that we only take seriously those communications which have merit. We have to use our elephant trunk of discrimination to weed out the valuable from the valueless and even harmful things we are likely to hear. This delicate process is further complicated by our ego’s petty interest in treating the valuable as valueless in order to maintain its untainted self-image.

Part II

Since we’re going to miss a week, I’ll at least offer a little light reading for anyone interested in the meantime. Nitya ends Volume I of the BU with a heartfelt vision very relevant to our study of Darsanamala:

Many people muse on the glory of realization, and dream of someday reaching there while, as if from behind, they are eaten up by the canker of ego and the darkness of ignorance. Every religion and every philosophy is trying its best to assure us that there is a bright tomorrow when we will be in the benevolent hands of the Supreme. This is a kind of panacea where the believer is held captive by self-hypnosis. But if we can shake ourselves out of this stupor and become more wakeful and conscious, we will see that we are in the hellfire of ignorance—an ignorance that we ourselves have generated, if not during this very life, then in a previous one. It is all because we glorify the highest and neglect our existential life.

Unfortunately, our existential life is one of functioning as a masochist and/or a sadist, taking pleasure in hurting ourselves, as well as feeling the vigor of life in the blood we or others profusely shed. Although we make many hypotheses painted in

numerous colorful forms that fascinate our imagination, they do not help us to come out of the quagmire of illusion. The next course for us in our search for the Absolute or Self-realization is to give time to the factual situations of life. However, this does not mean one helpless person should hold another helpless person on their lap with the two sitting together bemoaning their fate. That will not help either. We have to see our egos clearly to know which aspects are malevolent and which aspects are benevolent. We have to rigorously clear away the agony-brewing aspects of ignorance or selfishness. The selfishness which we speak of here is the bias which in every walk of life leads us away from that central benevolence to which we should gravitate every moment.

The purificatory discipline of the individuated self is the major door to salvation. The same scriptural texts that give us the idea of release or liberation also help to give relief from the proliferation of our ego's power to demolish. Therefore, it is absolutely necessary to sublimate the ego's power by spiritual reconstruction if we wish to reach our goal. (635-6)

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3/22/16

Apavada Darsana Verse 6

If one alone has reality,
how can one experience another's beingness?
To say that the real is in the real is tautology;
to say it is in the unreal is contradiction.

Nataraja Guru's translation:

If one alone has reality

*Another in it how could there be?
If existence is posited in existence, tautology (comes),
And if non-existence is so asserted, contradiction (comes).*

Verse 6 is a real head-buster, forcing us to stop and think as hard as we are able. Humans tend to just “read over” koans like this, assuming we have some idea of what they mean, and so getting very little if anything out of them. Yet if we are brave enough to admit our lack of understanding, as Deb did right off the bat, profound insights may arise. Deb started us off by frankly admitting her bafflement, and the deconstruction was on. The class succeeded in teasing apart at least a goodly amount of what seems to be the Guru’s intent, leading to an especially intense closing meditation to internalize our gleaned insights.

Gurus like those of the Gurukula sometimes use incomprehensibility as a teaching technique to force students out of their comfort zone. Being mystified just might stop us in our tracks. We prefer not to own up to our doubts, at least about ourself. (Other peoples’ doubtful performances are fair game.) We have been trained from childhood to give the right answer and to appear in command of our reasoning, even when we are not. *Especially* when we are not. We fear humiliation or worse for floundering in public. This ersatz certitude builds a cocoon around the psyche, insulating it from the greater context. Sometimes a guru can break through the cocoon with a tap on the forehead or a sucker punch to the ego boundary. Later we may even thank them for it.

A reasonable interpretation of the verse came to me during the opening meditation, but I withheld it until the end to allow everyone to thresh their own staffs of wheat (apologies to the gluten-shy). I wanted to avoid merely substituting a new and improved cocoon for the old ones.

Between us we have enough Sanskrit to make some sense of the original, and this helped, because part of the fault lies in the translation. We'll get to that in due time. Nitya did not provide a word for word breakdown here, as Nataraja Guru has already done so in *An Integrated Science of the Absolute*. It still appears that a longer explication would be worthwhile, if anyone out there wants to give it a shot.

Andy examined the first two lines in a helpful way: the first postulates unity, while the second depicts duality, asking how it can even exist in a unitive reality. This overcomes the first linguistic confusion, because the 'one' of the first line is different from the 'one' of the second. Nataraja Guru's wording avoids this confusion, saying in essence if there is oneness, how can any other (or otherness) exist?

Nitya's translation leads us to think in terms of solipsism, of our own reality being irrevocably cut off from that of all others. Much of his commentary is based on this theme, that we are isolated by our uniquely structured modes of thinking, both from other people and also from ultimate reality. This is true, of course, but Nataraja Guru's and the class's reading added another important dimension, as we shall see.

In any case, this explains why Nitya reprises the material on isolating structures of thought developed throughout childhood and nailed in place by adulthood. Bushra talked about the French psychologist Jacques Lacan, who is in substantial agreement with us in noting how language constrains thought to certain pathways. According to Bushra, Lacan equated the constraints of linguistic thought-structures with an archetypal Father image, and counterposed a Mother figure representing the bliss of original unity, which we intuitively long for and seek to attain. The old "alphabet and goddess" theme. Lacan believed that the real is only perceivable through trauma or madness—events that blast through the conditioning of thought structures. While this may be true, we

like to propose other options, for instance, the dedicated deconstruction we are putting forth in our Darsanamala study, using words to break out of the iron grasp words have on us.

We are also seeing the upside of language in creativity. We are trying to create a happy mythical family with a doting archetypal dad and loving archetypal mother all mixed together and even swapping roles. Erasing it all would revert us back to the worm stage. We are aiming to bring the bliss of the cosmos into our constructed reality wherever it may be, to make it shine as brightly as possible, not to turn off the light in embarrassment. This trajectory is shared with master jazz musician Vijay Iyer, profiled in the Feb 1, 2016 issue of The New Yorker magazine:

Improvising musicians are often taught to rid their minds of thoughts, which Iyer regards as “an impoverished view of thoughts.” George Lewis [another jazz musician and composer] said, “I’m suspicious of people who say they blank their minds to play. With Vijay, I think he’s looking at the situation and making small tests. He’s being careful and deliberative, even in the most ecstatic moments, which I find attractive. The ones who blank their minds, I’m always thinking, How can we get your attention? Someone who can operate like Vijay, on multiple levels of consciousness, that’s what I admire.”

In our Darsanamala study we are aiming to free up our ability to improvise in life. Instead of repeating a few timeworn formulas, we are channeling the music of existence into the world we live in. Both Nitya’s and Nataraja Guru’s readings of this verse offer us contrasting ways to ratchet up our improv.

Before aiding and abetting this process, Nitya opens with a summary of conditioning as we have explored it:

From the previous verse we have come to know that the world of empirical experience is structured in our own minds. The constituent factors of that structuring include sense data drawn from memories, psychological urges arising from incipient memories, and names and nomenclature, all of which are arbitrarily assigned in the formation of concepts. In addition there is a structural device of ideation based on whatever meaningful correlation is adopted by the individual mind. (136)

Nitya then sketches the upside and the downside of this perfectly natural outcome of the process of individuation:

It is through the action of this conditioned structure that a normal individual mind can communicate ideas which can to some extent be reproduced in another mind. However, the complete communication of one's total experiential awareness to another individual remains impossible. (136)

Communication is perhaps the greatest joy of being alive, and it takes place in an exuberant variety of forms. In oneness there is no other to commune with. We hope to realize that duality and separation are not curses to be endured but opportunities to find new ways to communicate and share. Loving kindness is a form of communication. Each situation invites a unique method of communication, and each individual responds uniquely to overtures from the environment. The dread of duality is itself an unhelpful dualism.

So, on to the third and fourth lines, dealing with tautology and contradiction. Nitya presents them in this way:

The self-luminous I-center... is the only area of consciousness which can assure certitude. At one and the same time it is the ultimate criterion of judgment and the consciousness which

applies that criterion. To introduce other criteria or another methodology to prove what is self-evident will result only in the logical fallacy of tautology. And if one fully understands that the only real existence is the Self, then to attribute reality to transient projections of the mind will result in contradiction. Accepting this as the final truth, the world of perceptions should be treated as non-Self and its so-called reality should be refuted. (137)

There was a lot of flailing around this, but I'll cut to the chase. The third line (To say that the real is in the real is tautology) employs 'real' for both satya and asti, and therein hangs much of the confusion of the wording. Elsewhere Nitya often distinguished these as 'real' and 'actual', which helps a lot. If we read the line as To say that the satya is in the asti is tautology, or To say that the real is in the actual is tautology, we get close to what I think Narayana Guru meant. We believe the world we see is reality, but Narayana Guru assures us this is not the case. We may even know this, but still, deep down, we cannot let the illusion go, since functionally we need to accept it. This approach also helps make sense of the last line: to say reality is in the unreal is contradiction. Of course!

Ordinarily, there are two types of structural thinking. Materialists insist "All this is real." Everything we see and experience is the real. This table is real; this room is real. Narayana Guru dismisses this as tautology. The word means redundancy, but the Gurukula gurus use it in a slightly more nuanced sense, of proving your point using your own assumed premises. "I believe in something, therefore it is true. I believe in it because I think it is true, and it is true because I believe in it." Don't laugh—we all do this all the time, even those who follow the fourth line, who insist that reality is invisible and very far from our awareness. Taken to extremes, this includes religious and other fanatics who self-

assuredly call upon an imaginary God or universal principle that they believe to be running the show, and of course they are responding accurately to its siren songs. It might want them to kill you, but that's okay, because God or Necessity demands it.

Narayana Guru is begging us to not fall for either fallacy. Jan caught his drift, helped along by Nitya's invocation of Carl Jung. She grasped that the yogic resolution of this paradox is that reality resides in the Self, rather than in the physical or metaphysical aspect of actuality. It is neither this nor that but Aum. It is not solely in this material stuff, and not in a city of the gods, but right in our heart. *Tat tvam asi. That is what we are. We are That.* It is not elsewhere, couldn't be elsewhere, because there is no elsewhere. (Jan didn't go on like this, that's Scott raving again.)

Jan admires Jung a great deal, and really appreciated what Nitya said about him:

Of all men who as scientists have shown unparalleled courage, C.G. Jung must be reckoned among the bravest. He risked his professional reputation, and sometimes his sanity, and reached out almost to the fringe of what is possible. He stood in awe and wonder at what he discovered. Time and time again he had to tread the razor's edge between the known and the unknown. Time and time again his scientific conditioning and belief systems were imperiled, until finally he withdrew from the inescapable conclusions of what he had discovered, on the plea that he was a scientist. (139)

She was challenged that "Nitya pulled the rug out from under him at the end," because Jung pulled back, but she didn't give in, claiming it's funny that those who have made only a small step themselves are willing to criticize others who didn't quite go all the way (though almost no one does), but then held back. Very few are willing to personally demonstrate what going all the way would

actually mean. Jan cited the rest of Nitya's accolade: "No one should criticize him for this. Of all men in this present era, his penetration of the unknown and his contribution to man's understanding of himself have been of incalculable value." Right on!

We are slowly building toward the ultimate realization arrived at exactly in the center of Darsanamala: That Alone is. We might imagine we already know this, yet due to the conditioning of language, even universal ideas like oneness tend to slip into a tamasic state if we aren't careful. We substitute the idea of oneness for actual oneness, without even realizing it. It becomes what Deb likes to call a Gurukula cliché. We have to reanimate these concepts all the time, to play our jazz in a fresh manner even when we already know the chord progressions. I've clipped in some of the science on improvisation from previous class notes in Part II.

I was happy to note that a number of us understood the implication of the last paragraph. I was planning to quiz the class, and didn't have to, because it came up separately from Nancy, Paul and Jan, with knowing nods all around. Class gets an A! Here's the paragraph:

According to the Upanishads there are only two methods by which man can come to know the truth. One is an annexing the certitude of the truth of experiencing one unit to another such experience, and thus knowing the whole universe to be a manifestation of one and the same truth. The second is denying the falsehood of the countless facets of the kaleidoscopic presentation of the phenomena of perceptual experiences. This denial culminates in the total abolition of all individual things, and in the experiencing of a wonder in the Unspeakable, which reveals itself to be the basic reality of the enquiring mind. (139)

Yes, we're talking *asti asti* and *neti neti* here. These are implied in Narayana Guru's verse, and he actually uses *asti* in the third line, as mentioned already. Remember this is a yoga matter: we aren't throwing out one aspect and keeping the other. They are to be intelligently and quantum-leapily combined to transcend the limitations inherent to both perspectives. We often advocate the idea that every bit of what we see around us is brimming with perfection and the value-form of delight. *Asti*. Then too we meditate on what is beyond all this, subtracting every limited notion from consideration to reach for the unlimited. *Neti*. Nitya's unique description of these is invitation enough, it seems to me: "experiencing the wonder of the Unspeakable, which is the basic reality of the enquiring mind."

Nancy added that we choose which way to go based on our own nature, our own taste, if you will. That is true, yet we become more well-rounded by intentionally adding options that are more foreign to our default setting. After all, as Deb and Jan affirmed at the end, breaking out of patterns is the main idea here. We have to overcome the natural resistance to change built into our system. A guru-knock on the head occasionally can energize such a leap. In quantum physics you increase the energy of the particle to make changes happen, changes that provide clues to the very nature of reality. In our everyday activities also, we can mentally increase the energy. We don't need a Large Hadron Collider, we can just start class with a cookie and some tea, and then quietly concentrate. With enough energy, our electrons may jump to a higher shell and expand our consciousness.

The bottom line (I'll put it here at the bottom) is that an honest assessment of our limitations should make us humble, naturally. As Nitya says, "Man, unfortunately, has a boundless vanity." We love to pretend we know what's going on, and in the process screen out what's *really* going on. We substitute our

comfortable imagery for the excitement and challenge of ever-new reality. Nitya continues:

The watchword of the British Academy of Science is: “we believe what we see.” But now scientists have gone beyond that and agree that what lies beyond the range of our senses, even beyond the range of the appliances which so greatly extend that range, can be known through the methodology of statistical approximation. Although the physicist does not yet know the exact nature of a particle, he can produce a deductive model of what is an approximation from a highly quantified unit.

This type of compromise has left the scientist with no justification for his previous claim of objective certitude. Heisenberg was honest and humble enough to announce to the world his belief that what awaits the scientific world is the principle of uncertainty. (138)

One of the most important steps in spiritual growth is to relinquish our death grip on needing to appear all-knowing. At every stage of scientific development, mediocre thinkers proclaim we now know the truth, and all previous modeling is false, or at best, intermediate steps to truth. Now we *know*. True believers—both religious and materialist—claim that their way is the only true way, and all others should be sacrificed to their idea of progress. As a species we have by no means outgrown such manias, as a glance at the news will remind us any day of the week.

Narayana Guru, in his gentle, compassionate way, is telling us this is all wrong. We know only a tiny, provisional bit of the whole picture, yet we manage to survive and even thrive. Instead of swaggering about our imaginary successes, we should be grateful to the mysterious factors that make this possible for ignoramuses like us to make our bumbling, stumbling way. At the

same time this blissful humility helps us to remain open to new input, and to respond appropriately to unanticipated challenges.

Lending proof to this assertion, the post-class meditation was unbelievably intense, emanating as it did from the puzzlement and unpretentious probing we undertook as a harmonious ensemble. With 17th century rap star Willie S: If music be the food of love, play on!

Part II

Swami Vidyananda's commentary:

If we press further along the foregoing reasoning concerning the relation between the effect and cause, we come to know there is only one thing that is real and that another can have no reality beside it. That is to say, only the Absolute which is the cause has reality and then it follows that the world is an effect having no reality. In a certain reality, if the reality of another is predicated, that is a tautology. Again in the Absolute which is alone real, if there is the existence of the non-existent world, this is impossible and a contradiction. When one's own existence is posited in oneself, there is the defect of begging the question (*petitio principii*) which is in principle a tautology.

As an alternative, if one should state that in the world that is non-existent there is existence; this results in the logical error called contradiction. Familiar examples of such contradictions in the Vedantic context are *gandharva nagaram*, the city of quasi-celestial beings, *vandhyà-putra*, the son of a sterile woman, *sasa-vishànam*, the rabbit's horn, etc. Their (inherent) impossibilities could be referred to as contradictions.

* * *

The “city of the gods” reference of mine in Part I comes from Atmo 67, with a related idea to the present verse:

One is beyond what can be counted,
the other is ordinary; other than these two there is not any other
form
existing in waking, or in dream,
or in some city of the gods; this is certain.

* * *

Here’s the excerpt on improvisation from the class notes for Apr. 19, 2011, Yoga Sutras, Part IV (the full version may be found [here](#)):

This is from *Inner Sparks* by Charles J. Limb (Scientific American Magazine, May 2011). Limb, a big admirer of John Coltrane, has been studying improvising musicians via fMRI, and writes:

As far as my studies have revealed, creativity is a whole-brain activity. When you’re doing something that’s creative, you’re engaging all aspects of your brain. During improvisation, the prefrontal cortex of the brain undergoes an interesting shift in activity, in which a broad area called the lateral prefrontal region shuts down, essentially so you have a significant inhibition of your prefrontal cortex. These areas are involved in conscious self-monitoring, self-inhibition, and evaluation of the rightness and wrongness of actions you’re about to implement. In the meantime, we saw another area of the prefrontal cortex—the medial prefrontal cortex—turn on. This is the focal area of the brain that’s involved in self-expression and autobiographical narrative. It’s part of what is known as a default network. It has to do with sense of self.

If we can understand what actually changes in the brain to perhaps reduce conscious self-monitoring—what a lot of expert musicians are doing and what amateur musicians are unable to do—that’s a pretty interesting target for someone to consider when trying to learn to become an improviser. I think that has implications for describing what gives rise to excellent improvisation and what experts do naturally. How a teacher can take that and utilize it in a lesson is another thing entirely, but I think there’s food for thought.

There is an obvious connection here with yoga, another way to maximize our whole-brain coordination and liberate our abilities. When we have talked in class about not being overly self-critical, it is to free ourselves to be more expressive and creative in just the way these musicians are able to.

The recently discovered “default networks” Limb mentions are a leap forward in our understanding of the mind and the role of meditation. Recent fMRI studies were done of people doing tasks, the kinds of things that have been studied a million times, only in these studies the focus was on what the brain was up to *in between* the tasks. The question was, when “nothing” is happening, what is actually going on in the brain? It turns out there are some very fascinating areas that light up at such times, and we’ll pursue this more in upcoming classes. My take on this discovery is that meditation is a way for us to spend quality time in these in-between or default areas of the brain. They appear to overlap in a vertical hierarchy very similar to stages of spiritual enlightenment.

The bottom line here is that, once you have learned the basics of social interaction and balanced your ego, hopefully by early adulthood, you can free yourself by letting go of the tight grip everyone feels they have to maintain all the time, and which is reinforced by subconsciously retained threats of punishment. By relaxing our self-criticism, not to mention criticism of others, we

permit ourselves to automatically rise to the next level of spiritual functioning. We also see that Oliver Sacks' genius was fostered by parents who did not make him feel guilty or intrusive for asking questions and following his curiosity. Let us all emulate this example, inwardly and outwardly.

* * *

It's interesting to contrast this with part of the article I shared last year, Michael Pollan's *The Trip Treatment* (The New Yorker, Feb 9, 2015):

When, in 2010, Carhart-Harris first began studying the brains of volunteers on psychedelics, neuroscientists assumed that the drugs somehow excited brain activity—hence the vivid hallucinations and powerful emotions that people report. But when Carhart-Harris looked at the results of the first set of fMRI scans—which pinpoint areas of brain activity by mapping local blood flow and oxygen consumption—he discovered that the drug appeared to substantially reduce brain activity in one particular region: the “default-mode network.”

The default-mode network was first described in 2001, in a landmark paper by Marcus Raichle, a neurologist at Washington University, in St. Louis, and it has since become the focus of much discussion in neuroscience. The network comprises a critical and centrally situated hub of brain activity that links parts of the cerebral cortex to deeper, older structures in the brain, such as the limbic system and the hippocampus.

The network, which consumes a significant portion of the brain's energy, appears to be most active when we are least

engaged in attending to the world or to a task. It lights up when we are daydreaming, removed from sensory processing, and engaging in higher-level “meta-cognitive” processes such as self-reflection, mental time travel, rumination, and “theory of mind”—the ability to attribute mental states to others. Carhart-Harris describes the default-mode network variously as the brain’s “orchestra conductor” or “corporate executive” or “capital city,” charged with managing and “holding the entire system together.” It is thought to be the physical counterpart of the autobiographical self, or ego.

“The brain is a hierarchical system,” Carhart-Harris said. “The highest-level parts”—such as the default-mode network—“have an inhibitory influence on the lower-level parts, like emotion and memory.” He discovered that blood flow and electrical activity in the default-mode network dropped off precipitously under the influence of psychedelics, a finding that may help to explain the loss of the sense of self that volunteers reported. (The biggest dropoffs in default-mode-network activity correlated with volunteers’ reports of ego dissolution.) Just before Carhart-Harris published his results, in a 2012 paper in *Proceedings of the National Academy of Sciences*, a researcher at Yale named Judson Brewer, who was using fMRI to study the brains of experienced meditators, noticed that their default-mode networks had also been quieted relative to those of novice meditators. It appears that, with the ego temporarily out of commission, the boundaries between self and world, subject and object, all dissolve. These are hallmarks of the mystical experience.

If the default-mode network functions as the conductor of the symphony of brain activity, we might expect its temporary disappearance from the stage to lead to an increase in

dissonance and mental disorder—as appears to happen during the psychedelic journey. Carhart-Harris has found evidence in scans of brain waves that, when the default-mode network shuts down, other brain regions “are let off the leash.” Mental contents hidden from view (or suppressed) during normal waking consciousness come to the fore: emotions, memories, wishes and fears. Regions that don’t ordinarily communicate directly with one another strike up conversations (neuroscientists sometimes call this “crosstalk”), often with bizarre results.

Part III

I came across a relevant excerpt from ISOA, Nataraja Guru’s *Integrated Science of the Absolute*:

The analogy of entropy alternating with negentropy as a subtle osmotic interchange of life-value factors, involving a neutral point of equilibrium, can here be composed and fitted into the total logistic situation. When moving in one direction upwards, as it were, in the vertical axis, the limiting case can be said to be that of tautology, and at a lower level we can similarly locate the point where contradiction resides, as when we say $a = a$, $a = \text{not } b$, respectively. Binary or multiple alternatives of choice could further complicate this situation through the maze of which we have to see how logistic becomes transformed into its own syllogistic version. This is where reasoning moves from the general to the particular or vice versa, through the intermediary of a middle term, yielding the famous fourfold logical form known to Aristotle and distinguishable by the types of syllogisms, *A*, *E*, *I*, and *O*. Within these fourfold limits, syllogistic reasoning deals diagonally with contradictory and

contrary factors in thinking, as some experts have tried to analyze and present to us in a simplified schematic form. (81)