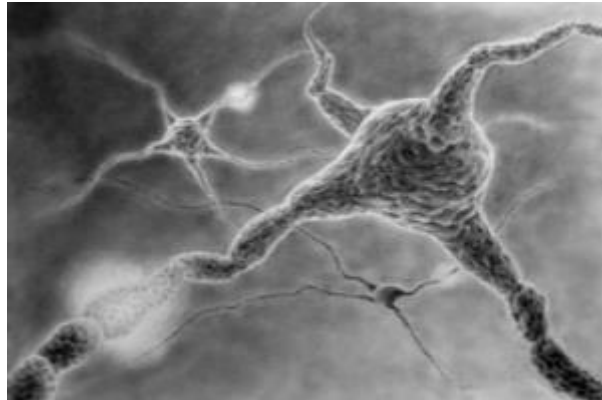


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METAtonin Research

The Pineal Gland and the Chemistry of Consciousness



AN INTRODUCTION TO *METAtonin*, THE PINEAL GLAND SECRETION THAT HELPS US ACCESS HIGHER UNDERSTANDING

**An Investigation into the
Out-of-Body/Near-Death/Enlightenment
Experience**

- AND -

**The Inception, Integration and Egress of Consciousness
in the Human Experience**

- AS WELL AS -

**An Inquiry into the nature of the Holographic Space-Time Continuum
and the Trinity of Consciousness**

One of the Greatest Treasures of Humanity lies deftly hidden in the heart of the Human Brain. The Treasure is not Material.

It is a Gateway - a gateway leading to our deepest origins that is activated when the pineal gland secretes a hormone similar to melatonin. We call this secretion METAtonin, a similar but Higher Octave of melatonin. The chemically active ingredient in METAtonin is known as DMT. We have

*attempted to compile all the relevant information on this subject complete with internet references
so that you can learn about this wondrous gift that
we have been endowed with*



Welcome to the METAtonin Research website. METAtonin is a close cousin of melatonin. Melatonin, as you probably already know, is a secretion of the pineal gland that encourages our consciousness to enter the sleeping state. METAtonin is a member of the same chemical family as melatonin; it is produced by the same gland and it also affects consciousness, but in a more pronounced way. The METAtonin messenger does not suppress waking self-consciousness the same way melatonin does during sleep; instead, it modifies the borders of consciousness by temporarily reprogramming our brain circuitry in a unique way allowing self-consciousness to separate from body consciousness while remaining aware.

The main psychoactive ingredient in METAtonin is chemically known as DiMethylTryptamine or DMT.

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Introduction: Consciousness and the Pineal Gland

The pineal gland has always held an elevated status in the records of most ancient cultures. Today it is credited with its ability to secrete melatonin and regulate our circadian cycles, but where is there mention of it being “the third eye” or “the window of the soul”? Recent scientific discoveries have begun to reveal just how significant the pineal gland really is. Each family of glands in the endocrine system secrete hormones that stimulate certain aspects of bodily function: reproduction, metabolism, growth, etc. The pineal gland secretes hormones that modulate the state of consciousness. The hormone that stabilizes waking consciousness is serotonin – which is produced by

several organs and glands in the body, including the pineal gland. The pineal gland also stores a high concentration of serotonin and converts it to melatonin, the hormone that stabilizes our sleeping state, during the night. Using a similar conversion process, the pineal gland can also produce a more complex form of melatonin which we call METAtionin, a higher octave of melatonin. Melatonin puts waking self-consciousness to sleep while the body continues to function, rest and repair; METAtionin goes one step further by allowing waking self-consciousness to remain awake but free from its connection to the resting physical body. Melatonin functions on a daily basis, METAtionin is rarely, if ever, produced. Melatonin is easy to detect in the blood; METAtionin is not, for there is a scavenger in the blood that readily destroys it. METAtionin is elusive, yet very powerful and it plays a role in activating one of our many hidden human potentials

It has long been suspected that the pineal gland secretes some type of neurochemical messenger and several noted authors have suspected that it is DMT-based. Recently, several scientific discoveries have verified this suspicion. It has been proven that the human pineal gland has a cellular structure and the essential DNA sequence required for the production of DMT. Furthermore, it has been proven by the Cottonwood Research Foundation of New Mexico that the pineal gland of rodents does indeed produce endogenous DMT: <http://www.cottonwoodresearch.org/wp-content/uploads/2013/11/Pineal-DMT.pdf>, or visit section 3. Rodents and humans have a very similar cellular structure and that is why they are used for endocrine research. Recent research by Jimo Borjigin and Jon Dean at the University of Michigan has revealed that both the pineal gland and the brain tissue are able to produce endogenous DMT in significant amounts. A recent video sponsored by www.dmtquest.org discusses this discovery: <https://www.youtube.com/watch?v=My95s6ZryPg>.

Pineal secreted METAtionin allows us to experience a dimension of human consciousness above the normal or default level of awareness. The first dimension of consciousness, pure unfettered self-consciousness, was experienced in the womb from about the 49th day of gestation until birth. Upon birth, our self-consciousness is suddenly thrown into the physical world of the additional dimensions of space and time. In this new dimension of consciousness, one is gifted with a toolbox of the 5 physical senses, the flow of time and the awareness of being a separate body. As we grow, we become accustomed to the parameters of this body and also develop the instinctive bodyguard awareness of the ego. By the time we are 7 years old, our self-ego-body default consciousness is well formed and it becomes our basic mode of existence and binding force of our human physical existence until we die and again return to the unfettered state of consciousness or Consciousness Beyond Life, that is, beyond human life.

However there is the option of an additional dimension of human consciousness that can be experienced during a lifetime, when, under the influence of METAtionin, the brain circuitry is so modified that self-consciousness is able to separate from ego/body consciousness, and travel in the many levels of consciousness that exist in parallel to the physical world including the world of dreams, archetypes, psychological imagery, spiritual realities and parallel planes of consciousness. The pathway to this enhanced level of consciousness is available to all humans; it is hard-wired into our brain architecture, like a homing circuit, although it is rarely activated. Those of us who pursue creative/spiritual lifestyles may sometimes experience or temporarily access this enhanced perspective: it being a main source of inner inspiration, creation, and illumination. This dimension of illumination is accessed by special stimulation of the pineal gland which then formulates the secretion, METAtionin, whose main active ingredient, DMT allows one to enter this additional

dimension of human consciousness or OBC, Out-of-Body Consciousness. An event of this nature rarely occurs in the course of a lifetime - maybe only once, but when it does, it is not forgotten and in many cases it results in the development of a whole new perspective and direction in life.



The potential for internally produced DMT-based METAtonin to influence the circuitry of the brain has been an ever-present component of human existence and throughout history, the influence of its effect may have played a part in many of our greatest discoveries and epiphanies. In fact, the Greek word for the pineal gland is “epiphysis” from which the word epiphany is derived. The pineal gland is also referred to as the “third eye” in many religions and cultures including the Egyptian, Buddhist, Druidic, Hindu, Hasidic, Ancient Greek, Islamic, Taoist, Zoroastrian, Sufi, Mayan, Tibetan, and Aboriginal cultures to mention a few: www.wikipedia.org/wiki/Third_eye. METAtonin is the active pineal gland secretion that dissolves the borders of consciousness and can act as a portal to the universe of the subconscious and hyper-physical phenomena; one of these phenomena is commonly known as an out-of-body or OBE experience; another is the NDE or Near-Death Experience, both of which will be discussed later on. The pineal gland is so named due to its similarity in shape to the pinecone, a symbol that is used in many religious themes including the giant pine cone statue at the Vatican, originally from Egypt, and the pine cone at the top of the pope's staff and the cone atop Buddha's head.



Science has yet to confirm whether consciousness itself has a physical component, and though several experiments in this area have been made, none are conclusive. It is generally assumed that consciousness could not exist without the framework of the brain, but again, this has yet to be proven. Consciousness appears to be a form of software with a unique self-renewing, self-knowing feedback loop, an ouroboros, that is cradled in the circuitry of the brain, that much is known. Discoveries in quantum and theoretical physics have further encouraged inquiry into the phenomenon of

consciousness, for it appears to be one of the fundamental formative forces in the universe - perhaps the first, be sure to visit chapter five for further information. Many award-winning physicists are now considering the primacy of consciousness: <https://dailygalaxy.com/2018/09/human-consciousness-and-the-universe-the-role-of-consciousness-is-like-spacetime-before-the-invention-of-general-relativity/>



Several researchers have also suggested that the pineal gland may prove to be more than just a hormone production gland, it may also contribute visual imagery to our visual cortex, a second visual platform so to speak. The pineal gland may be called the third eye, but it is not a third eyeball. It has no lens, pupil or iris, but it does have a retina. In fact, the pineal gland may prove to be more like a television receiver. Several unique properties of this gland may contribute to the visual aspect of a METAtonin experience. One theory is that the matrix of corpora arenacea crystals (brain sand) in the pineal gland may be able to interpolate scalar holographic-hyperspace information into a physical realm signal that is then converted into photons by piezoluminescent DMT molecules in suspension, if they are present at that time. The photons emitted from the DMT molecules are converted into a neural signal by photosensitive pinealocytes in the gland then sent to the visual cortex via a neural pathway, hence, the television receiver theory. No other endocrine gland or area of the brain or body has such a unique collection of specific biological components. Details of this theory will be discussed later on in the pineal pathway section.

The contents of this research resource are derived mainly from observed scientific phenomena as well as some well-founded speculation. We are attempting to provide the general public with the broad spectrum of information available regarding the pineal gland and its relationship with endogenous DMT. In some cases we have simplified scientific concepts to make them more understandable and we have used some sources that are not from the established scientific community but, in our opinion, worthy of consideration. For exclusively scientifically legitimate pineal gland research please visit: [http://onlinelibrary.wiley.com/journal/10.1111/\(ISSN\)1600-079X](http://onlinelibrary.wiley.com/journal/10.1111/(ISSN)1600-079X). If you have experienced a profound Out-of-Body experience, be it a waking OBE, a Near-Death Experience or a Lucid Dream experience and are looking for an explanation, you have come to the right place. There are other possible explanations: ketamine, glutamine, dynorphin and bicameral brain shift, for example, but the pineal gland and the DMT-based secretion, METAtonin, is a prime candidate. Recent research by Professor Jimo Borjigin of the University of Michigan has revealed that

the cortical brain tissue of the rat brain (very similar to the human brain) can produce endogenous DMT on its own under certain conditions, visit: <https://www.nature.com/articles/s41598-019-45812-w#Sec7> for details. You may also want to visit: <https://www.frontiersin.org/articles/10.3389/fendo.2019.00037/full>, Updated View on the Relation of the Pineal Gland to Autism Spectrum Disorders, which also discusses pineal gland DMT production. In addition: <https://www.sciencealert.com/new-clinical-trial-points-to-how-psilocybin-works-in-the-brain-to-dissolve-your-ego> discusses the role of glutamine in psilocybin induces Out-of-Body experiences

You've come to this page in your life because you are curious. Be curious! We have been born to be curious. Why are we here? Where are we from...and going to? Do we have a potential conscious connection with our creators? We hope you find some answers here or at least some intriguing concepts to dwell upon.

We will begin with a technical discussion of the consciousness portal chemical itself: DMT. As mentioned earlier, synthetically produced DMT when it is sold on the street is categorized as a class one controlled illegal substance. The neurohormone METAtenin contains this same chemical, but, as such, it is internally produced by the pineal gland and is an essential component of our neurological, psychological and spiritual makeup. It is suspected that METAtenin performs an essential psychological function during gestation, early childhood and during the death process and at times in the midst of our lives....a function that we can all benefit from understanding.

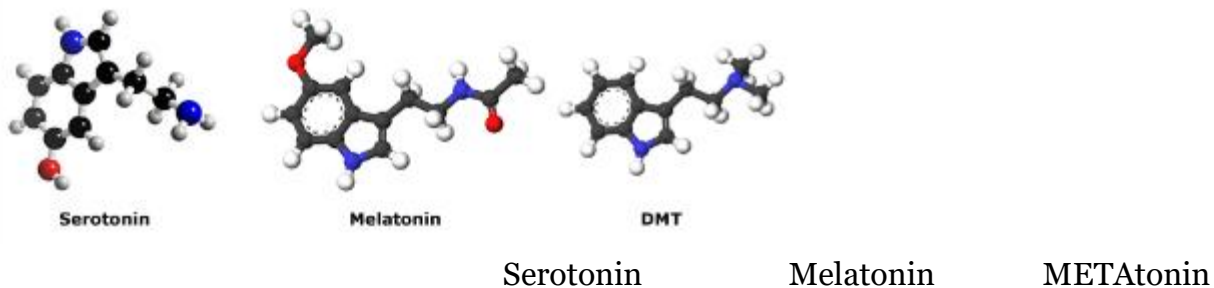
Origin of the word METAtenin

Presently, there is no way to differentiate the pure chemical DMT (an illegal schedule 1 substance) from the internally produced, or endogenous, form. The name METAtenin is an attempt to differentiate these two: the natural internal source from all others: here is the logic> melatonin and METAtenin are both derivatives of serotonin. Serotonin is a member of the tryptamine family; Melatonin is also a member of the tryptamine family with an additional methyl molecule, and METAtenin is the same tryptamine core with two methyl groups. Melatonin is, essentially, a derivative of serotonin (serotonin + one methyl group), and METAtenin, in essence, is a derivative of melatonin (melatonin + one methyl group). Each of these is a higher octave of the previous one. Hence METAtenin describes a higher octave of melatonin. Likewise the name "metatonin", a slight alteration of the word melatonin reflects how the molecule of metatonin is just a slight alteration of molecular melatonin. Both of these hormones neurochemically shapes the state of consciousness in a unique way. See detailed info on the name METAtenin and on the synthesis of DMT at the end of this article*. The term metatonin first occurred in a book by Terence and Dennis McKenna.

Serotonin is an extremely versatile neurohormone that regulates digestion, growth, reproduction, aging, bone metabolism, cardiovascular function and in the brain it modulates learning, memory, and psychological well-being and many anti-depressant drugs attempt to control the level of serotonin in the brain. Serotonin is principally produced by liver and intestines and is delivered throughout the body via the cardiovascular system. The pineal gland also produces serotonin and stores it as well; in fact, it contains the most serotonin-rich tissue in the human body. The reserve of serotonin maintained by the pineal gland is held there for the production of the pineal hormones melatonin and METAtenin.

Melatonin production is instigated by the pineal gland in periods between cycles of light,

blue (5000 kelvin) light in particular. Newly discovered blue light sensitive ipRGCells in the retina inform the pineal gland via an optic nerve pathway. Melatonin activates our sleeping state, this being a function of our ocular-endocrine system. Melatonin allows waking self-consciousness to rest so that our body consciousness can focus on its work of repairing itself without the meddling distractions of the ego/body consciousness and the various physical activities of the body associated with the waking state. Melatonin silences conscious awareness, METAtonin relaxes the body also, but, as explained further, does not suppress conscious awareness. For a more detailed explanation of melatonin production, the function of the suprachiasmatic nuclei and circadian rhythms, visit: http://thebrain.mcgill.ca/flash/a/a_11/a_11_cr/a_11_cr_hor/a_11_cr_hor.html . Melatonin may also increase light sensitivity in nocturnal environments, see: <http://www.sciencedaily.com/releases/2004/08/040817082213.htm>. Melatonin also modulates the level of testosterone in maturing males.



METAtonin allows self-consciousness to remain active and simultaneously separate from its attachment to the resting body. This is a powerful experience, but it is rare. Unlike melatonin, METAtonin is not produced or secreted by the pineal gland on a regular daily basis, in fact, it is very rarely produced at all - except in crucial situations. Also, METAtonin is not primarily delivered to its target, the central brain, via the blood. Once DMT enters the blood supply, it is immediately destroyed by the DMT scavenger monoamine oxidase or MAO. For this reason, unlike all other hormones, it is very difficult to measure METAtonin, endogenous DMT, levels in the blood. Since it is rarely produced and, furthermore, difficult to detect by standard methods, METAtonin earns its first attribute of being elusive. Its second attribute is that it is also extremely powerful: as in its chemical acronym DMT, which is very apt, it is the DynaMiTe of hormones. Adrenaline empowers the body in crucial situations, METAtonin, similarly, empowers consciousness by modulating the neural network of the brain in crucial and enlightening conditions by allowing fully aware self-consciousness to escape the confines of the physical body. Hence, METAtonin is both powerful and, at the same time, elusive.

METAtonin is the exclusive pineal secretion that is predominantly DMT, but like any other secretion may contain minor amounts of additional cofactors that refine and target a specific goal or effect – in this case, the nature and intensity of an out-of-body experience, profound epiphany or lucid dream.

A simple analogy that is often used is to compare the states of consciousness that the pineal gland modulates is the situation of a jet pilot. Considering the major occupations of a pilot, who is either is landed on the ground (as in sleeping, melatonin) or cruising in the air (flying, awake, serotonin), there is the third option to be considered which may never be used but must be accessible at all times, that is, the emergency ejection seat. METAtonin is the escape option, it allows the self-aware consciousness circuit to escape its normal task of overseeing the body. When activated, which is rarely called for, METAtonin has a profound effect on consciousness, booting it to the altogether unfamiliar realm of being outside its normal occupational location, the body.



DMT - the consciousness escape hatch

The actual process of METAtonin production takes place when the pineal gland internally secretes an enzyme called methyltransferase (INMT) that catalyzes two methyl groups to combine with a serotonin molecule, thus resulting in endogenous DMT or METAtonin. Recent research is verifying the presence of this enzyme in the human pineal as well as the presence of the gene associated with its production. When needed, the pineal gland can produce a surge of METAtonin that is immediately delivered to the central brain via the cerebral spinal fluid and possibly the blood if the heart is functioning at that time. Endogenous or internally secreted DMT is also produced by other organs such as the lungs, the largest producer, the retina, the thyroid gland and many other body tissues in varying amounts. In normal situations, endogenous DMT produced by these organs enters the bloodstream where it is quickly destroyed by MAO (MonoAmineOxidase) a blood-borne tryptamine scavenger. Therefore, due to the presence of MAO, METAtonin produced near the center of the brain cannot be accurately detected by sampling the bloodstream.

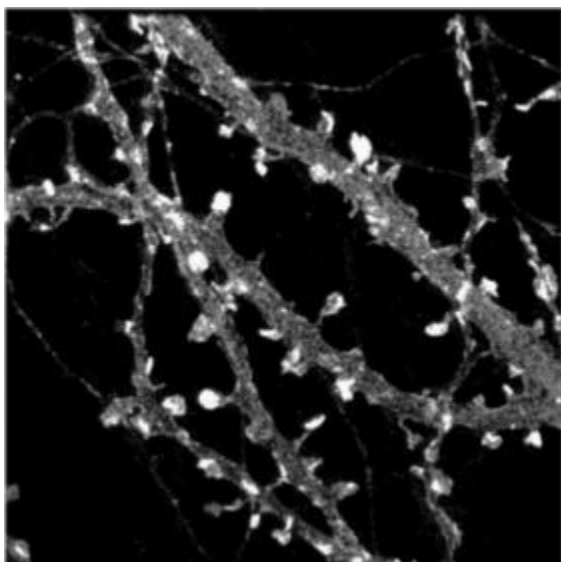
Endogenous DMT in the blood, even in small amounts can have a subtle debilitating effect on one's normal state of consciousness and mental equilibrium, for this reason MAO continually scours the blood and destroys any trace amounts of endogenous DMT. When activated, the pineal gland produces a surge of METAtonin that is quickly absorbed by the central brain before MAO can destroy it; this surge is quick and intense enough for self-consciousness to make the quantum leap from an integrated state of combined self/body consciousness to distinctly separated states of free-floating self-consciousness and autopilot body maintenance consciousness. This quantum leap can sometimes

induce a great deal of psychological turmoil, particularly if the subject is not prepared for the experience and naturally tries to resist it - which happens quite often.

Please note that the inhibitory function of MAO may be exercised at diminished levels (thus raising the default level of METAtonin) during adolescence and even to a more diminished degree during gestation when METAtonin may play an important role in the introduction of consciousness to the evolving embryonic brain, see the Birth of Consciousness section.

METAtonin and the creation of neural pathways

The three-pound human brain consumes 1/5th of the total electrical power produced by the body or about 25 watts/hour. There is no doubt that the brain is obviously a computer-like bioelectrical organ, but a closer look at the 85 billion neurons that comprise the circuitry of the brain will reveal that the surface skin of each neuron is made up of thousands of "taste buds" or receptors. When these receptors are stimulated, they alter the actual circuitry of the neuron. In a sense, the neurons provide the electrical framework of the brain, but it is neurohormones that establish and modify the actual operating systems, that is, neurons and glial cells comprise the hardware of the brain and neurochemicals are the software. Therefore the brain should be seen as a bioelectro**chemical** collaboration.



Receptors on Neurons

Like its sisters, METAtonin molecules lock into the receptors of a discrete family of neurons in the brain (5-HT_{2A} receptors). When these Sigma-1 neuron receptors of the METAtonin-sensitive family are stimulated, they temporarily create a new neuron pathway in the brain architecture, a new consciousness feedback loop, much like an alternative operating system in a computer.

In addition, DMT stimulates TAARs (trace amine associated receptors) that are also known to accelerate synaptic activity. This temporary alteration results in a highly clarified and heightened self-directed consciousness that is temporarily separated from its usual assignment: that of being the ego

caretaker of the body.

When it receives the appropriate signal from another area of the brain, the pineal gland can produce a surge of METAtenin that will saturate the cerebral spinal fluid in the surrounding brain area for a short while. By no strange coincidence, the pineal gland is located in the very center of the brain at the junction of the main ventricle through which cerebral spinal fluid flows throughout the brain and, in particular, which surrounds its nearest neighbor, the thalamus, which is the central juncture for all incoming and outgoing cranial signals (see the Seat of Consciousness section). Suddenly the body enters an autonomous state much like autopilot, and self-consciousness is allowed to exit the confines of the brain/body circuitry via the METAtenin pathway. Thus, one is entering Out-of-Body Consciousness. Usually, those who experience a sudden separation of self-consciousness from host body consciousness when they are unprepared for it, find the sensation to be extremely frightening and disorienting. In many cases unprepared people who experience such a sudden separation may think that they have temporarily gone insane, and, when the experience has passed, do their best to erase it from their memory. This erasure is easily accomplished because experiences that have no cultural memory tag or linguistic anchor are easily erased. The purpose of this article and the many others like it is to bring the concept of the pineal gland and the Out-of-Body Experience phenomenon into the common vernacular. METAtenin may function on a subtler level also, at a diminished and steady level, a basal level, during gestation. In this instance it may serve as the usher of consciousness. This is discussed later on.

Sleep Paralysis and the hypnagogic state

When an unprepared person first encounters the state of free-floating consciousness brought on by a pineal-activated METAtenin (endogenous DMT) release, the initial effect may seem like total body paralysis, since self-consciousness has been relieved of its association with, and control of, the body. One of the most common forms of this paralysis is *sleep paralysis* which is encountered at the borders of sleep. Clinically, if one experiences sleep paralysis upon waking, this is known as "hypnopompic" sleep paralysis (http://en.wikipedia.org/wiki/Sleep_paralysis). If the sensation is felt when entering a sleep state, then it is called a "hypnagogic" event. In this state, the body framework and body over control have been placed in autopilot, similar to the sleeping state, i.e. self-consciousness is fully aware, but it has been relieved of its' responsibility for the host body. This can be a very frightening, usually terrifying, unless the subject realizes that he/she has been freed of the restraints of, and responsibility for, the body and is now able to travel anywhere consciousness determines, just by using the vector of thought. However, in most cases the subject, in a paralyzed state, panics and typically ascribes the experience to some occult force, usually a force defined the prevalent culture. Thus, what could be understood and used as a gift is misinterpreted as a threat, a curse, or a sign of mental imbalance.

According to available statistics, 33% of the population experiences sleep paralysis at least once in their lifetime, and for some, it is a recurring experience which, in many cases, becomes a recurring nightmare. Consciousness transitions can go astray for many reasons. On the constructive side, the pineal gland may be intervening in order to allow the subject to awaken without being required to return to the host body, being momentarily free to fly. On the destructive side, the subject may be affected by neurological or psychological trauma resulting in an interrupted transition to the waking

state, which is considered a type of seizure. The medical profession, as a rule, prefers the latter description and sometimes prescribes tranquilizers to ease the situation. Usually, the subject hears a distinctive pulsing sound as the experience approaches. Hopefully, increased public awareness of this phenomenon will ameliorate the confusion and paranoia usually associated with sleep paralysis when it is an unknown and it is experienced for the first time. For those who choose not to experience the transcendental option of accepting and embracing the paralysis as an invitation to explore the OBE, there are several exercises that therapists suggest as use for quickly terminating the experience which must be succinct and easy to remember. For a very effective infographic developed by Dr. Omiete Charles-Davies of Nigeria, visit: <https://www.25doctors.com/learn/sleep-paralysis-old-hag-syndrome>

The author of this website experienced six sleep paralysis episodes before he overcame the panic and fear associated with this unexpected paralysis, and, having read Dr. Robert Monroe's literature, focused on the OBE option - which is what happened.

Sleep paralysis is not the only precursor to a pineal-activated METAtonin OBE epiphany. There are many potential triggers. Sometimes the slightest gesture or touch can trigger it, that is, when one is at a trigger point. This can happen when one is under a great deal of emotional stress or anticipation, in which case a very slight signal will trigger the event. Many a devotee has been tapped on the forehead by a guru to be sent on a kundalini ascension or state of rapture. The devotee assumes that the guru or minister delivered the experience when, actually, the event was the result of the devotee's pineal heightened state of awareness and the guru or priest saw that it was the right time to act as the catalyst.



Don't let Sleep Paralysis scare you - it may be a blessing misunderstood

Nor is the unfolding of an Out-of-Body experience always instantaneous, this transition can be more gradual, even controlled: one can slowly make the transition with precisely-tuned visual or auditory stimulation. Since the 1980's experimenters have been developing "brainwave entrainment" audio, visual, trans-cranial voltage, magnetic and virtual reality technologies to elicit a

hypnogogic state of mind and great progress has been made. <http://www.brainwavecollege.com/>. YouTube has hundreds of audio and audio/visual websites. In many major metropolitan areas Ajna light www.ajnalight.com or Lucialight, <http://www.lucialightexperience.com/> services are now available. These devices use specifically calibrated light flashes to enhance consciousness and create visual imagery. The history of this technology is discussed by the originator of Ajna light technology, Guy Harriman on: <https://www.youtube.com/watch?v=7sKH8kN9gXA&t=1252s> and his abstract: <https://www.researchgate.net/publication/316090457> *Theory and Science of the Ajna Light*. There are several virtual reality devices in development now as well.

German professor of philosophy, Thomas Metzinger, VR researcher and author of *The Ego Tunnel* has teamed up with Professor Mel Slater of the *Virtual Embodiment and Robotic Re-Embodiment Project* in Barcelona to create a consciousness immersion laboratory. Maintaining that all human perception of self is based on a virtual reality embodied within the brain, they have been successful at substituting standard human perceptions with believable, tactile alternate perceptions. In doing so, one's sense of self (and consciousness) is transported to a new reality. They have been able to recreate Out-of-Body experiences and a new kind of psychological therapy that helps one experience how others experience one's own self.

Visit https://cordis.europa.eu/result/rcn/182982_en.html, and <https://www.newyorker.com/magazine/2018/04/02/are-we-already-living-in-virtual-reality>

The inventor Thomas Edison was known to access the hypnogogic state when seeking answers to technical problems. He would sit in a chair with two large steel balls in his hands; after posing a question he would close his eyes and enter a sleeping state. As he reached the edge of sleep, he would drop the balls, suddenly awaken, and, in many cases, his answer would be in mind; Robert Louis Stevenson, author of *Robinson Caruso*, also used this method. There is also the practice of yoga nidra which is focused on a deep relaxation exercise that eases consciousness in into a hypnogogic state: <https://yogainternational.com/article/view/5-benefits-of-yoga-nidra>

As for the third state of consciousness enabled by the pineal gland, the sleeping state, it may be more than a state of vacant, restful and inactive consciousness. Some theoreticians propose that this seemingly mindless sleep is an equally valid and manifest state of consciousness, though we wake with no memory or reminder of it. The theory is that our consciousness, during deep sleep, is transferred to a superconscious state of connectedness known as the causal plane, and since the brain is not engaged during this transition, it shows very little activity. This is theory, known as the *Trikaya* concept is promoted by Ken Wilber, transpersonal psychologist, and is discussed in his educational discourses, the deep sleep state being an infinite consciousness void of any conceptual or visual imagery.

The Grip of the Ego

Our body creates a very strong bond with our self-consciousness through the development of the

ego, which is absolutely essential for physical survival. As we mature, particularly in egocentric Western society, the ego and consciousness become inseparable; to attempt a separation of the two is not an easily accomplished task. Our ego does its best to discourage any such separation, and it will usually muster up its full arsenal of fearful emotions at the onset of such a separation in order to retain the bond between self-consciousness and the physical host. The main function of the ego is, after all, is to protect and encourage the integrity of body-centered consciousness and body survival. The vanity fair ego doesn't want consciousness to wander off from its appointed task. In a sense, the ego guards the gates to the entrance of the portal, and it can do a very effective job. Martin Ball Ph.D. does a very good job of describing this:

<http://www.youtube.com/watch?v=HfyGc9-jkaM>.

However, there are certain circumstances that can instigate a METAtinin cascade. At the onset of a natural METAtinin event, one may have to pass through a curtain of ego-induced fear that may be accompanied by the additional sensation of body paralysis or sometimes dread. Preceding the sensation there may be a pulsing "whuffing" sound/pressure wave that seems to come from all sides. The immediate sensation is that one is being trapped; trapped inside a paralyzed body, this is an understandable emotional misinterpretation - but actually, one is being released. The body is being suspended and protected in an autopilot mode so that consciousness is free to roam. This can amount to an altogether frightening yet enlightening experience. Once past the gamut of the ego fear grip, consciousness is suddenly free to roam beyond the body. Those who take the synthetic path and partake of an appropriate dosage of synthetic DMT usually experience an accelerated transition without any ego grip and are literally popped out of their body instantly and, as a projectile, can end up landing almost anywhere. Pineal-based endogenous DMT experiences may tend to be less chaotic, more gentle, personal and more memorable.

It is important to make a distinction here: when one uses an outside source of chemical stimulation to change the state of consciousness, one is entering a state of altered consciousness; when one is experiencing a higher state of consciousness that is stimulated by a natural, internal, endogenous hormone, one has entered state of enhanced consciousness; a state of consciousness that is an integral facet of human experience, one that quite possibly be experienced during a lifetime and one that we most certainly will experience at the time of death.



METAtonin as a gateway to transcendent reality

It is believed that METAtonin is found at high concentrations in the blood of children during gestation, at birth and up to the age of three or more. The theory is that METAtonin plays role in the gradual introduction consciousness to the embryonic brain, this is supported by the fact that the human placenta is found to have high concentrations of the INMT, the enzyme required to convert the amino acid tryptamine into METAtonin (see link to Dr. Frecska below). After being born the METAtonin levels gradually decrease as the infant ego/body consciousness evolves. In reverse role, as the body deteriorates when approaching death, and particularly at the moment of death, METAtonin eases the return of consciousness to its original source. In a Federally sponsored study conducted by Dr. Rick Strassman, author of *The Spirit Molecule*, at the University of New Mexico at Albuquerque, subjects were intravenously fed synthetic METAtonin (DMT) at elevated levels (www.rickstrassman.com). Dr. Strassman noted that many of these subjects described experiences similar to the descriptions of the near-death experiences that have been reported by both Elisabeth Kubler-Ross in her book, *On Death and Dying*: www.near-death.com/experiences/experts02.html) and Dutch cardiologist Dr. Pim Van Lommel in his book: *Consciousness Beyond Life*, and concluded that NDEs were most likely a result of endogenous DMT

Dr. Van Lommel also suspects that pineal-secreted DMT, METAtonin, is responsible for facilitating this dual transition. It has been verified that the level of endogenous DMT is elevated in newborns but elevated levels have not yet been verified for gestation and early adolescence; nor has it been established to be present in the central brain at the moment of death. However research at the University of Michigan Health Department by Dr. Jimo Borjigin and Dr. George Mashour has revealed that 30 seconds past the cessation of blood flow to the brain of a rodent there occurs "a widespread, transient surge of highly synchronized brain activity that features electrical signatures of consciousness exceeding levels found in the normal waking state, suggesting that the mammalian brain is capable of well-organized electrical activity during the early stage of clinical death".

Visit : <http://www.uofmhealth.org/news/archive/201308/electrical-signatures-consciousness-dying-brain>. It may be that a component of this final surge may be the stimulation of the pineal to produce endogenous DMT, thus escorting consciousness from the body. DMT is also a necessary

neuro hormone for proper brain function and is welcome to pass into the brain via the blood-brain barrier. Hungarian researcher Dr. Ede Frecska, further posits that endogenous DMT also has a physiological role in that it helps extend the life of the brain during periods of oxygen deprivation. He notes that both the brain and lungs store reserve DMT in small vesicles: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5048497/> and that the lungs with their prodigious production of DMT, METAtenin, may be more capable of flooding the brain with DMT than the pineal gland. Visit: <https://grahamhancock.com/frecksae4/>. In fact, Dr. Frecska proposes that endogenous surges of DMT may be the result of an orchestrated conjunction of lung, brain, tubulin (see Hamerhoff) and pineal activity.

METAtenin may also be released at other times during a lifetime to create an epiphany, either spontaneously or by design. The experience sparked by a METAtenin release contains two essential qualities: First, one is very calmly and truly fully conscious, fully awake, and sober; and, second, one also finds oneself in a place that is totally unnatural and, yet, it may strangely feel very much like being at home again, thus, OBC, Out-of-Body Consciousness. For example: one is fully awake and finds oneself floating above their own body and is able to fly wherever their thoughts take them, or they may be transported to a unique otherworldly culture; some experience a tunnel of light leading to the center of the galaxy or to an angelic realm. An extremely emotional or painful experience can trigger a METAtenin cascade: suddenly one is swept above their immediate locality to see themselves and their situation at a great distance and with a great understanding and awe. METAtenin induced experiences are generally short-lived, but they can have a very lasting, life-altering effect. Dr. William James, American psychologist, called such a profound internal event a "noetic" experience. Furthermore, if the METAtenin release takes place while one is sleeping, one will find themselves fully awake and in conscious control of their dream state commonly known as "lucid dreaming".



Epiphanies can be life changing

Higher intelligence and consciousness exists at the quantum-entangled time transcendent holographic infinitely intelligent universal macro-micro all-pervasive level. Humans exist on a limited

mental/physical single-track time-space macro level. DMT or METAtonin can act as a consciousness quantum booster if properly ingested and prepared for. This is a huge jump for our limited consciousness to take, so be warned. Of course, METAtonin is not ingested, it is naturally secreted by our body when such an event is internally called for; DMT, on the other hand, can be purchased on the street. Extreme care should be taken if this artificial shortcut approach is experimented with. DMT is unlike any other mind-altering substance. It won't get you "high". In fact, "you" won't even be there. According to the accounts of those who have partaken of a full-fledged synthetic DMT dosage, the traveler immediately passes out and revives about 10 minutes later. During that 10 minutes, one is booted to a parallel plane of existence that can be exhilarating, nightmarish, extra-terrestrial, inspirational or all of the above. Terrance McKenna, famed noetic archeologist, gives an excellent and informed description: <https://www.youtube.com/watch?v=EZAMKn2xr9E>. It is imperative that one has a loving and experienced guide present. This is not a drug to be experimented with lightly... this is a federally classified class one illegal substance for good reason. Those who do use carefully prepared DMT-based brews in a religious context, such as the shamans of Peru, go through years of extensive training. For those who seek information on proper preparation and consumption of DMT-based entheogens, consult:

<https://www.dmt-nexus.me/forum/>, The Entheogenic University. Enthogen: from the Greek: "becoming divine within" is gradually replacing the term "psychedelic" - describing a chemical substance, typically of plant origin, that is ingested to produce a nonordinary state of consciousness for religious or spiritual purpose.



South American Shaman

Some prefer the natural approach; start meditating and concentrate on the pineal, if one can extend the periods of mind-silence, things will begin to happen. It worked for me, although I had no particular goal in mind at the time. I was a serious practitioner of meditation in the early 70's and, after a series of sleep paralysis episodes, I had a major Shakti METAtonin breakthrough in 1973 that was totally unexpected and completely life-transforming. At first, I just accepted my experience, but after a while, the scientist in me began to inquire. It wasn't until the year 2000 that things came into focus and the result of my inquiries led to the development of this web resource.

Shaping the METAtonin experience

In most cases, the intensity of a METAtonin/DMT experience is influenced by the original intent of the traveler, the traveler's state of mind and the surrounding physical environment . If the traveler has no intent or direction in mind, the event may end up being euphoric or catastrophic. On the other hand, if the traveler is well-informed, mentally prepared and has calmed and focused frame of mind experienced with some form of meditation, the traveler may be rewarded with a more meaningful destination; see the "Setting and Mindset" section.

One who is interested in this phenomenon may want to experience a service at the Church of Santo Daime that has several branches in the US (HQ is in Santa Fe)and many more worldwide. This syncretic (or reconciliatory) church originated in Brazil; as part of the church ritual, the congregation partakes of a mild natural daime (or ayahuasca, www.ayahuasca.com) DMT- based tea, then the group is led through an inspirational group meditation. The church setting provides a very supportive, caring atmosphere. For info visit: <http://www.santodaime.org>. Here is a vivid account of what the service is like to attend a service: <http://realitysandwich.com/323341/multiple-and-subtle-bodies-entheogenic-incorporation-in-the-santo-daime-tradition-part-1/> Several court cases objecting to the use of daime have been brought before the U.S. Supreme Court, to date all these cases have been decided in favor of the church.

One approach in an effort to reap more information from the Metatoinin/DMT experience is being pursued by The Center Medicinal Mindfulness in Boulder, Colorado. Under the direction of Daniel McQueen, they have been developing a steady-state DMT experience using targeted infusion pump technology that extends the normal 5-minute peak DMT-aware state to 20 or 30 minutes, thus giving the subject much more time to comprehend and retrieve the DMT hyper-reality experience. The actual equation for the administration of the injection process is being developed by Dr. Andrew Gallimore and Dr. Rick Strassman. Visit: <https://www.medicinalmindfulness.org/>

There are also many forms of meditation that are oriented towards attaining a natural METAtonin experience or Shakti kundalini, this is a slower, steadier path, but, then again, the results usually prove be more lasting.

In many indigenous cultures specially trained shamans use herbaceous compounds to activate the METAtonin neural pathways, such as the Peruvian shamans, www.deoxy.org/shaman.htm , who focus on the plant world to obtain information on herbaceous healing compounds. According to Dr. Jeremy Narby, author of *The Cosmic Serpent: DNA and the Origins of Knowledge*, over 74% of today's pharmacopeia's plant-based formulas come from indigenous societies. The rights to the formulation of these herbal mixtures are usually sold to major pharmaceutical companies who then synthesize them. Other travelers, such as ancient Mayan astronomers used their chemically induced trance states to glean accurate information on the size, age and major cycles of our solar system, our

galaxy and nearby stars without telescopes. Australian archeologists have found cave paintings made by aboriginal shamans that graphically illustrate gene duplication; this is usually only observable through a high power electron microscope (see Jeremy Nearby's book). All of these visionaries are raised in a culture that respects and culturally accepts such travels. Shamans who engage in such explorations are trained from childhood in the art of navigating the subconscious realm, which is no place for the amateur. To do well in the uncharted, pre-linguistic realm of the unconscious one must be psychologically balanced, true of heart and possess a clean conscience; no hidden agendas here, thoughts themselves take shape and have great power, www.erowid.org/experiences/subs/exp_DMT.shtml.

METAtonin and early childhood

The things that young children sometimes say contain gems of wisdom that show that they have a profound awareness and connection with Higher Intelligence. That is because our METAtonin levels are very high at this very early and wondrous age. So, too, is the size of the pineal gland which is enlarged and steadily decreases until puberty. The veil is slowly lowered and eventually all that remains is a shady memory and a lost sense of wonder. Many child psychologists, philosophers, poets, and artists refer to these enchanting memories of lost childhood in their works such as the *Magical Child* series by Joseph Chilton Pearce and the works of William Blake and Marcel Proust to mention a few.



The pineal gland begins to function in the developing human fetus around the 49th day after conception, and, at first, it is located in the back of the throat and then gradually moves upward and inward during gestation to be finally located in the center of the brain. This progression results in the creation of a small duct known as the cranial pharyngeal canal connecting the back of the throat to the pituitary/hypothalamus/pineal complex and allows some children to experience a unique secretion. This duct is usually sealed by bone tissue in early childhood, though in some cases it may persist into adulthood. This may explain the acrid slightly metallic taste in the back of the throat that is sometimes associated with a hormone release from the central brain. This "nectar" most likely

originates from the pituitary gland but may also involve a collaboration with the pineal gland. Certain oriental texts refer to this secretion as the "nectar of sublime awareness" or amrita that is produced by deep meditation focused on the highest chakra: the pineal gland, or third eye, visit: <http://biologyofkundalini.com/article.php?story=TheCrystalPalace>. This secretion is also referred to in the Druid culture of British Isles as the "grail" itself. Isn't it ironic, and really not so surprising, that the Holy Grail - an invaluable treasure sought after by thousands of deeply dedicated souls throughout history - is actually a gift available to each and every one of us from the very center of our brain?

It is quite likely that most of us have had endogenous DMT experiences before the age of 3, though this period of life grows more and more difficult to remember as we mature. Subjective experiences that stem from the unconscious, like dreams, are quickly reabsorbed into the unconscious unless a determined effort is made to remember them. It could be the same with pineal gland METAtonin activated events, these are usually unexpected and are difficult to describe, we have no common vernacular to describe these events which makes it difficult for us to anchor them into our memory. This could be even more difficult when we are very young and are still in the process of developing our language skills. One of the main purposes of this article is to familiarize us with one of our hidden gifts by giving it a name and a logical framework, with this in place it makes it easier for us to recognize hyper-consciousness experiences of our personal past and the experiences of others that we may have heard of.

However, one distinction that should be made, as pointed out by Eban Alexander in his book, *The Map of Heaven*, is that when one experiences an NDE or OBE, the experience is not a dream-like phenomenon, it is a fully conscious, fully aware grippingly real experience. True NDEs or OBEs are usually hard to forget, because they are consciously more *real than real* as has been reported many an OBE testimony. This may be because we humans may live in an unrecognized state of constant but subtle home-sickness, but don't recognize this until we've experienced our true home. Visit: <https://www.youtube.com/watch?v=NMBNZspmn7I>

In some ways the term *le petite mort*, the little death, is a term that well defines the OBE.... an experience that, for a moment, allows one to experience the consciousness shift that takes place when one dies. Giving one the taste of self-consciousness untethered from the body. And...self-consciousness without a self, well, that's just plain consciousness.

Five types of METAtonin events resulting in Out of Body Experiences

1) The first group (type 1, intentional) is based on mental focus and a desire for transformation: a state of transcendent bliss, ecstasy or enlightenment that is consciously sought after through focus of

the mind or dedication to a spiritual discipline or with the aid of a spiritual guide.

A) Nirvana, Satori, Samadhi, Shakti Kundalini or God awareness: a state of inner peace and God connectedness attained through Buddhist, Hindu, Islamic, Yogic, Christian and other practices aimed at elevated consciousness. Elizabeth Gilbert in her book, *Eat, Pray, Love*, described her personal shakti kundalini experience quite well. Certain forms of Tibetan *Phowa* meditation that result in an OBE state: <http://www.ithou.org/node/1958>, In this context the pineal gland is functioning as the bardo bridge. Gopi Krishna, an advanced Indian yogi, maintains that when the pineal gland is activated by kundalini energy, the door to universal knowledge, evolution, and genius is opened: <http://kundaliniresearch.org/blog/>

B) Vision Quest: A Native American ritual involving fasting and prayer that results in a profound life-altering vision. www.crystalinks.com/visionquest.html

C) Dreamtime: A cultivated state of mind that allows Australian Aborigines to raise themselves above the landscape and perceive the location of pathways and sources of water and food in what appears to be nothing more than an endless desert wilderness. Aborigines are true minimalists and pride themselves for using as few tools as possible in order to survive, instead, they rely on their carefully cultivated ability to read the landscape with hyperconscious Dreamtime Ancestor awareness in order to unveil the locations of food, water, shelter, pathways and other necessities. This is an example of one of the many ancient cultures that manifested the use of the pineal gland METAtionin experience as a guide for daily life. This is further discussed in the section on neurotheology and in section 5, Dreamtime.



Dreamtime Ancestors guide everyday life

D) Sufi enlightenment: An ecstatic transcendent spiritual discipline based on a special form of swirling dance meditation God awareness. Another form of dance-related awareness is the practice of Trance Dance, visit: <http://www.trancedance.com/trancedance.do>. This form of dance originates from the San people of South Africa.

E) Taoist Light Deprivation Pineal Activation Experience: a 12 - 20 day total immersion in darkness that theoretically induces the pineal gland to produce METAtionin in quantities high enough to bring about a cosmic awareness. Developed by Mantak Chia of Thailand, a Taoist scholar and healer, this is

an ancient method of enlightenment. Dr. Mantak has built a special chamber that can accommodate over 60 attendees. See: http://www.universal-tao.com/dark_room/enlightenment.html.

F) Rapture and other states of transcendent experience that are the result of dedicated worship, prayer, devotion and/or abstinence.

G) Creative ecstasy: as experienced by many artists, as described in the books by Rollo May. This may also refer to the **autotelic** experience as described by Mihaly Csikszentmihalyi, an ego-less ecstatic state achieved during a creative or athletic pursuit: <http://www.bioenterprise.ca/docs/creativity-by-mihaly-csikszentmihalyi.pdf>

H) Extreme sports and athletic ecstasy as described in the upcoming book *Alchemy of Action* by Doug Robinson and Norman Schaefer

I) Specialized brain stimulation. One device that uses light stimulation is the previously mentioned Lucia Light Simulator invented by Austrian researchers Dr. Engelbert Winkler and Dr. Dirk Proecke creates a "hypnagogic light experience" by using carefully timed flashing lights. You can visit one of the US distributors at: <http://vermontlucidlight.com/#lucia-no-03-neurostimulator> and there are now Lucia Light centers located in NYC (<http://www.lucialightny.com/>) and Boston (www.facebook.com/bostonlucia). Another device is the Shakti Helmet that, when used in conjunction with meditation, may help activate certain brain areas to initiate a METAtonin episode. Website: www.shaktitechnology.com. There are several other mind-enhancing aids available; many use subliminal sound frequencies to induce a theta state of mental resonance that may also help trigger a METAtonin or OBE release. There is also the Hemi-Sync sound recordings developed by pioneer Robert A. Monroe and available at the Monroe Institute in Virginia. Mr. Monroe, originally a sound engineer, stumbled across a combination of simultaneous sound patterns that reverberated with brainwave activity and that unexpectedly launched him into the realm of the Out-of-Body Experience. He is referred to later on in this paper in the "Out-of-Body Locales and bandwidth" section. Visit: <https://www.monroeinstitute.org/>. Visit <https://www.sacredacoustics.com/> for some of the latest developments in brainwave entrainment and syncsound technology. Presently, virtual reality technology is also under experimentation, one example: <http://vrscout.com/news/deepak-chopra-guided-vr-meditation/>.

German professor of philosophy, Thomas Metzinger, VR researcher and author of *The Ego Tunnel* has teamed up with Professor Mel Slater of the Virtual Embodiment and Robotic Re-Embodiment Project in Barcelona to create a consciousness immersion laboratory. Maintaining that all human perception of self is based on a virtual reality embodied within the brain, they have been successful at substituting standard human perceptions with believable, tactile alternate perceptions of shifted consciousness. In doing so one becomes convinced that they occupy a body or space outside of their own. This is proved to be a very effective tool to treat a variety of psychological disorders. The project has been able to recreate Out-of-Body experiences and an objective therapy that helps one experience how others experience one's own self. Participants, who in 90 minutes experience the virtual aging process, death, translation, the tunnel, life review and emergence, gain insight and

comfort with the concept of death and dying.

See: https://cordis.europa.eu/result/rcn/182982_en.html,

and <https://www.newyorker.com/magazine/2018/04/02/are-we-already-living-in-virtual-reality>. Dr. Metzinger maintains that most OBEs do not take place outside the body, but that they originate within the virtual chamber of the brain. This does not explain, however, Near-Death Experiences which occur when the brain is flat-lined and totally non-functional.

J) Remote Viewing, a mental discipline ultimately used by the CIA and the US Military to remotely view strategic targets. Russell Targ and others developed this talent at under contract of the US Government at the Sanford Institute. Remote viewers discovered the ring around Jupiter before it was verified by the NASA *Pioneer 10* satellite and were involved with locating the hiding place of Saddam Hussein, website: <http://www.espresearch.com/>. Remote viewing has also been verified by research conducted at the Princeton Engineering Anomalies Research (PEAR) Institute, www.princeton.edu/~pear/. The researchers in this project never referred to or considered the pineal gland to be of any consequence. Also: <http://www.collective-evolution.com/2015/11/27/how-to-do-what-the-cia-already-did-leave-your-body-and-remote-view-something/>

2) Out of Body Experiences due to Extremes (type 2), OBEs that occur as a result of experiencing or enduring physical, mental or emotional extremes that sometimes result in an unintentional OBE.

A) Rebirthing, now known as Holotropic Breathwork pioneered by Dr. Stanislav Grof is a transcendent experience that can be brought on by controlled hyperventilating with the help of an experienced guide. This process may result in activating rarely used METAtenin-synthetic pathways in the pineal gland or may in some way encourage the lungs to increase DMT production beyond normal levels. See the section on Wim Hof or visit: <https://therenegadepharmacist.com/what-is-breathwork-breathwork-demystified-science-purpose-different-breathwork-practices/>



Dr. Stanislav Grof

B) An ecstatic transcendent collective OBExperience can be experienced by members of an

emotionally charged group, gathering, celebration, or revolutionary movement as in the abovementioned trance dance. This is discussed in the book *Dancing in the Streets* by Barbara Ehrenreich.

C) An extremely intense personal emotional or intellectual challenge can sometimes result in emotionally uplifting pivotal OBE, or epiphany. In his autobiography, R. Buckminster Fuller describes such an uplifting experience at a point of deep depression in his life; this experience completely changed his life; it gave him a new perception of himself and revealed to him a vision of how he could make his unique contribution to humanity. Joseph Chilton Pearce in his *Spiritual Initiation and the Breakthrough of Consciousness*, discusses these phenomena in the beginning chapters of this book. Edward and Emily Kelly in their book *The Irreducible Mind - Toward a Psychology for the 21st Century* devote a whole chapter to pivotal mystical experiences and the many studies that have been made about this subject. The Kellys recognize Strassman's work, but the book was published before the latest discoveries in pineal gland DMT production were announced.

D) Out-of-body Consciousness can be induced as an escape mechanism by someone subjected to extreme pain, torture or dangerous emergency situation. In this case, METAtenin is secreted to allow an individual to escape from an excruciating physical pain or trauma, as reported by many child abuse victims and victims of combat trauma, torture, exhaustion or extreme pain during an emergency. Hemingway in *A Farewell to Arms* and Jack London in *The Star Rover* describe such a situation. In his autobiography Charles Lindbergh states that he experienced OBC during his trans-Atlantic flight due to the effects of extreme exhaustion. This is also discussed in chapter 3 of the book *The Secrets of the Soul: Using Out-of-Body Experiences to Understand Our True Nature*, by William Buhlman, titled "Combat and Trauma induced out of body experiences". Later on in this paper I mention an incident where a friend of mine relied on an out-of-body experience to deliver her from a life-threatening situation. In this mode, the out-of-body phenomenon is functioning as a survival mechanism. Soldiers being debriefed after serving in combat situations are routinely warned not to discuss their combat OBE experiences after release.

The military may have kept records on battle induced Out-of-Body incidents, but they have not been released to the public. This topic has a tremendous potential for research. Out of Body Consciousness can occur both in the heat of battle and resurface much later as a common dissociative symptom of PTSD, see <http://dps.missouri.edu/resources/Handbook/ptsd.pdf>.

E) An out-of-body experience sought by those who use self-inflicted pain as a vehicle for transcendence, such as in the American Indian Sundance ceremony or self-flagellation, as practiced by certain devout Christian sects.

F) An Out-Of-Body experience can result from a deeply connected sexual experience. Naomi Wolf in her book *Vagina* describes the complex hormonal orchestration that occurs during sexual arousal and orgasm and the profound relationship between our brain and our sexual centers. Several

neurohormones are secreted by the pituitary gland as a result of sexual activity include oxytocin (bonding, nurturing, empowerment), dopamines (pleasure, reward) and norepinephrine. The production of the latter neurohormone could possibly stimulate the production of endogenous DMT by the pineal gland resulting in an OBE. Wolf, however, does not specifically mention the OBE phenomenon in her book. visit: <https://www.facebook.com/naomi.wolf.author>.

Dr. Jenny Wade describes OBEs in her book *Transcendent Sex*, which is based on the narratives of 91 people who were not using drugs or practicing Tantric or other sexual or meditative techniques to bring about an enhanced consciousness state during sex. Apparently, a special connection can exist between two partners that can bring about a shared Out-of- Body Experience. This unique connection appears to occur at random; it doesn't seem to pertain to devotion, commitment or intent. It seems to be a form of resonance that is generated by some kind of subconscious alignment. Visit: <http://www.transcendentsex.org/> This subconscious form of alignment is labeled as *Macro Contact* in the novel *2150 AD* by Thea Alexander, <http://www.donalexander.com/macrosociety/pages/TheaA.html>. There are a number of YouTube videos by Angelstarcreations that address this subject as well: <https://www.youtube.com/watch?v=XSnQlpiVapc> In this instance the special alignment is called the phenomenon of the "twin flames". In some instances these writers are describing an extreme form of orgasm resulting in an OBE, a more contemporary iteration of the *le petite mort* concept.

The Taoist philosophy sees sexual energy in a third light. Western, mainly puritan based, thought sees the expression of sex as either for reproduction or a satisfaction of lust - creating a dualistic sacred/profane incompatibility. However, according to Tao, "the way", philosophy, a healthy understanding of sexual energy is natural and indispensable to human health and longevity as "rain falling on the fields is to plant life"; and is a primal flame that can be harnessed to purify and illuminate the higher aspects of human wisdom and empowerment. They acknowledge that the human design includes access portals to higher and clearer consciousness that is brought about by engaging the completely aligned and energized endocrine system capped by the pineal gland and that the primal, and the essential force that catalyzes this process is mentally harnessed sexual energy. According to their philosophy, when primal sexual energy is wasted, one becomes enervated; if it is suppressed, subverted or improperly resolved it can result in unlimited greed, rage, bitterness and sociopathic misalignment. This wisdom is gleaned from Taoist study of the potentials of human nature that goes back as far as 2,500 BC during the reign of the Yellow Emperor. The goal of Taoist discipline is a form of continuous enlightenment that is attained by energizing the pineal gland via image-guided primal life force resulting in a superbly aware state of mind embodying a firmly grounded, agile yet fully relaxed and fully aware physical presence. Visit: <http://www.universal-tao.com/> . More information on present-day research into the beneficial relationship between sexual activity and human longevity can be found in the Dreamtime section.

G) G-LOC or Gravity Induced Loss Of Conscious. Out-of-body events have been experienced by pilots in high-G situations both during maneuvers and in high-G simulators.

H) There are many out-of-body epiphanies reported in the lives of many of our greatest leaders, writers, artists, and researchers, as well as everyday people. Sometimes these episodes are simply reported as being touched by the hand of God. Usually, the epiphany is the culmination of a long mental or emotional struggle and results in a total realignment of perspective.

Near-Death Experiences

3) The third group, (type 3) is the out-of-body experiences as described by those who have undergone a near-death experience, or NDE, as reported in the research of Elisabeth Kubler-Ross, Dr. Raymond Moody, Dutch cardiologist Dr. Pim Van Lommel, Dr. Rick Strassman, and many others. Dr. Van Lommel's book, *Consciousness Beyond Life: The Science of the Near Death Experience*, is a scientific examination of real and accurate conscious memories of brain-dead patients who witnessed operating room procedures that took place while their brain EEGs were flat-lined. That is, their brain was clinically silent, their eyes were taped shut and their ears plugged and yet, repeatedly, after resuscitation the patients accurately recalled surgery room events that they had observed from above the surgery theater in detail. A skeptic at first, the intrigued cardiologist proceeded on a very scientific examination of the NDE phenomena and came to the same conclusion that Dr. Strassman did: that most likely candidate for such a phenomenon is DMT and its most likely source is none other than the pineal gland. This book follows a methodical scientific and medical approach to a subject that has been long rejected by the scientific community and comes to the scientific conclusion that consciousness can exist beyond the parameters of the physical brain. Of all the categories discussed in this paper, NDE evidence is the most convincing because the OBE subject is being carefully monitored during their experience and the subject can then verify their personal observations with the recordings of the surgery procedure. For general information visit: *International Association for Near Death Studies*: <https://iands.org>. In addition have a look at the Greyson scale, developed by Dr. Bruce Greyson shows how many aspects of a NDE or any Out-of-Body Experience, for that matter, can be considered as significant to the experience: <https://iands.org/research/nde-research/important-research-articles/698-greyson-nde-scale.html>

Van Lommel's book was published in 2007 (www.pimvanlommel.nl/home_eng) states that studies in the US and Germany suggest that 4.2% of the population has experienced an NDE. Recently, Dr. Eben Alexander, Harvard neurologist, has written several magazine articles and a book *Proof of Heaven* that is based on profound NDE he experienced when all of his higher brain functions were immobilized by a severe case of meningitis, <http://www.lifebeyonddeath.net>.

Here is a case in point: George Ramsey, a high school teacher in Walkill, NY, suffered a heart attack while driving. He blacked out and crashed into a pet store at which point his heart stopped beating and he had a near-death experience. When he awoke, he was surprised to find himself handcuffed to a hospital bed. The hospital had done a toxicology test and had discovered DMT in his

blood. The police had booked him for driving while under the influence of an illegal drug. Mr. Ramsey did not partake of drugs and had never heard of DMT. Visit: <https://www.dmt-nexus.me/forum/default.aspx?g=posts&t=19063>. A further inquiry into public records may reveal similar events.

NDE researcher Dr. Sam Parnia believes that a much higher number of survivors of near-death would remember their experience if not for the medications used in intensive care units - which tend to encourage the erasure of near-death memories, see: <https://www.youtube.com/watch?v=WnoIf2NwaRY>



Lucid Dreaming

4) The fourth group (type 4) of potentially METAtonin-induced episodes is defined as those experiences that take place when one is asleep in a dream state, usually accompanied with REM. This is commonly known as lucid dreaming or “night flight”, in which one becomes fully awake, conscious and in control while one is still in a dream state. This may be a situation where both melatonin and METAtonin are working together. This connection has not been verified scientifically, although many experienced subjects in DMT injection sessions have noted that the DMT induced environment is very similar to the lucid dream environment.

The challenge of maintaining consciousness while in a dream state involves very a delicate mental balancing act. If one becomes fully, assertively conscious in the dream state, they will quickly wake up, but if one can remain in a passive state of consciousness as a quiescent observer without making any assertive thoughts or personal mental comments, the lucid dream experience will continue on. Meditation practice is a most beneficial way to quiet the ego and the everyday chatterbox mind so that one can maintain a state of quiet, observant, unobtrusive consciousness while witnessing and quietly directing the dream environment.

There are many organizations that explain lucid dreaming in great detail and provide exercises and even nutritional supplements that stimulate lucid dreaming such as: <http://lucid-dreaming.com>, <http://howtolucid.com/lucid-dreaming-blog>, <http://www.dreamyoga.com/>, <http://www.world-of-lucid-dreaming.com/> and there is an Academy for those who would like to develop lucid dreaming skills: https://academy.world-of-lucid-dreaming.com/join?mc_cid=4eae8965a9&mc_eid=f7e080c99c and, there are the works of several authors such as Stephen LeBerge, author of: *Exploring the World of Lucid Dreaming*, visit: <http://www.lucidity.com/>. Terrance McKenna has noted that DMT levels of

cerebral spinal fluid exhibit a 24hr. cycle that peaks at 3am, further inducing a receptive state. In addition, subjects undergoing a DMT experience exhibit REM. It would also be interesting to know if MAO inhibitor concentration cycles in CSF varies as well. For a recent article on lucid dreaming: <http://blogs.discovermagazine.com/crux/2016/01/08/lucid-dreamers-consciousness/#.XGgnOuhKjIU>.

Research abstract: <https://www.ncbi.nlm.nih.gov/pubmed/23220345>

There are some supplements that are known to encourage the lucid dreaming experience: Calea zacatechichi, the Mexican dream herb, Silene Capsensis, the South African Dream herb, Mugwort, from the sage family, a European dream herb, Choline, an amino acid that also promotes production of acetylcholine which may stimulate the pineal gland, Galantamine, an alkaloid synthesized from a combination of plants, known as the “lucid dreaming pill.” and Huperzine-A - a powerful ancient Asian lucid dream supplement. In addition, there is the supplement 5-HTP that boosts serotonin levels at night and accelerates the REM cycle (or dream sleep) which amplifies the effect of the previously mentioned lucid dream supplements. We have divided Out-of Body Experience into 4 categories, but the divisions can be more discrete; the OBE Research Foundation, <http://www.oberf.org/>, offers 12 categories including experiences based on premonitions, UFOs, reincarnation and more.

A Lucid dream with a lesson

“So, I find my self in a tavern. Its upstairs. The 1840s, perhaps England or Connecticut. Smoky and friendly. But I am an outsider. Usually, Earth planers do not enter the Thought plane in control of themselves. But as I said, it was friendly, and I felt at home and I knew I was in a dream. After a while, I felt compelled to leave the room and go downstairs. The stairs were old, well-worn and narrow – as they are in colonial homes. There was probably a fireplace down there. There were two fellows there on either side of the doorway leading to the stairs, they were kind of like guardians. They looked at me. I could see that they did not intend harm, but they did have a serious job. It was their job to test me.

Physical planers don’t understand the power of thoughts on the thought plane. They can be dangerous, like a wild cannon. The physical plane is ruled by physical rules ...and it can take a beating. The thought plane is ruled by thoughts, so egos have to be harnessed. Physical planers can be careless and not even know it. So, while they were looking at me, their heads began to swell. Their features smoothed out and their faces puffed up to become like marshmallows or pillows. If you’ve ever seen Pink Floyd’s *The Wall*, there is a scene where children are marching to school singing: ‘we don’t want no education’ and as they march down a dark tunnel their faces bloat up to become rag dolls...well that’s what these gatesmen were doing. It was a very unsettling effect. But somehow, I knew it was only an effect... I did not panic. I somehow felt that deep in their hearts they loved me.... but, they also had to test me. They had to know that I was made of strong stuff. That I could hold my center.

I smiled back at them and passed through them to the door, their faces returned to normal and they nodded. The stairway was irregular and curved and it opened into a downstairs manor room with

a fireplace. The fire was burning very bright and it radiated the room; there were no other sources of light. There was a couch facing the fire and I was behind it. The room was quiet, hushed. There was a silhouette of people on the couch. I could see the soft firelight reflecting off their bodies. There was a woman there in the center of the couch facing the fire, reclined. Many, many children surrounded her on both sides. Seemingly cuddled, they were, like kittens, drawing solace and care from her. Her arms were outstretched embracing them all. They were all totally at peace. The children were drawing love from the woman. There was a profound peace and connection of love between them. The feeling was inescapable.

Of course I was curious, and I drew up nearer to the couch, which was curved and old fashioned, well worn and welcoming. As I came up close to the group on the couch I recognized the woman, I knew her. I had loved her but had never seen her in this light of universal motherhood. It was either Kathleen or Betty, I couldn't tell, and I didn't want to get too close for fear of disturbing the powerful setting that I was witnessing. I was tempted to move in front of the couch proclaiming "here I am. It's me" but I knew that this would only end up distracting the setting and throw it out of balance for my own sake. I was honored to be able to witness this aura of love and caring, and, if I was careful, I could possibly become a part of it – not by being instrumental, but by witnessing and not interfering....to let it overwhelm me with its power. To yield.

I had meditated for a bit by this time and was no expert, but there had been times when I became quiet enough to feel the whisper of the universe touch me. What I was witnessing at this point was way bigger than me, this was an honor, and I could very easily snuff the whole thing out with a simple outburst. The dream would implode and be gone. Luckily, I, what was left of me, kept the quiet.

I moved behind the couch and sat while calming myself and then let the beauty of the fire and the tenderness of the event overwhelm me. And it did. The fire grew louder and I lost myself as felt the radiance of the moment take me along with it. There was a roar of light and I melted into its warmth and grew as big as the universe. It was pure joy."



Mental Illness

5) The fifth group (type 5) of phenomena is related to mental illness, which may result when METAtonin is continually produced in higher than normal amounts, or when MAO (monoamine

oxidase the DMT scavenger) production is for some reason inhibited and trace amounts of the METAtonin continually hamper thought and perception patterns in the brain. Schizophrenia is a likely candidate for this classification. It is a remarkably complex syndrome that has many symptoms that are similar to weak and strong elevated METAtonin states and METAtonin is found at higher than normal states in the urine of schizophrenic patients. The National Institute of Mental Health made some preliminary investigations into this issue in the 1970's but the research was curtailed for political reasons and no definite conclusions were reached.

See: [http://www.tripzine.com/pit/DMT TA anxiolyti](http://www.tripzine.com/pit/DMT_TA_anxiolyti) and *The Biological Basis of Schizophrenia*, published by: Springer Netherlands, Chapter 10: The Biological Basis of Schizophrenia by J. A. Smith 1978 . For more recent research visit: <http://www.ncbi.nlm.nih.gov/pubmed/1305641>

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It is not uncommon for schizophrenia to develop during adulthood after living very normal lives. Those who have experienced the sudden adult onset of this mental disorder report the sensation of feeling out of focus with their mental placement in the body and the sudden ability to pick the thoughts of people who are passing by. It is a very disconcerting experience, especially when this sensation cannot be turned off and if there is no explanation for it. These symptoms are very similar to a mild METAtonin release that doesn't result in a quantum jump of consciousness. This could be a result of an inhibition of the secretion of monoamine oxidase, MAO, whose job is to neutralize any trace amounts of METAtonin in the bloodstream, as previously mentioned. Autism has also been linked to a malfunctioning pineal gland. Please visit the autism section near the end this paper.

Its interesting to note that two of the most addictive habits of humanity are the consumption of coffee and tobacco. Both of these contain mild beta carbolines that compromise the scouring effect of MAO, the blood scavenger of endogenous DMT. As stated earlier, over 30 tissues in the body are capable of creating DMT and the purpose of MAO is to keep the blood clear of this highly psychoactive secretion. The ingestion of tobacco smoke and coffee subtly compromise MAO thus raising the default level of endogenous DMT in the blood. Cigarette manufacturers were well aware of the effect of beta carbolines and were sure to employ a beta carboline additive in their mixture.

They were taking advantage of the fact that humans seem to be naturally attracted to substances that raise the level of the spirit molecule in their blood. The herbs valerian and passionflower are natural sources of MOA inhibitors and are used to treat insomnia.



Please consider donating to Dr. Strassman's pineal gland research, see research section at this end of this article

Incidence of METAtonin events

If any of you readers have had an experience similar to those mentioned above, you are not alone. According to the Australian Institute of Parapsychological Research, www.aiprinc.org and the Journal for the Society of Psychical Research, www.aspr.com, between 10% and 18% of the population have experienced an Out Of Body experience at least once in their lifetime, these numbers may be decreasing, though, due to the widespread use of fluoride in public water systems. Another website, the OBE Research Foundation, www.oberf.org has collected data from thousands of recorded incidents and has cataloged information on OBE research. Another organization dedicated to "remote viewing", www.learnremoteviewing.com offers a systematic course on how most any serious student can attain a disciplined Out of Body state of mind. This organization prefers to describe this skill as remote viewing and claims that, in the past, the US Military recognized the strategic importance of this skill and tried to develop it. (Spies don't usually do well in a realm of absolute transparency). To our knowledge, none of the aforementioned organizations recognize the role of the pineal gland as the instigator of an Out-of-Body-Consciousness, OBC, they are more interested in the development, reportage, statistics and results of this phenomenon than in its possible origin.

The Science of Out-of-Body Consciousness

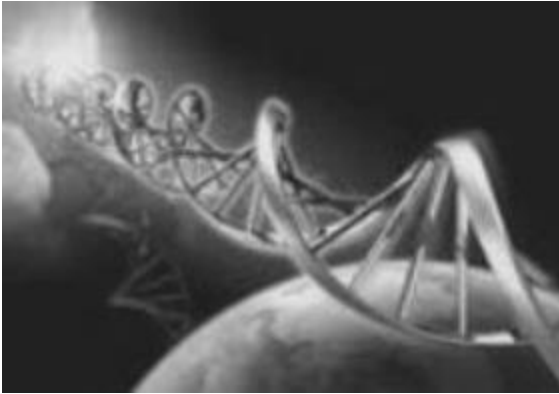
Presently, the scientific community is in the early stages of recognizing the OBC phenomenon. Pineal METAtonin-induced Out-of-Body-Consciousness events have been experienced by many of us in different degrees of intensity, and they have undoubtedly contributed to the inspiration of countless artists, researchers, and writers of the past. However, are these events real? and how is "real" defined? Does the brain fabricate the sensation of being out of the body by simply accessing past recollections? Or, indeed, is the OBE subject actually observing present real-time

reality at a distance from the body? Perhaps there are several types of OBConsciousness, some being veridical (verifiably real) and some being hallucinatory. British author Anthony Peake has written several books on this subject and in his recent book, *The Out of Body Experience* he takes a very serious look at the validity of OBExperiences and comes to the conclusion that OBConsciousness does not actually take place out of the body but most likely take place within the realm of the brain itself or in a holographic personal parallel reality which he describes as an "intrasonic" experience (experienced from within). This is the same conclusion that researchers Andra Smith and Claude Messier of the University of Ottawa department of neuroscience arrived at using fMRI imaging technology, see: <http://journal.frontiersin.org/article/10.3389/fnhum.2014.00070/full>. They scanned the brain of a subject who claimed to be able to effect an OBE at will and observed the brain activity changes after the subject had entered an OBE state. They conclude that the OBE is alteration of the brain's somatosensory (body placement) circuitry that creates the illusion of being displaced from the body. Another possibility is that consciousness is actually displaced (for example, 8 feet above the body) and it uses its access to memory information to create a virtual image of the reality that it should be seeing (it creates an accurate image of the room and body below). This is not a hallucination but a virtual orientation platform that enables consciousness to gauge its placement in space – and it may not be 100% accurate. However, since consciousness cannot be measured or detected in any way, all of these theories may be premature. The fifth section of this webpage ([Consciousness to the Fourth](#)) is an inquiry into the nature of consciousness itself.

From this point on speculation on OBC goes in many directions, mainly because consciousness itself has not been qualified and the boundaries and definitions of reality, time and space have become hazy due to discoveries in quantum and theoretical physics, for example, Peake suggests that the body, particularly every cell in the body, is a repository for information that OBConsciousness can access. His theory is that DNA molecules within cells intercommunicate to create a holographic cloud of information that is accessed via micro Einstein-Rosen wormholes in cellular tubulin that allows OBConsciousness to access distant parts of the universe and parallel realities. Furthermore, this cloud may also resonate with the planetary morphogenetic field via "morphic resonance" as described by Rupert Sheldrake in his books, *A New Science of Life* and, recently, *Science Set Free*. The morphogenetic field is a repository of the DNA templates that resonate with each species and that evolve as each species evolves. Another force field or matrix that is thought to pervade space is the elemental DNA template that encourages microscopic particles in a vacuum in zero gravity to automatically align themselves into a double helix formation. First discovered by Dr. Ignacio Pachecco (see: <http://www.abovetopsecret.com/forum/thread600818/pg1>) and further investigated by Professor Greg Morfill of the Max Planck Institute. In his experiment nonorganic dust, when held in the form of a plasma in zero gravity, automatically formed into helical structures similar to DNA, see: http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=1308529&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs_all.jsp%3Farnumber=1308529. In another way this an indication of the "implicate" order which was detected in the collective interaction of electrons in a plasma state by David Bohm which led him to propose his holographic theory. It appears that space may be programmed to encourage the formation of the DNA double helix template of life. Robert Lanza in his book *Biocentrism* comes to the same conclusion, but by a different process. This biocentric universal life template pervades the universe and is a prime example of counterentropic forces at work. The universe maintains an existential balance between entropic and counterentropic forces, and while a great deal of effort has been expended in understanding entropy, research into counterentropy has just begun.

Dr. Paul LaViolette in his book *Genesis of the Cosmos – The Ancient Science of Continuous Creation* debunks the theory of the Big Bang in favor of a self-sustaining universe based on continuous disequilibrium of infinite open systems supported by the counter-entropic dissipative process of life. This explanation has been metaphorically hidden in the many of the most ancient myths of the origin of the universe, but have been ignored by present-day scholars who fail to recognize that there have been ancient civilizations, though not technically "advanced" as ours, who

have shown technical prowess that not even we can accomplish today. www.etheric.com. Section 4 of this paper discusses this matter further.



This connection between collective DNA and consciousness may seem a bit over the top, but recent discoveries at The Russian Academy of Sciences may actually verify the above and furthermore expand our comprehension of how DNA shapes our reality in more ways than just providing a genetic code. It all has to do with what our scientists call "junk" DNA; that 95% of DNA that seems to be useless repetitive information, The Russians under the leadership of biophysicist and molecular biologist Pjtor Garjajev have pursued a much more holistic approach and have come up with some surprising results: (<http://www.scribd.cometwww.rexresearch.com/gajarev/gajarev.htm>).

The human genome project was a massive undertaking, it was essentially an examination and tabulation of the molecular makeup of the human gene, no small feat in itself. However, it was basically a biological identification process and a very important first step. Dr. Garjajev, on the other hand, assembled a team of biologists, physicists and linguistic experts and pursued a more "wide angle" approach to understanding DNA from a biophotonic (coherent light intercommunication) and linguistic perspective. Garjajev's linguistic experts detected the basic elements of a language structure in the sequences of "junk" DNA that mirrors and may prove to be the origin of basic human speech patterns (which was theorized by Noam Chomsky as early as the late 1950s). In a reverse manner, it was discovered and verified, human speech, under certain conditions, can actually modify the sequence pattern of DNA! Furthermore, DNA is actually a crystalline structure capable of supporting and producing coherent light (documented by Dr. Fritz-Albert Popp) which in turn provides a mode of synchronous communication for all the cells of the body as suggested by Dr. Jeremy Narby. The collective crystalline structure of the body can also resonate and respond to the larger human morphogenetic field of evolving collective human consciousness. In addition, coherent light stimulated DNA creates a magnetic disturbance in the space it occupies. If the DNA is removed from a specific location, the magnetic disturbance field that it had previously defined remains in the vacuum space that the DNA molecule once occupied! This is known as the "**DNA phantom effect**". It is possible that this lingering magnetic field is actually a micromagnetic wormhole, indicating the vibratory energy of DNA may also intermingle with small amounts of "dark energy" and provide a segue to parallel realities. Adherents of Out-of-Body Consciousness claim that the METAtonin-activated neural consciousness circuit is able to access parallel realities via the biophotonic cloud of information created by the cumulative presence and intercommunication of the 70 trillion DNA molecules in our body. Visit: <http://www.emergentmind.org/gariaev06.htm>, <http://www.fractal.org/Life-Science-Technology/Peter-Gariaev.htm>, <http://www.scribd.com/doc/47283165/DNA-Decipher-Journal-Inaugural-Issue-Is-Published>, and <http://www.scribd.com/doc/31618631/DNA-Monthly-Vol-5-No-7>



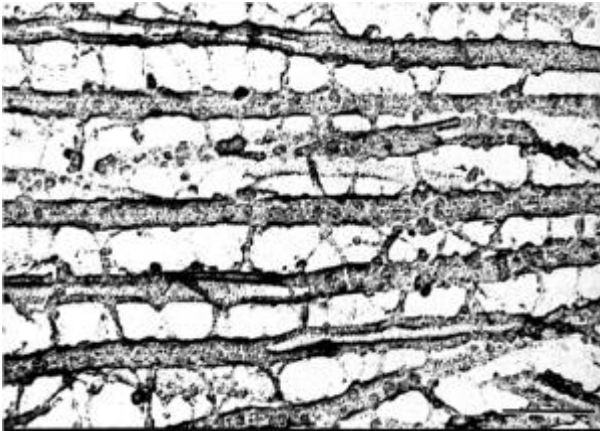
Dr. Fritz-Albert Popp - biophoton research

Another theory of consciousness and consciousness travel based on intracellular biophotonic coherent light transmission has been developed by American anesthesiologist Professor Stuart Hammerhoff and British theoretical physicist Professor Roger Penrose. Known as the **Orch OR theory**, it is based on the microscopic tubular structures that support communication within the cellular structure. Microtubules are made from tubulin molecules that arrange themselves into a helical tube with 13 molecules in the circumference. These microscopic tubes can be of varying length, up to a centimeter long in some instances. Known as *microtubules*, these tubular molecules define and create the structure of the cytoplasm of cells; they are crystalline molecule and can support coherent light pulses as small as a single light proton. It has also been detected that in this microscopic environment that light as a waveform has been quantum reduced to become a particle – which is exactly what happens in the macro world when light as a waveform is “observed” (by a conscious being) and thus reduced to a particle form. When microtubules perform quantum reduction in a collective or orchestrated manner, a state of quantum coherence, or superradiance, is established, this, they conclude is the fundamental building block of consciousness and may constitute the field from which OBConsciousness is launched. The main reason why these scientists focused on microtubules is because interference with microtubule function can reduce a human into a sleeping unconscious state and is the basis for many anesthetic procedures. Visit: <http://www.quantumconsciousness.org/> or see an interview with Hammerhoff: <https://www.youtube.com/watch?=bEATDhaZyVA>.

A 2014 update of this 20 year old controversial theory of consciousness was recently published in the Physics of Life Reviews. It claims that consciousness derives from a deeper level, a finer scale of activities within the brain neurons (and perhaps the astrocytes) Read more at: <http://www.kurzweilai.net/discovery-of-quantum-vibrations-in-microtubules-inside-brain-neurons-corroborates-controversial-20-year-old-theory-of-consciousness>. It may also prove that tubulin is not the repository of consciousness but that it provides the *link* between the field of consciousness and waking perception. What happens to consciousness when we are sleeping or are under anesthesia? Does consciousness cease or is the connection to it temporarily disabled? Quite possibly once the flame of consciousness is ignited during gestation, it continues to resonate until we die and thence the flame returns to its original source. Tubulin may prove to be necessary for waking consciousness to function, acting as a segue, not the source.

Further investigations are discussed by Anthony Peake in his sixth and latest book, The Infinite Mindfield, http://www.amazon.com/Infinite-Mindfield-Gateway-Higher-Consciousness/dp/178028571X/ref=sr_1_7?s=books&ie=UTF8&qid=1365591111&sr=

[1-7&keywords=Anthony+Peak](#) which includes discoveries regarding entheogens, neurobiophotonic networks, and the Zero Point Field.



Microtubules in Cells

Microt

Both of the above discussions touch on the subject of intracellular communication via DNA-radiated biophotonic coherent light. Recently, Project ENCODE http://www.evolutionnews.org/2012/09/junk_no_more_en_1064001.html has determined that "junk" DNA actually contains the genome's hidden control circuitry. DNA is capable of performing thousands of different tasks, yet in the matrix of the body the DNA in each specific cell performs a discrete task. What informs the DNA as to its specific function? How do 70 trillion DNA molecules communicate with each other? It seems that biophotonic light is the medium and if that is so, how is it transferred throughout the body? The answer to that question may be the Bonghan duct network, a threadlike tissue that permeates the body, envelopes every organ and even enters the lymphatic and blood vessels. These ducts can transfer DNA granules and may conduct coherent light signals. The distribution of these ducts seems to mirror the classic acupuncture meridians. See: <http://howthebodyreallyworks.com/p=167> and: <http://www.ncbi.nlm.nih.gov/pubmed/15898080>.

Healing with Biophotons

Since it appears that DNA resonates in a collective field of biophotons, could a therapeutic light that resonates with the DNA emission be used to modify, to heal, DNA that may be out of coherence? That is what some contributors to the Journal of Photomedicine and Laser Surgery contend, for example: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2957070/>. In addition, a number of practitioners have been developing systems of their own including Johan Boswinkle of <https://www.biolithe.nl/biophoton-therapy> and the American counterpart, Bionontology, <https://www.bionontologyarizona.com/> of Arizona. These practitioners use a device called the Chiren which they claim can detect and reharmonize biophotonic coherence. David Muehsam, PhD. of Consciousness Healing Initiative is another voice: <https://www.chi.is/energy-heals-part-ii-biophoton-emissions-body-light/>. In the March 2017 Huffington Post

article: https://www.huffingtonpost.com/entry/the-medicine-of-the-future-is-light-recent-research_us_58d93c5ce4b06c3d3d3e701f biophotons have been endowed with a new acronym: UPE or Ultraweak Photon Emissions.

Terrance and Dennis McKenna in *The Invisible Landscape* published in 1975 postulate that the pineal secreted tryptamine/harmine presence in the consciousness circuit of the brain generates an electron spin resonance that creates a holographic standing wave field that draws its information from DNA neural/genetic code and extends its range via a superconducting phenomenon to the quantum level that also resonates with human thought perception and memory retention. The McKenna brothers also surmise that memory itself is a holographic phenomenon, a theory that recent brain research led by Dr. Carl Pribram has further strengthened.

The Popp 380, The discovery of intracellular light

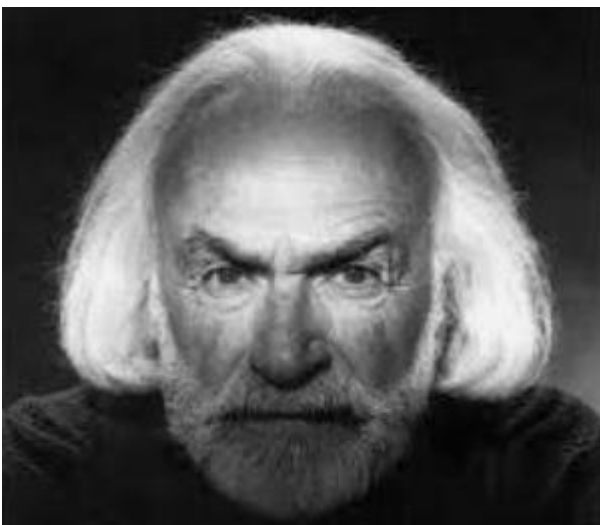
In the 1920's, Russian scientist Alexander Gurwitsch discovered that a healthy plant placed in a quartz jar could influence a diseased plant in a quartz jar next to it, he surmised that the plants were communicating via some wavelength of light. The communication stopped if the light was blocked or if the plants were transferred to glass jars indicating that ultraviolet light, which can't pass through glass, was the most likely candidate. He called this light mitogenetic radiation. However at that time there was no equipment sensitive enough to detect this light. In 1970 Albert Fritz-Popp took up the lead using photomultiplier sensors that could detect individual photons. He had discovered that a certain known carcinogen, benzopyrene(e) – found in charred food and tobacco smoke - consistently scrambled 380 nanometer (30,000,000,000,000,000 Hertz) ultraviolet light to a different frequency. He further discovered that when living tissue was denied access to 380 nanometer light, it fell out of step with the body and eventually succumbed to cancer. Other compounds that exhibited the same scrambling effect at 380 nanometers turned out to be carcinogens as well. He further discovered that the body is continuously bathing every cell in the body with this frequency of light – it is a fortifying light that supports cellular health and, furthermore, is an essential form of cellular intercommunication.

He determined that all living things emit light - plants and animals. Using his new sensitive equipment, Popp detected that humans generally emit 10 photons per second per square centimeters, about 300,000 photons/second for the total body. Unfortunately, photons are very weak and 380 nanometer ultraviolet light is at the extreme edge of visibility. In addition, light emitted throughout the human body was orchestrated in rhythmic patterns and was also coherent (flat and parallel). When Popp first presented his findings, his peers were intrigued but noted one glaring omission: what is the source of this light that is continually bathing every cell in the body? Ultimately it was determined that the source was the 3 billion layered structure of DNA crystalline molecule. The corresponding field of orchestrated light created in unison by the 100 trillion plus DNA molecules in the body forms our body's morphogenetic template that defines the details the placement and function of every cell, and the architecture of this template is downloaded from the morphogenetic field embracing our planet via "morphic resonance". The main goal of many contemporary energy

healing methods is to bring the human body into maximum resonance with this field, for the morphogenetic field is the repository of all human healing information and strategies; an example of one of these healing systems is Bodytalk: <https://www.bodytalksystem.com/>. In fact, in one of his talks, Terrance McKenna speculated that the morphogenetic field may become visible in certain psychedelic states.

Dr. Dan Winter and his team at the HeartMath Institute <https://www.heartmath.org> have recognized a correlation between the complex electromagnetic field of the heart and the spinal waveform of DNA. According to his theory, the DNA waveform varies in resonance with the heart field which determined by our emotional state of being. Winters has done a detailed geometric/angular analysis of the double helix and has determined the spacing of the DNA codon which corresponds with the wavelength of ultraviolet light that he calls the “blue flame”; perhaps the same 380 nanometer light that Fritz-Popp describes. For an introduction into Winter’s theory see: <https://www.youtube.com/watch?v=4Rx35q-zJRk>, Fractals, DNA and the Golden Mean.

In another approach to DNA resonance, Terrance and Dennis McKenna in *The Invisible Landscape*, published in 1975, postulate that the pineal secreted tryptamine/harmine presence in the consciousness circuit of the brain generates an electron spin resonance that creates a holographic standing wave field that draws its information from DNA neural/genetic code and extends its range via a superconducting phenomenon to the quantum level that also resonates with human thought perception and memory retention. The McKenna brothers also surmise that memory itself is a holographic phenomenon, a theory that recent brain research led by Dr. Carl Pribram has further strengthened.



Dr. Carl Pribram

theorized that memory was Holographic

According to "quantum activist" Dr. Amit Goswami, a recalled OBE or NDE only becomes real when one returns to physical body consciousness after the event; at that moment of waking the potential for the memory of the event "collapses" into a real memory. The actual "seeing" of the event is a non-local quantum phenomenon and the seeing is witnessed by all personal consciousness

present at the time; being non-local, it is all-pervasive, unfocused, and as a form of virtual information it requires a conscious observer. When the patient awakens, the information is then observed, that is, remembered. He explains this at: <http://www.youtube.com/watch?v=gZgMYYSr5Lo> . This may seem somewhat confusing for those of us who have experienced OBConsciousness: the experience feels very real and in the now when it is happening, at least that is how seemed during the experience. Dreams are remembered, Out-of-Body Consciousness is unmistakably experienced.

Another reason why there is so much interest in quantum phenomena is that memory is a basic factor of self-consciousness, and the brain with its 100 trillion synapses plus the additional storage potential of glial cells does not even come close to containing enough storage capacity to hold the memories of an entire lifetime. Under hypnosis most subjects can recall minute details of almost any lifetime event that they have experienced including colors, smells, and exact wording of conversations, According to Prof. Simon Berkovich of George Washington University (<http://www.nderf.org/NDERF/Research/Berkovich.htm>), the storage density of our brain would have to be 100,000 times denser than it is presently measured to be. In other words, our brain would have to be that much larger (100 thousand times larger) to store all the sensory, emotional and mental history of a lifetime. So where is it stored? The answer may lie in a quantum connection to parallel holographic reality or to what is classically known as the akashic record, and this may be the same venue that is accessed by our consciousness when stimulated by METAtonin. For a thorough introduction into the latest quantum possibilities and theories visit: <http://www.near-death.com/experiences/research08.html>. Memory may also reside in the matrix of our DNA, see: <http://wyss.harvard.edu/viewpressrelease/93/writing-the-book-in-dna>. Another approach may be that our memory is holographically stored in waveforms as Michael Talbot suggests in his book *The Holographic Universe*. This is further elucidated in the Unified Spacememory Network theory: <http://holofractal.net/2015/02/20/the-fractal-holographic-field-of-life/> in which time is the memory of holographic space and space, in the fractal-holographic universe, is infinite.

In chapters 11 through 14 in his book *Consciousness Beyond Life*, cardiologist Dr. Pim van Lommel makes a thorough study of quantum physics; endless, timeless, nonlocal all-pervasive consciousness and the human brain which he sees as a transceiver that resonates with a discrete portion of the full spectrum of consciousness available. Universal consciousness functions much like the internet “cloud” of information that now permeates our biosphere; an individual human brain is much like a personal computer that accesses certain limited fields within the cloud and stores personal memories that are used to define one’s individuality. He makes the point that when experiencing OBC or Near-Death Consciousness, one is not actually transcending personal consciousness; that is because we are completely immersed in endless universal consciousness all the time, we just can’t sense it. However, the blinders can be dissolved when the tuning of the brain encompasses a broader spectrum. Dr. van Lommel suspects that junk DNA in conjunction with endogenous DMT secreted by the pineal gland can reconfigure the neural network of the brain to raise the scope of consciousness.

Molecular Nutation and Parallel Realities

If Van Lommel is correct, that we are submerged in Universal Consciousness at all times, but not able to tune in or resonate to it except at one specific level; how could this be so? We know that the amount of emptiness in an atom is extremely large: the size of the nucleus of an atom is approximately 1/50,000th the size of the atom itself, or the size of a pea compared to the size of a baseball field (3/8" to 14,000 sq ft) and the electrons spinning about the nucleus are much smaller, 1/2000 the size of the nucleus (the same as a honeydew melon to a single pit). So it is really quite conceivable that two atoms could occupy the same space - even 3, 4 or 20 atoms. But how is it that they would not interfere with each other? One theory expressed in *The Ultimate Frontier* by Eklal

Kueshana is that all the atoms and molecules of any one level of universe reality nutate at the same exact rate and do not interact with atoms that nutate at a different rate.

The earth rotates every 24 hours and the *axis* of *that* rotation also slowly wobbles at an angle of 23.5 degrees. This wobble, or nutation, is 25,920 years long and is called the precession of the equinoxes. In fact, almost all celestial bodies have properties of rotation and nutation - sometimes with a secondary nutation within the primary nutation and so on... Atoms also exhibit this property, and at the atomic level is it theorized that atoms and molecules of different nutation can occupy the same space. According to Kueshana, we, on the at the lowest level of nutation, the physical plane, cannot perceive higher planes that nutate at a higher frequency. However, the higher levels can perceive us; and, it is claimed that there are at least 6 levels or octaves above us, see: <https://www.youtube.com/watch?v=cfHjkKmmzoA>. If this is the case, it may be that when our consciousness is enhanced by DMT, we don't really leave the position we are in, we just perceive it at a higher nutational level and therefore it appears that we have traveled to some far-off universe, but this is not so. We have not moved at all, we are perceiving the same universe, but at a *higher nutational level*. In which case our brainwave function has moved to the gamma or lambda state (100+ Hertz)

Scalar Holographic Reality and the Pineal Gland

In order to investigate the pineal gland further, it is necessary to grasp the nature of reality that the pineal gland is proposed to access: the hidden side or dark side of reality, which Anthony Peake in his book *Opening the Doors of Perception* calls the Pleroma, a term used in Gnostic teachings. As most researchers have deduced, it is most probable that the Pleroma and our human memory field are both holographic in nature, so this is something we need to grasp. Holographic reality really makes no sense at first because energy as we know it manifests in a very different manner in the holographic realm than it does in ours. On the physical plane we are surrounded by radiated concentric electromagnetic waves, but holographic reality exists in the medium of scalar or parallel waves. These scalar waves are flat....unlike the electromagnetic waves of our physical reality which are always curved, i.e. dispersive, in nature. Electromagnetic radiation, the energy of our reality, radiates in a curved wave from a point source such as a candle or a star. The further a wave moves from the source, the dimmer it becomes. This property of diminishment is not present in scalar reality in which the energy wave does not get weaker or flare out as it moves away from the source. Scalar energy intensity stays the same no matter how far away one is from the source. Scalar waves appear to be sourced from a flat plane, not a point, or the source is, technically, infinity. There is no entropy in scalar holographic reality, no heat, no light, no arrow of time, no radiation, zero. The wave energy of holographic reality is not electromagnetic and is not yet detectable. The physical plane energy is clocked by time, it is point-sourced, that is, it is local; holographic reality is all pervasive and eternally now, that is, non-local. To us, holographic reality is a zero point - not zero degrees, zero heat; no thermodynamics. Holographic reality is information-rich, but it cannot support heat. We cannot physically experience holographic akashic reality, but consciousness can. Consciousness, having no physical attributes, and yet present in both realities, may be the bridge

between these two worlds, consciousness may bind them, the yin and the yang, matter and dark matter, pervaded space and unpervaded space, real and virtual.

In a room with a scalar candle in it, the light in the room would be equally the same everywhere, and when one approached the candle it would get no brighter. But a candle, being a point source, is not a good example, if one were in a room where the whole wall was evenly lit up as the light source, that would be more like scalar situation; in addition, the energy from the wall would not increase as one moved closer to it. In scalar reality, therefore, distance is of lesser significance, for it has no bearing on energy levels. In our radiation-based non-scalar world, distance and energy in a way define each other, and define time and entropy as well.

In our non-scalar material reality, scalar waves do not occur naturally, but with specific technologies we are able to create scalar waves: laser light, for example, is scalar. The intensity of a laser light does not diminish with distance in a pure vacuum. Nikolai Tesla also worked with scalar energy waves; his wave generators were designed to emit scalar waves. The US Navy also uses scalar technology in their HAARP program. Scalar waves are perfectly flat and they move ahead like a wall with each wave absolutely parallel to the wave before it. If these waves are to properly rebound from an edge or boundary, that boundary would have to be a perfectly flat plane as well. All wave phenomena require a medium for the wave to fluctuate in, and scalar waves are not supported by any measurable physical or electromagnetic medium. It is speculated that scalar waves interpenetrate the physical universe using what is known as the Dirac sea as a medium. The Dirac sea was first postulated by Paul Dirac, the British mathematician.

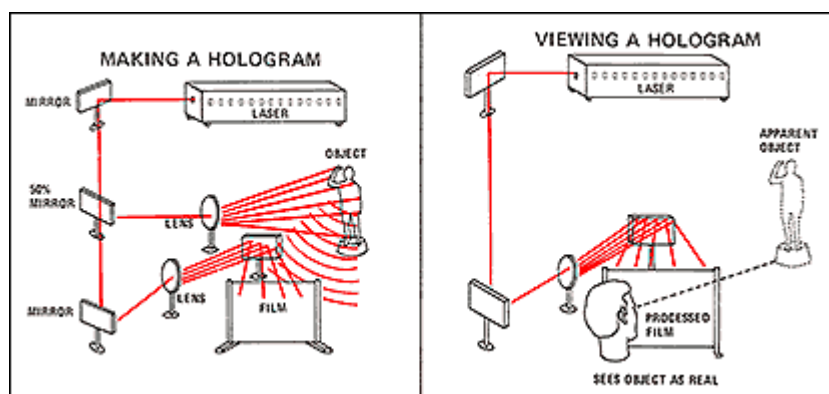


HAARP antenna radiates scalar waves from a flat plane of antennas

In a radiation-based reality such as our physical plane, it takes time for light to travel from point to point - and it travels in a straight line. In a scalar reality, the source of the wave is not a point, but a flat plane, much like a flat screen TV. Scalar energy waves travel as a moving wall or plane, not as an expanding circumference. In scalar reality two points far from each other but in the same plane experience the scalar wave generation at the same time, since a wave emerges forward from the whole plane instantaneously. Picture two mosquitos who are resting on a flat screen TV, this is a large TV, 100 ft wide, and the mosquitos are 90 feet apart. The TV is flashing blue and white alternating

colors. When it flashes blue, both mosquitos, though they are at a distance receive the blue message at the same exact instant, for they are entangled on the same plane and can be at a distance yet experience an event simultaneously.

Picture this: one is on a ledge that is perfectly straight as far as the eye can see and it so happens that below the ledge is the ocean with approaching waves that are perfectly straight and parallel to the ledge, this begins to define a holographic situation. It also happens that the waves are approaching at a consistent rate, equally spaced, and they hit the ledge and bounce back all in parallel. This ledge is made of a soft material and the waves slowly and very evenly erode it. We have here scalar waves, or reference waves, consistently eroding a perfectly straight boundary - the ledge we are standing on. One day, a boat is securely anchored offshore; it is firmly anchored and cannot rotate or move. As the reference waves come in some of them hit the boat and a new set, a *curved* set of waves, *radiate* from the boat towards the ledge where they interact with the incoming parallel ocean waves. The two sets of waves, curved and flat. converge at the ledge and reinforce or deplete each other when they impact it. After a while, the ledge, while still perfectly a straight line, becomes irregularly eroded. This pattern of erosion is a holographic rendering. Later on, when the boat is removed, incoming parallel waves will rebound off the irregular ledge pattern and some will focus exactly back to where the boat was and create the 2-dimensional shape of the boat. In addition, one would not need the whole length of the ledge to create the boat image, just a small section of the holographic ledge would reveal the whole boat image. A parallel phenomenon takes place in a photographic hologram that uses a 2-dimensional medium (film) and 2-dimensional scalar light waves (laser) to create a 3-dimensional image. Two-dimensional waves on a 2D plate render a 3-dimensional image and even if one uses a small part of that plate, it will reveal the whole image, though not in as great detail. For a more thorough explanation read the "Resonating with the World" chapter of *The Field* by Lynne McTaggart.



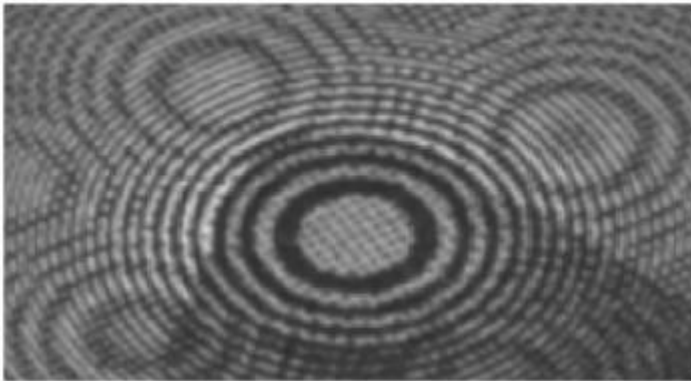
50% of the flat laser light impacts the film while 50% radiates off the object as a curved wave,

after film is developed and illuminated by laser light, viewer can see a 3D virtual image of the object

Now we have to make a jump. We'll take this phenomenon a step further: how would a 3-

dimensional holographic medium support a 3-dimensional image? Why even consider this question? What would a 3D holographic medium look like? Instead of finding the interwoven concentric circles that we would find etched on a 2D holographic plate, we would find interwoven 3D concentric spheres occupying a 3D medium. This concept of a 3D hologram is what many theorists are contemplating as the framework for memory retention in the human brain, and, in fact, 3-dimensional holographic storage systems are already being considered for computers. It takes a vivid imagination to even visualize such a reality, but many theorists including Dr. Pribram are considering that our memories are stored holographically. For example, when humans lose large parts of their brains, they still retain *all* their memories though with less clarity, a quality that holograms exhibit, and there are other similarities as well, see abstract: *The Brain as a Conscious System* by Mercer and Schemp at:

<http://www.tandfonline.com/doi/abs/10.1080/03081079808962066?journalCode=ggen20>. A 3D hologram does not reside in a plane, it resides in a plenum or space. It is a triaxial hologram. Just as the image impression stored on a 2-dimensional hologram plate appear as concentric circles, our memories are stored in a 3-dimensional holographic field as oscillating concentric spheres locked into a holographic matrix supported by scalar waveforms. Visit: <http://experiencer.org/the-quantum-hologram-and-the-nature-of-consciousness/>



Interference patterns on this 2D holographic plate will produce a 3D virtual image when illuminated by a laser

According to Dr. Carl Pribram, memory is holographically stored as continually oscillating pulsations that endlessly resonate in the matrix dendritic pathways of neurons and glial cells that support a 3D holographic matrix of the brain. The fact that the DNA of brain cells can produce scalar or coherent light may further support this theory. This biophotonic light can generate and support a scalar wave environment. Individual memories may be coalesced out of the 3D oscillating holographic brain field by consciousness using a form of selective Fourier reduction. Fourier analysis was discovered by Joseph Fourier, the French mathematician. Take the final movement of Beethoven's 9th where the chorus and the orchestra are in full swing, if one were to isolate the total compound sound wave at any one moment, it would reveal a very complex waveform. Through Fourier analysis,

one can isolate single waves, each separate voice, every single instrument. It may be through some form of neurological Fourier reduction that the brain, or the consciousness embedded in it, is able to access every memory from the holographic memory field. Point-sourced, local realities tend to be hierarchical, holographic non-local realities are less so.

Holographic organization may extend further than the brain, in fact, it has been surmised that the "dark" universe and the memory information stored therein is also a holographic reality, hence the holographic space-time theory, and it is further conjectured that the pineal gland may be able to access this holographic space-time reality via the unique properties of endogenous DMT in concert with corpora arenacea or "brain sand". Just as the term "junk" DNA is being revised by ENCODE scientists delving further into the properties of seemingly useless DNA, so to may the term "sand" be revised by future scientists who may discover that these randomly suspended multicrystalline particles that have been purposefully created as a component of our brain and particularly the pineal gland may actually function as an amorphous crystalline transducing matrix.

With this in mind, one might take a second look at the new age fascination with crystals, there could a correlation here. Holographic/Akashic reality is a non-entropic perpetually resonating energy field or matrix. Perhaps physical plane crystals with their crystalline matrix may in some way resonate with this otherwise undetectable field. It may also prevail that the Pleroma holographic/Akashic "dark energy" reality predates our linear space-time, and, in fact, may have given birth to our physical reality with the big bang for reasons explained in the second section. This dark energy seems void to us, it is a form of energy that is not electromagnetic or radiative, quite possibly thermally void reality - a self-perpetuating, reverberating plasma matrix where consciousness itself may provide the template. Consciousness may also inhabit life there as it does here, though it may be non-local or hive-based. Life there, however, would not involve combustion. Combustion: all thermal forms of life as we know it here are based on combustion, the conversion of hydrogen and oxygen into heat and water and then reverse combustion, or photosynthesis, which is the conversion of light, water and carbon dioxide into hydrocarbons and oxygen. If there is life in the Pleroma, it is most likely not based on combustion, heat or any kind of radiant energy. The relationship of matter and energy may be completely different, but for here, in our physical reality, whatever breathes or burns owes its' existence to light. In "dark" reality/energy/life/consciousness, there seems to be little focus or concentrations of activity, it exists in a state of all pervasive coherence. It is a world almost impossible for us to conceive. Water, too, holds a mystery of great proportion, it is the essence of our existence in unison with light and carbon.

Perhaps someday when we are able to create a three-dimensional quantum computer-generated hologram that resonates within a crystalline structure or matrix, we will gain more insight into the nature of dark energy holographic reality or perhaps communicate with it. Another possibility would be in the creation of holographic segue using specially tuned and oriented standing scalar waves in an environment devoid of thermal, material and even gravitational properties thus

allowing for the emergence of holographic space-time reality. We may someday learn how to fold space and navigate the infinite levels of holographic reality with our consciousness, who knows? For further information on the Universal Holographic Theory visit: <http://academy.resonance.is/discovery-center/>.

Consciousness resonance may be the ultimate mode of travel, perhaps Dada is right: Consciousness is the Final Frontier.

<https://www.youtube.com/watch?v=looX2ZdElQ4>

A Possible Pineal Pathway

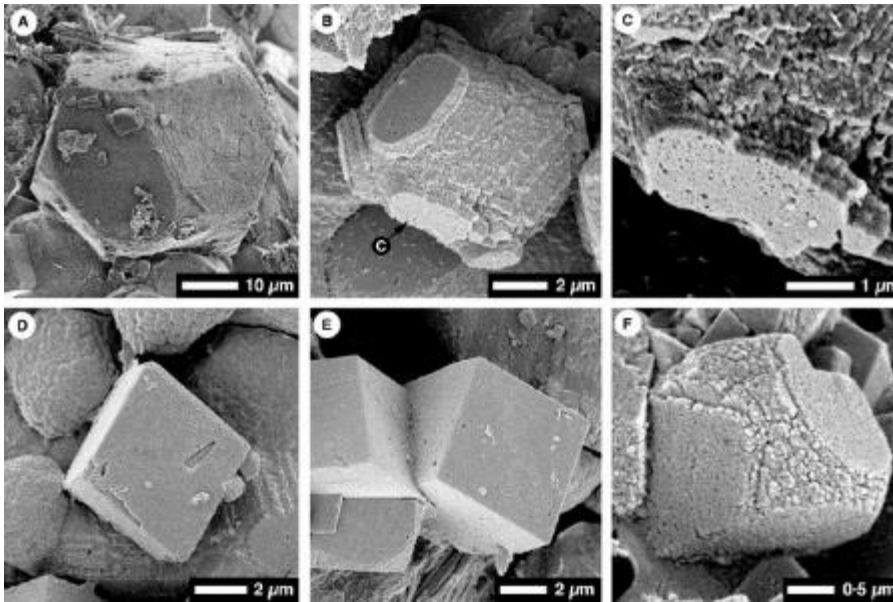
The pineal "eye" is not viewing an image that originates from without, it is tuning into an all-pervasive holographic information field that it is immersed within. Yes, it is "seeing", but not in the way the human eye sees. The pineal gland in the human context acts more like a television receiver that attunes to the holographic spacetime in order to detect and transfer information. Hence this pineal "eye" is of a different construction and operation when compared to an optical eye. The theory embraces several steps beginning with the antenna: a matrix of layered crystalline calcite molecules that can detect the holographic wave pattern. We're discussing corpora arenacea, also known as "brain sand", grains composed of three types of layered crystalline calcite that are distributed throughout the pineal gland. The term "sand" is misleading, for at a macroscopic scale the grains appear as irregular lumps, but at a microscopic scale we find a very precise crystalline matrix comprised of magnetic and electrically charged molecules aligned in a planar fashion along rhombic isometric and hexoctahedral axes. This crystalline amalgam is comprised of carefully layered combinations of calcite, apatite and magnetite crystal. This crystal formation is known to exhibit *birefringent* properties and perhaps, collectively, may prove be *multirefringent* in nature.

We are referring here to the process of how the direction of a wave is bent when it enters into a new medium at an angle - the phenomenon of refraction. Most waves bend at a consistent angle when they enter a new medium, hence the science of optics. Multirefringent describes a multiple angle refraction. The theory is that certain layered combinations of planar calcite molecules can perform unique functions. One combination of layers could interpolate holographic information into a slight physical, electrical or quantum disturbance (based on resonance with calcium's two excitable valence electrons), another layered formula of calcite could act as a planar matrix lens that would be able to concentrate the barely discernable planar disturbance into a point-source physical phenomenon. Thus, we have a scenario in which a planar (holographic, nonlocal) wave pattern can be translated into a (physical, local) detectable point source with no outward energy loss.

To repeat: we have a normally undetectable holographic disturbance (parallel, scalar, nonlocal) that is both detected and then refracted at several converging angles by a specially layered calcite matrix that brings the disturbance into a focused physical or electrical single point-source perturbation, a barely perceptible one. This is the first step in the pineal gland pathway.

The birefringent nature of corpora arenacea calcite crystals and the theory of attenuating and interpolating scalar holographic information into a barely detectable physical plane point-

source signal was developed in the research of Dutch scientist Dr. Saskia Bosman, <http://asmaracentrum.com/saskiabosman%20.html>.

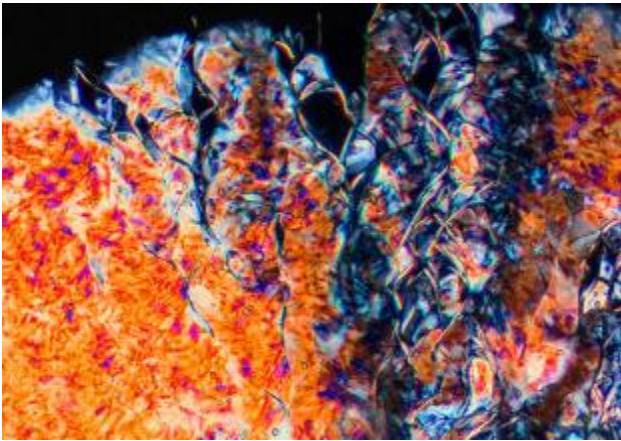


Microscopic Calcite Crystals

The next step of translation only takes place when these calcite crystals are enveloped in a fluid containing a suspension of molecular DMT is present. As David Wilcox has revealed, DMT exhibits piezoluminescent properties meaning that when molecular DMT is disturbed, it creates light, even the slightest disturbance can result in the release of photons, and in some cases, electrons. Thus the physical plane point-source disturbance created by the brain sand scalar wave focusing can stimulate DMT molecules in suspension to create photons and possibly electrons which can then stimulate the photo-receptive pinealocytes in the pineal gland. Pinealocytes exhibit properties very similar to the rods and cones in our retina. The Pinealocytes convert these photon emissions from the disturbed DMT molecules into neural signals that are then sent via the pineal/spinal/SCN/optic nerve pathway to the visual cortex via the optic nerve. Theoretically, the brain sand calcite crystals are the translation medium for scalar-based holographic information that is transmuted into a subtle physical equivalent then into a photic response and ultimately into a neural message sent to the visual cortex where it can then be interpolated. As for the piezoluminescent properties of DMT, it should be noted that of the 21 amino acids in the human body there are only three that exhibit fluorescent properties with tryptophan exhibiting the highest absorptivity and thus the most luminescent. This means the tryptophan shows the highest quantum field and resonance and resonance energy transfer capabilities of all the amino acids. Fluorescent excitation in tryptophan normally occurs at 285nm but is known to exhibit wavelength shifts of up to 20nm depending on environmental conditions. Tryptophan is the core amino acid from which DMT and melatonin is derived.

This is a possible visual pathway that allows us to view the parallel holographic reality that we are immersed in. It is important to remember that photon emissions are *extremely* weak, about as bright as a candle at 15 miles (24 km) distance. Not only is the pineal gland located in the center of the brain for maximum protection and for the proximity of the thalamus, it is also quite possibly the darkest location in the body. Perhaps it will be discovered that there is light-absorbing pigmentation surrounding the gland that supports this theory. Pineal glands in more primitive species are located near the surface of the skull in order to perceive exterior light, the human pineal gland is so placed in the darkest location in order to process minuscule internal light signals. The pineal has a dual role: ambient light information sent from the eyes via the optic nerve informs the pineal as to when it

should produce melatonin and internal light information from the octonia brain sand/DMT source which provides holographic scalar wave information to be sent to the optic nerve and the visual cortex. Unfortunately, at this point there is very little evidence to support the existence of reverse neural communication via the super cervical ganglion from the pineal gland to the SCN/optic nerve, but this reversible form of communication is not uncommon in central nervous system neural pathways.



Crystalline Piezoluminescent DMT

To sum it up, here is a theoretical pineal pathway: the multi refractive amalgam of calcite/apatite/magnetite octonia crystals is able to demodulate scalar universal holographic space-time information into a very subtle physical realm point source signal which is then converted into photons by the then present piezoluminescent suspension of DMT molecular crystals, these photons are then detected by light-sensitive pinealocytes of the pineal gland and are converted into a neural signal that is directed to the visual cortex via the same pathway that the retina sends circadian light information to the pineal gland to instigate melatonin production but in this case, it is in a reverse direction going from the pineal to the optic nerve.

Bosman research paper: <https://www.scribd.com/doc/26772568/Bosman-Saskia-The-Role-of-the-Pineal-Gland-in-Mystical-Experiences>

DMT photoluminescence: <https://en.wikipedia.org/wiki/Piezoluminescence>

In the book *The Pineal Organ, Its Hormone Melatonin, and the Photoneuroendocrine System* By Werner Korf, Christof Schomerus, Jörg H. Stehle. Pg. 12 "Pinealocytes have photoreceptor-specific molecules", these are considered to be an atavistic trait with no determined function.

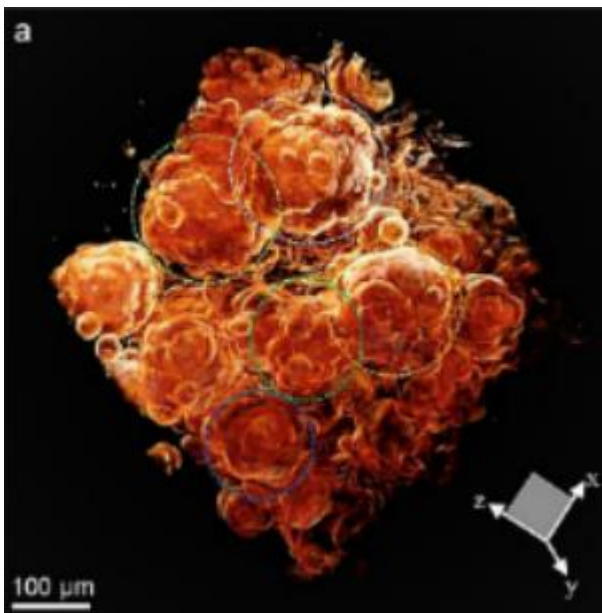
The Pineal Gland and the Substrate of Consciousness

Indeed, this brain sand/endogenous DMT collaboration may prove to be more than just a catalyst for OBE and NDE events and a window to holographic reality during childhood and adult life; it may be a form of communication that provides more to the brain than just visual imagery. Prior to birth, this pathway may also send structural instructions to the emerging brain during gestation thus providing a seed template cradle for the acceptance of consciousness into the circuitry of the brain. When the template is properly established, the brain is able to cradle the initial spark of consciousness, and, as the embryonic brain develops, increasing levels consciousness are encouraged to evolve. This process continues after birth until full maturity is reached. Thus the pineal gland may help to create and provide the substrate of consciousness as well as ushering consciousness to its full potential. This dovetails with the conclusion that Anthony Peake comes to in his latest book: *Opening the Doors of Perception*. Brain sand is also found in other areas of the brain including the vermis of the cerebellum, the part of the human brain that controls body equilibrium, speech, eye and body movement thus it may also contribute to body-consciousness integration.

This may be just a coincidence, but a majority of DMT experimenters report that the first stage of a DMT voyage involves travelling through a maze of geometric shapes of varying colors, much like travelling through a matrix of rhombic isometric hexoctahedral crystals. Could this crystalline structure imagery be a reflection of the brain sand geometric mechanism itself?

Verification of this multirefringent/pizeoluminescent theory: there are several experiments that could begin to verify this proposal: does stimulating the human pineal gland pinealocytes with light create any kind of visual response in the visual cortex? This would verify the pinealocyte connection to the visual cortex via the superior ganglion and the superchiasmatic nucleus. Secondly, does a photomultiplier sensor placed in the vicinity of the pineal gland detect any photon emissions in the pineal gland when DMT is present and do they vary for different brainwave states, particularly gamma and lambda states? Also as a test for the demodulation properties of brain sand: do calcite/magnetite/apatite crystal combinations, similar to brain sand, immersed in a suspension DMT molecules create photons when excited by scalar waveforms? Video of typical brain sand spacing in pineal matrix: <https://media.nature.com/original/nature-assets/srep/2012/121217/srep00984/extref/srep00984-s2.avi>

Finally, in reference to the holographic spacetime theory, if, indeed, the Pleroma is a scalar holographic field then this suggests that the edges of the field must most likely be planar and parallel, not curved, in order to support scalar resonance, as in a laser, or staser; this further suggests that the enveloping shape of the "dark energy" universe is a geometric polyhedron: a cube, hypercube, or a more complex polyhedron composed of faces that are paired, parallel, aligned, similar in shape and similar in orientation. Does such a polyhedron exist? Would each pair of parallel faces support a unique octave of scalar resonance? What would happen at the center of the polyhedron where all the scalars intersect? Or perhaps the boundaries of dark matter form some other geometric shape. This concept is discussed by A. A. Dolginov of Rensselaer Polytechnic Institute: <http://www.astro.rug.nl/~weygaert/isvdo9wey.ieee.pdf>, *Dark Matter in Universe as the Geometry of Empty Space*. The large scale geometry observed on the north pole of Saturn comes to mind. What would be the ideal "antenna" sensitive to scalar holographic reality? Is there some form of attuning crystal lattice capable of converting scalar non-local waves into local perturbations?



Microtomographic Image of Brain Sand in the Pineal Gland
(Department of Biomedical Sciences, Korea University)

The previously mentioned brain sand/DMT/pinealocyte sequence may not prove to be the pineal pathway, but it is a good candidate for explaining the visual aspects of the OBE experience. But the OBE is usually more than just a visual experience, it normally involves a full-body awareness as well. A possible scenario for body consciousness shift could be the DMT/orch-or tubulin/thalamus sequence where DMT-stimulated cellular brain tubulin encourages consciousness fluidity while the DMT-enhanced thalamus allows body identity to shift from the resident earthly body to the brain-sand-defined holographic visual

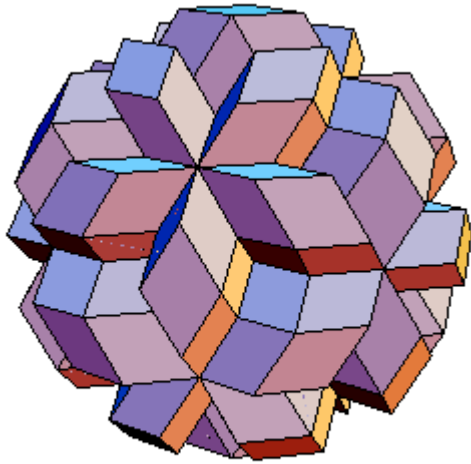
context: https://www.researchgate.net/profile/Andrew_Gallimore/publication/277281153_ESSAY_Building_Alien_Worlds_The_Neuropsychological_and_Evolutionary_Implications_of_the_Astonishing_Psychoactive_Effects_of_NN-Dimethyltryptamine_DMT/links/5565af3808aec4bof485b596.pdf. Body-consciousness shift could be traced to the spinal cervical ganglion connection with the pineal gland. The first (pineal brain sand) scenario offers a mode for holographic space-time *visual* demodulation, which, seemingly, only the multirefringent brain sand can offer and the second scenario (body consciousness shift via tubulin) provides for body consciousness transfer which may also involve calcite sand modules in the cerebellum. Perhaps the pineal pathway incorporates both of these possibilities - an orchestration of all of the above. Although, a great more research needs to be done on the tubulin/DMT consciousness shift phenomena as well as the thalamus body consciousness shift. So far, research in this area, if it has been done, is not yet available to the public. Andrew Gallimore (from the essay above) furthermore conjectures that this DMT-enhancement of consciousness is actually an atavistic mechanism that was exercised to a much greater degree by our ancient ancestors, as do the McKenna brothers. Perhaps, some day investigating the true meaning of "sand" in brain sand end up being as significant as investigating the "junk" in junk DNA. For a start, see the brain sand research of Baconnier, Lang, Hilezer, Berkovic and

Meshulam: <https://www.ncbi.nlm.nih.gov/pubmed/12224052>

To see a video of the above microtomographic image, visit: <https://media.nature.com/original/nature-assets/srep/2012/121217/srep00984/extref/srep00984-s3.avi>

As for a DNA perspective, Dr. Bosman also suggests further possible antenna for scalar waves. A scalar "antenna" needs to be comprised of crystalline structure, a structure that is comprised of series fields or plates that are stacked on top of each other at equal spacing, that is, in parallel. One such series of stacked fields are the 3,000,000,000 base pairs of human DNA. This long, very long, molecule is crystalline in nature and as such has been found to be able to produce scalar coherent laser, or biophotonic, light as discovered by Russian scientist Alexander Gurwitsch, developed by Italian and Australian researchers and then fully documented by Dr. Fritz-Albert Popp of Germany. Thus crystalline DNA can create coherent, laser, light and at the same time be responsive to scalar waveforms. DNA molecules also support soliton waves, packets of free stand self-reinforcing energy that may sustain biophoton production,

see: https://www.researchgate.net/publication/265019896_Solitons_in_DNA_and_Biological_Implications. Not only do the DNA ladder rungs define parallel equally spaced planes, but they also rotate. Thus we have the potential of responding to and creating *rotating* scalar waves at the quantum level. This nanoscopic spiral life pattern wave may pervade all space and may have already been detected in zero gravity experiments conducted by the Russian Academy of Science, as mentioned in the previous section on The Science of Out of Body Consciousness.



A Complex Rhombohedron illustrates the Geometry of Corpora

Arenacea

Warm to the Touch

Before we leave the topic of holographic reality. It might prove worthwhile to dwell on the subject of radiative reality vs. holographic reality. In holographic reality nothing is warm to the touch, or cold to the touch for that matter. In holographic reality one doesn't get warmer as the fire is approached. There is life, intelligence, emotion, joy, pain and ecstasy on the other side, but there is no photosynthesis, no combustion, no heat, no fusion; a non-thermal reality. That doesn't mean its cold on the other side either, that's why the Z in Zero Point Field is misleading. It tends to make one think of zero degrees. There are no degrees in holographic reality, at least degrees of heat. It may be strange, even difficult to imagine an existence with intelligence but without heat or cold: such an exercise would help in understanding the holographic nature of the Pleroma, the 70 or 80% of the universe that we know exists, but cannot detect. A simple example of an existence without the sensation of heat is a fish in a constant temperature fish tank - it never experiences heat or cold. In the holographic space-time field, reverberating intermeshing scalar waves define a highly concentrated information-rich reality - much more concentrated than anything in our reality, except, perhaps, in the center of our stars or black holes, where there may be a concentration of both heat and information. The fact that holographic reality does not support thermal energy also indicates that may be devoid of entropy, that is, that decay may not an inevitable process in holographic reality. This allows eternal realities to exist. It may be that entropy and eternity are mutually exclusive properties.

Eternal Beings sometimes dream of being Non-Eternal / Non Eternal beings dream of being Eternal

The Pineal Gland and the Emergence of Consciousness

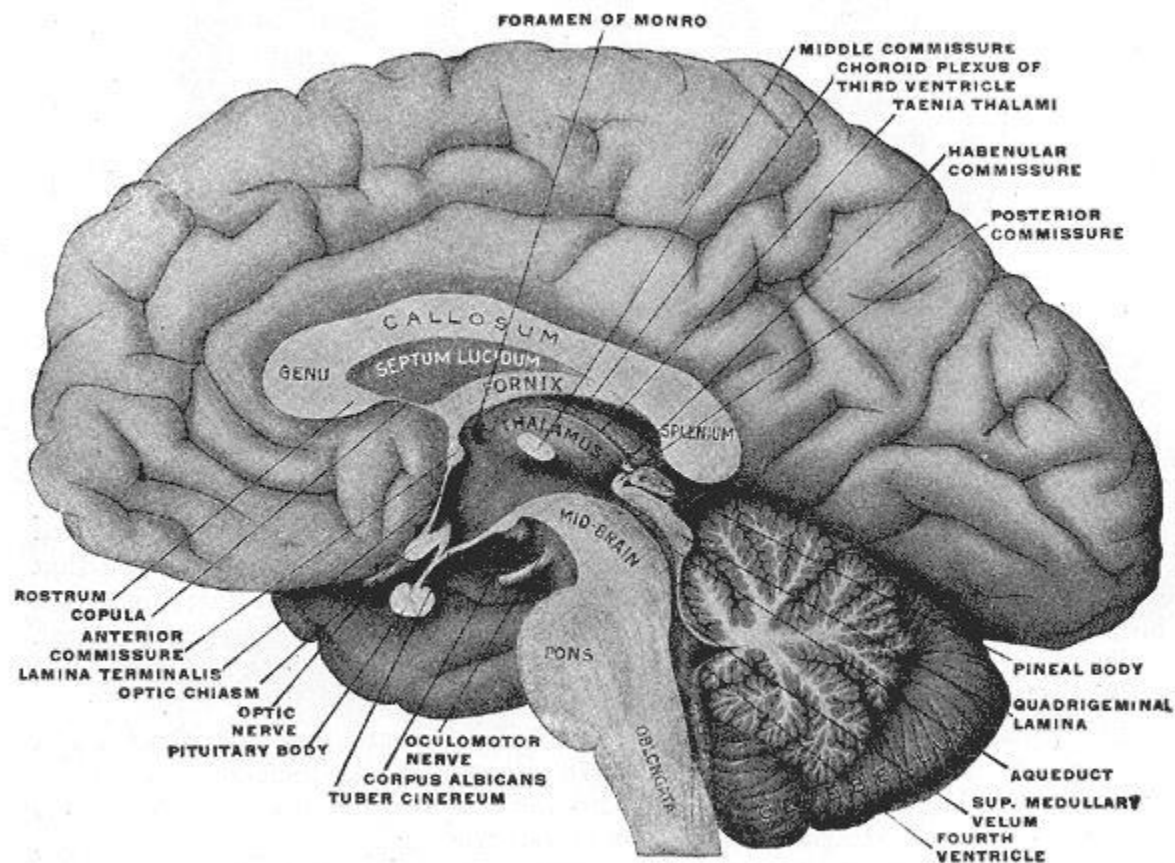
Drs. Anne Moir and David Jessel in their book *Brain Sex* suggest that the evolution of a human male from a female human embryo is a carefully orchestrated program of testosterone exposure during critical periods of embryonic development. If this program is interrupted due to irregularities in the embryo or the mother or exposure to endocrine inhibitors such as bisphenol, the resulting child may end up being sexually conflicted. In the same way the pineal gland may usher consciousness into the embryo in a series of discrete stages during gestation. It is theorized that a property of consciousness is that it may be linked to the dark energy/holographic reality. The pineal gland with its brain sand/METAtenin connection to this realm and its arrival in the brain on the 49th day of gestation (it being the first endocrine gland to appear) seems to make it a prime candidate for being the usher of consciousness. Consciousness references itself to sensory input and at first there is very little sensation, but as the embryo develops and sensory portals develop, consciousness gains new territory in which to expand with the aid of the pineal gland basal DMT/brain sand phenomenon as mentioned earlier.

An excellent novel that describes the evolutionary stages of consciousness from its simplest to its most profound level is *The Complete Cosmicomics* by Italo Calvino. In this gradual process, the pineal gland provides the pathway and template for consciousness expansion. Consciousness itself does not reside in the pineal, it most likely reverberates in the cellular tubulin of various regions in the brain, particularly the thalamus, the claustrum and the prefrontal lobe as Hammerhoff suggests. Furthermore, just as irregular exposure to testosterone can result in a child of confused sexuality, so can an interruption of the pineal process during gestation create a person of irregular consciousness, usually resulting in a form hyper or hypo sensitivity such as schizophrenia or autism, as Andrea Axt suggests further on in this work. This process of consciousness growth may occur in all sentient beings to different degrees with the highest level being self-awareness. Self-awareness is determined by the "mirror test" developed by Dr. Gordon Gallup Jr. and animals that have passed it are elephants, cetaceans, apes, and magpies, see: <http://www.animalcognition.org/2015/04/15/list-of-animals-that-have-passed-the-mirror-test/>, as well as.... humans.

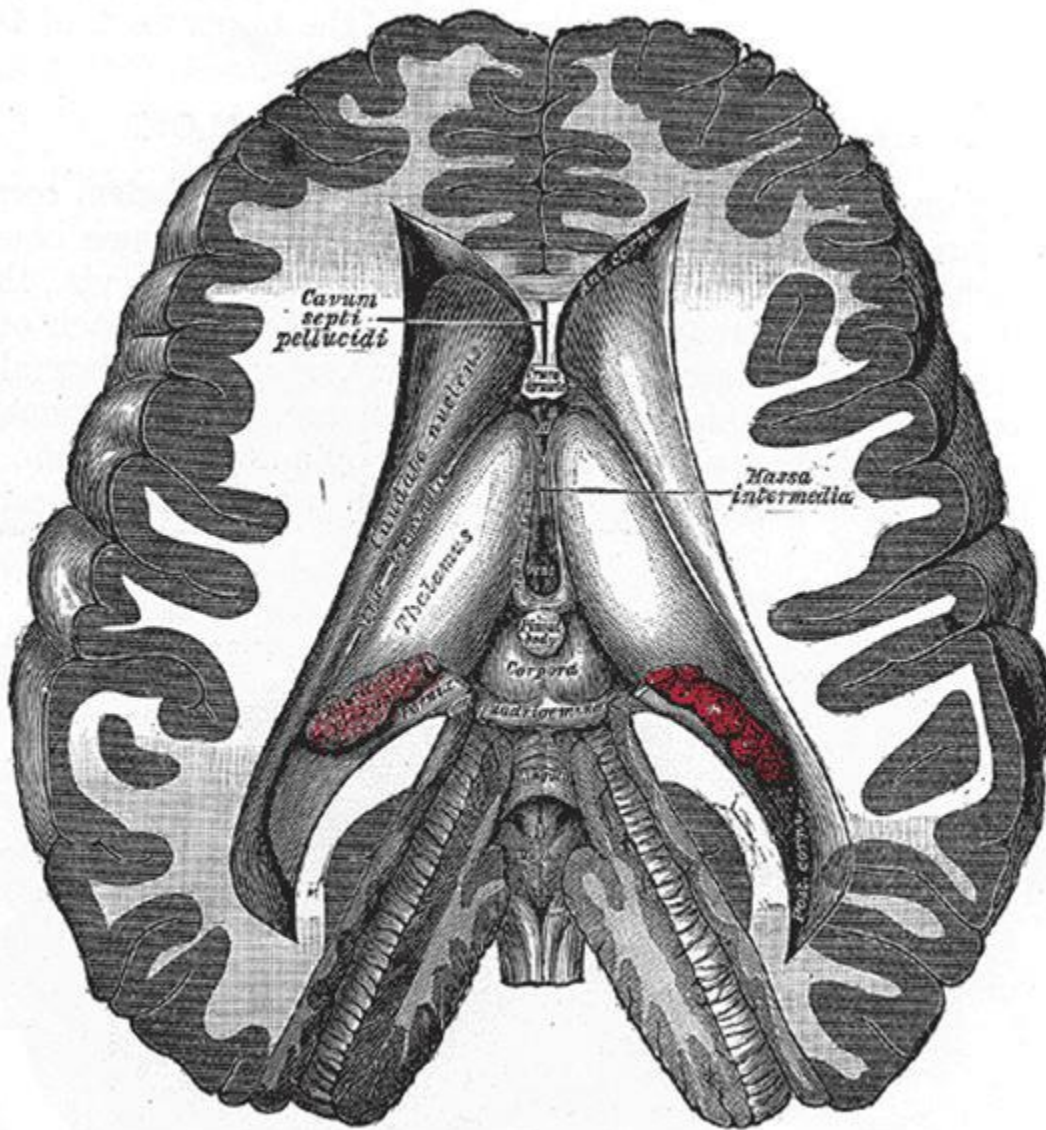
Consciousness and the Morphogenetic Planetary Geometry of Personality-See Section 3

The pineal gland at the seat of consciousness

A good understanding of the pineal gland's placement in the brain will reveal its central location at the crossroads of consciousness. The drawing below is a view of the pineal gland from the side (from Gray's Anatomy plate 715):



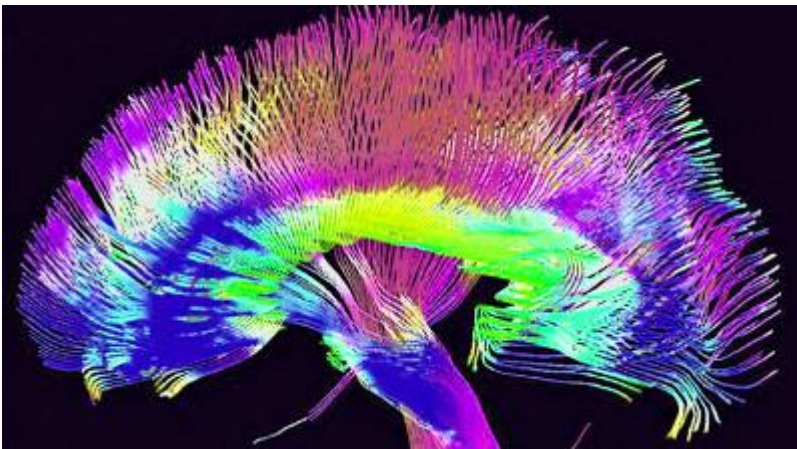
The pineal gland can be seen resting on top of the midbrain tucked in the fold between the two lobes at the rear of the thalamus. The thalamus and the pineal gland are surrounded by cerebral spinal fluid. The next view is the pineal gland as seen looking upwards from below (from Gray's Anatomy plate 716):



The pineal gland is the round circle in the center nesting between the two lobes of the thalamus. All the cavities in this area of the brain are filled with cerebral spinal fluid and are known collectively as the third ventricle.

In his previously mentioned book, Dr. Pim Van Lommel states that several areas of the brain must be functioning in order for waking consciousness to occur: the frontal, temporal and parietal lobes of the cortex, the hippocampus, the brain stem and the thalamus. The thalamus which consists of two brazil nut-sized lobes is of essential importance because it is the messenger hub of the brain. All incoming stimuli from the body, the eyes, and the ears are processed and distributed to the cortex while, simultaneously, all messages sent from the cortex destined to be distributed throughout the body are also being processed. The thalamus is the command center of the brain. It is also known to regulate the level of awareness and is suspected to be the seat of consciousness working in conjunction with the cortex. If the thalamus is compromised to any degree, the patient becomes comatose and if the thalamus remains inoperable, the patient will never return to an awakened state. The *Science News* 2013 special article on consciousness details conditions in the brain that result in the disruption of consciousness, quote: "Not only is the thalamus itself compromised, but also its connections — white-matter tracts that carry nerve signals — which seem to be dysfunctional in people who aren't fully conscious, researchers reported last year in *NeuroImage*. "I can't help but think there's something

fundamental about the functional circuitry,” says neuroscientist David Edelman of the Neurosciences Institute in San Diego. “There’s a fundamental loop between ... the thalamus and the cortex. If those connections are cut or if you’ve damaged them, that individual will not be aware by any measure, forever.” It is quite possible that consciousness resides in this loop between the cortex and the thalamus and may somehow resonate with NPR (non-measurable physical reality, aka dark matter/energy) via DNA (Van Lommel, Narby, Garjajev) or microtubular (Hammerhoff & Penrose) resonance. Recent research also points to the claustrum nerve complex in the brain to be the "orchestra conductor" of consciousness - a theory proposed by Francis Crick shortly before his death as well as the insula cortex, see: <http://yaledailynews.com/blog/2014/09/09/research-suggests-new-consciousness-hub/> and www.scientificamerican.com/article/neuronal-superhub-might-generate-consciousness/. Another factor that may contribute to consciousness is the presence of spindle neurons - which are only found in humans, large apes, elephants and cetaceans, see: <http://www.smithsonianmag.com/science-nature/brain-cells-for-socializing-133855450/?no-ist> For an excellent series of interviews with experts in this field visit: <http://www.closetotruth.com/topics/consciousness/consciousness>. There is also the recent discovery of rosehip neurons that work in conjunction with the pyramidal neurons found predominantly in the neocortex, see: <https://newatlas.com/rosehip-neuron/56093/>



Clastrum: The Interneuron Tree of Consciousness Connectivity rooted in the

Thalamus

Since consciousness has no local signature, it may resonate in the collective heart-brain field. This concept is gaining ground due to recent research conducted by the Heart-Math Institute: <https://www.heartmath.org/research/science-of-the-heart/> and the Resonance Academy; <http://holofractal.net/2013/05/30/the-singularity-of-the-heart/>.

Van Lommel's Paradox

By comparing the descriptions and statistics of several hundred near-death experiences in Dr. Pim Van Lommel’s book with the reports from subjects in Dr. Rick Strassman’s book and other sources, it becomes quite evident that the entheogen responsible for the Near-Death Experience is DMT. Research has also begun to verify that the pineal gland is the most likely source of endogenous DMT or METAtonin, in the brain, and, not surprisingly, the pineal gland neighbors the thalamus which is most likely the orchestrator of consciousness. Now that we’ve isolated the principal players it is time to investigate the method of hormone delivery. The pineal gland secretes both melatonin and METAtonin, both modify the state of consciousness and the two most likely mediums for delivery of these hormones to the thalamus are blood flow and the cerebral spinal fluid. It is quite possible that the melatonin is transferred by blood flow. The pineal gland exhibits profuse blood flow characteristics; these two organs neighbor each other and the melatonin transfer occurs at a gradual pace, furthermore, there is no melatonin scavenger in the blood as there is in the case of METAtonin (monoamine oxidase -MAO). The blood may be an excellent carrier for melatonin, but for certain reasons, the blood may not be the most likely candidate for delivering METAtonin to the thalamus.



Dr. Pim Van

Lommel, NDE Research

When it comes to near-death out-of-body consciousness, the situation is different. Dr. Van Lommel noted that all of the surgery patients who experienced vivid and accurate near-death experiences reported these incidents beginning at a point in time during surgery when the patient was undergoing a cardiac arrest. That is, the out-of-body events were experienced when blood flow in the brain had ceased. When an NDE occurs at this time, the only possible medium of exchange between the pineal gland (the source of endogenous DMT) and the thalamus, the seat of consciousness, could only be the cerebral spinal fluid. These two glands are adjacent and possibly touch each other; the endogenous DMT must permeate from one gland to the other almost instantaneously, for there is a narrow window of time. According to Van Lommel, the brain doesn't react to the interruption of blood flow until the first 6.5 seconds has elapsed and most cardiac arrest patients are usually resuscitated within 20 to 37 seconds of the initial arrest. If the patients are revived within 37 seconds, the EEG returns to normal although the patient remains unconscious. If there is an NDE incident, it is reported much later upon waking and verified with the surgery room record. In most cases, it has been verified that the NDE initially occurs when the brain is flat-lined and blood flow is non-existent. Thus we have Van Lommel's paradox: how can the brain be considered the vehicle for out-of-body consciousness during an NDE when the brain appears to be completely shut down during the incident? Is the memory of the incident witnessed then stored somewhere else and then downloaded into the brain when functionality returns as Goswami suggests or is METAtonin delivered to the thalamus via the third ventricle cerebral spinal fluid all the way to the Foramen of Monro thus immediately saturating the thalamus and modifying the state of consciousness in preparation for transition? Though the brain may be flatlined, the pineal and thalamus glands may be designed to function for an extended period after blood flow ceases and it is during this period that the Out of Body Consciousness is initiated. See: <https://www.youtube.com/watch?v=avyUsPgIuQo>

As mentioned earlier in this paper, maybe the answer is simpler. When the brain dies, with the help of the surge of endogenous DMT, consciousness retreats back to its holographic spacetime origin, and if the brain reawakens, consciousness returns to the physical cradle of the brain field. The reason why DMT users describe the same experience as the NDE subjects is because the same thing is happening, except in the case of DMT, the brain/body is put into autopilot mode, and consciousness, no longer lodged in the citadel of the mind, goes on the same or similar journey.

It will take many years of research before any of these questions can be answered, but the first step has been achieved with the Cottonwood Research Foundation May 23, 2013, announcement of the verification of METAtonin, endogenous DMT, production in the pineal gland of laboratory rodents. When will it be possible to verify that the human pineal gland also secretes endogenous DMT? Is it delivered to the surrounding area via the cerebral spinal fluid or the blood? How does METAtonin modify the activity of the thalamus to create out-of-body consciousness? How is it that the extremely high concentrations of nicotine, utilized by South American *Tabaqueros*, has the same effect as DMT?, does nicotine stimulate the pineal gland to produce METAtonin or does a massive stimulation of nicotine receptors create the same consciousness-displacing effect as endogenous DMT? What is the physiological nature of consciousness, how is it embedded in the circuitry of the brain and how does consciousness span both baryonic (physical space/time) and non-

baryonic realities or is it a precursor to both and finally, two questions from the above: Can light excitation of the pineal gland be detected and imaged by the visual cortex? and by using photomultiplier sensors can any light or photon generation be detected in the pineal gland?

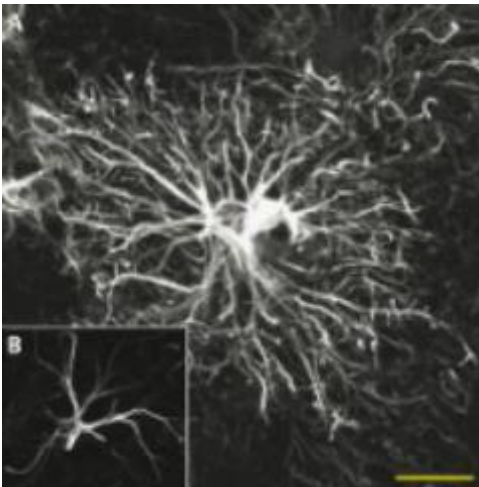
“Junk” DNA and “junk” Neurons, the Glial network.

Just as indecipherable DNA sequences that constituted 95% of the DNA molecule were relegated to the status of “junk” DNA by early researchers, so, too, there are “junk” neural cells, known as glial cells (in Greek: glue cells) that constitute 90% of the brain cellular structure. This neural conglomerate has been considered to be an insignificant structure by the neurological community since brain cellular makeup was first researched in the 1890's.

Just 30 years ago, most brain scientists believed that only neurons intercommunicated and were solely responsible for our thought patterns and that glial cells were a passive network of connective tissue that anchored and insulated neurons. There are several types of glial cells, but recently scientists have begun to focus on the most complex type of glial cell called the "astrocyte". These cells are abundant in the cortex, more abundant than neurons themselves.

As one ascends the evolutionary ladder, astrocytes in the cortex increase in size and number, with humans having the greatest number astrocytes and also the most complex (dolphin astrocytes may not have been investigated yet). Scientists have also discovered that astrocytes communicate with each other and with neurons in the cortex and are capable of sending information through both networks, neural and glial. Finally, astrocytes are also the adult stem cell in the brain and control blood flow to regions of brain activity. Because of all these important properties, and since the cortex is believed responsible for higher thought, scientists have started to realize that astrocytes must contribute to the thought process and perhaps even consciousness.

Astrocytes



Mouse

Human

Early researchers were so focused on neurons that they concluded that glial cells were worthless, in fact, glial experiments didn't begin until the 1960s. Dr. Stephen W. Kuffler at Harvard discovered that frog and the leech that astrocytes were influenced by neuronal ion exchange, a process long held to be the chemical counterpart to thought. Since then many researchers have completed experiments on the communicatory ability of glial cells with neurons. In the late 80s and early 90s, it was discovered glial cells respond to and release neurotransmitters, though their chemical means of communication differs from neurons.

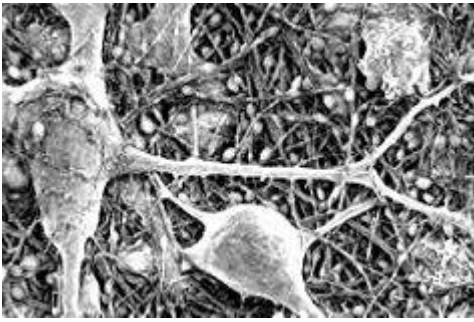
Astrocytes have hundreds of 'endfeet' spreading out from their body. They look like mini octopi, and they link their endfeet with blood vessels, other astrocytes, and neuronal synapses. Calcium is released from internal stores in astrocytes as they are stimulated, then calcium travels through their endfeet to other astrocytes. The term 'calcium waves' describes the calcium release and exchange between astrocytes and between astrocytes and neurons. Scientists at Yale, most notably Ann H. Cornell-Bell and Steven Finkbeiner, have shown that calcium waves can spread from the point of stimulation of one astrocyte to all other astrocytes in an area hundreds of times the size of the original astrocyte. Furthermore, calcium waves can also cause neurons to fire. Furthermore, it was recently shown that a molecule that stimulates the same receptors as THC can ignite astrocyte calcium release. There are no reports yet as to how other entheogens affect the status of the glial network or if they exhibit anything similar to Sigma-1 receptors.

According to the recent theory, neurons are tied to our muscular action and external senses. We know astrocytes monitor neurons for this information. Similarly, they can induce neurons to fire. Therefore, astrocytes modulate neuron behavior. Neuronal activity without astrocyte processing is a simple reflex; anything more complicated such as abstract thought might require astrocyte processing. The fact that humans have the most abundant and largest astrocytes of any animal and we are capable of creativity and imagination also lends credence to this speculation. Basically, it is obvious that astrocytes are involved in brain processing in the cortex, but the main questions are, do our thoughts and imagination stem from astrocytes working together with neurons, or are our thoughts and imagination solely the domain of astrocytes? It may be that the role of neurons is to support astrocyte activity. From: <http://www.scientificamerican.com/article.cfm?id=the-root-of-thought-what>

A study, published in *Cell Stem Cell*, not only introduces a new tool to study the mechanisms of the human brain, it supports the hypothesis that glial cells — and not just neurons — play an important role in learning. "Glia are in a position to regulate the flow of information through the brain," says R. Douglas Fields, PhD., a neuroscientist at the National Institutes of Health. "This concept is missing from all our models." In addition, astrocytes, have evolved as humans have evolved, while neurons have exhibited very little change. A mouse neuron and a human neuron look so much alike that even experienced neuroscientists can't tell them apart.

There is some conjecture that the more complex human glial cells have played a role in making humans smarter. Steve Goldman, M.D., PhD., a neuroscientist at the University of Rochester teamed up with this wife, Maiken Nedergaard, M.D. to test this idea. They injected some human glial cells into the brains of newborn mice. As the mice grew, the human glial cells thrived. These cells spread through the mouse brain, integrating perfectly with mouse neurons and, in some areas, outnumbering their mouse counterparts. All the while, Goldman observed, the glial cells maintained their human characteristics.

Next came the intelligence tests. In terms of social behavior, the humanized mice displayed no noticeable difference, however, these mice are measurably smarter. In classic maze tests, they learn faster. "They make many fewer errors, and it takes them less time to come to the appropriate answer," Goldman says. It might take a normal mouse four or five attempts to learn the correct route in a maze, but a mouse with human glial brain cells usually learned the correct route by the second try. It appears that Glial cells somehow enhance learning. From: <http://wabe.org/post/make-mice-smarter-add-few-human-brain-cells>. *Just as we planted human astrocytes in mice, what will the outcome be when whale and dolphin astrocytes are planted in humans? or vice-versa?*



neurons surrounded by glial cells

Nonlocal astrocytic activity

Asok Kumar Mukhopadhyay, MD believes that there are several reasons brain research merits a change of focus. He points out that the brain is the organ with the highest information density per unit volume and mass. In the brain, information is channeled through four cellular networks; neuron-neuron, neuron-astrocyte, astrocyte-neuron and astrocyte-astrocyte network.

Astrocytic intervention in the flow of information through neuronal channels is primarily meant to prevent informational chaos which the extremely non-linear neuro-neuronal, glia-neuronal and neuron-glia channeling is prone to exhibit. Like information, the mind and often the 'self' behave in both local and nonlocal ways. The brain is the playground of such both local and nonlocal players. Local players means energy and matter confined within defined space and time. Nonlocal players are those which are not consistently confined to a specific space and/or adhered to a definitive time. Therefore, with knowledge pertaining to only local players, explaining brain function with the help of local theories of science and adhering to use of local investigative tools, we are far from understanding the brain as a whole. There are preliminary data available in science on nonlocal behavior in the brain activities and we are hoping to find out how we can outreach this domain.

Two titans, local science and nonlocal science meet within the science of the brain. This issue has not been adequately addressed so far. Like any cell, an organ which works locally and has the ability to communicate nonlocally can be responsive to evolutionary forces. Unlike kidneys and liver or lungs or spleen, the brain with its constituents, neuron and glia belong to such group.

How consciousness, mind, and self of individual neuron and glia make a unitary experience of consciousness, mind and 'self' as a whole within the brain is the issue. The binding element involved in this process of unification is suggested to be information. The closest approximation of the 'abstract' consciousness at the concrete plane, therefore, in most likelihood is the conformational geometry of information involving various groups of neuron-glia at different hierarchical levels operating in different contexts. It may be that the two different networks – the neuronal network and the glial network are separate phases of the brain that, like the tide, ebb and flow as the dominant paradigm depending on the activity and focus of the self.

From: <http://akmukhopadhyayconsciousness.com/pdf/LINK11.pdf>

Glial Cells Hosting and Shielding Consciousness

There are three basic classes of glial cells: astrocytes, oligodendrocytes and microglia. We have already discussed astrocytes, which may help orchestrate the hosting of consciousness: oligodendrocyte activity tends to be restricted to the central nervous system, and finally there are the microglia which may be involved in another important aspect of consciousness, that is the buffering or shielding consciousness from an excessive input. In many ways, consciousness defines itself by the parameters and intensity of its many forms of input. One of the most important functions of the brain

is to modulate sensory input to an acceptable level. As infants grow they gradually develop workable levels of buffering for all the senses. Two major contributors to this process are GABA (a neuroactive amino acid) inhibition and microglial activity. The microglia are sometimes known as neuron pruners, they circulate throughout the brain removing inactive and diminishing neural connections, thus eliminating background static and unproductive sensitivity. If this process is not kept in proper balance, mental instability such as autism or schizophrenia may result. For information GABA significance, see: <https://www.autismspeaks.org/science/grants/gabaergic-dysfunction-autism>, for information on microglial activity, see: <http://www.nature.com/news/microglia-the-constant-gardeners-1.10732>

Cilia and neural communication

Another factor that may contribute to brain function are neural cilia, these are small hairlike whiskers that grow from the surface of neurons. Cilia that appear on nostril nerves aid in detecting smells, cochlear cilia detect sound and cilia on photoreceptors enhance photosensitivity. Recently, scientists have been enquiring into the function of cilia in the brain and their contribution to intra neural communication. It has been speculated that ciliar communication may play a role in brain development and possibly learning and memory. Lack of proper cilia development may play a role in obesity and possibly depression.

Visit: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5607811/>

The Second Visual Platform

As mentioned earlier, the pineal gland may prove to have a visual function also. The pineal glands of lower vertebrates do indeed have photoreceptor cells similar to those found in the retina. In the human pineal gland, the photoreceptor cells have evolved into “cone-like modified photoreceptor cells” known as pinealocytes. For information on this research visit:

<http://www.sciencedirect.com/science/article/pii/S0014483586900424> and www.sciencedirect.com/science/article/pii/S0306452286902885. These pineal receptors may be sensitive to a specific

spectrum of light or electromagnetic stimulus and if this is so, what is the source of stimulation? It could be coherent biophotonic light produced by our own cells as discovered by Dr. Fritz-Albert Popp:

<http://www.worldscibooks.com/physics/1559.html>, or it could be that coherent light-

stimulated-DNA is resonating with the dark energy that permeates 72% of the universe

(<http://www.dapla.org/>) as suggested by Dr, Garjajev or it could be light emanating

from microtubules as suggested by Hammerhoff and Penrose. It could be luminous piezoelectric calcite crystals, or octonia, that are found to be present in the pineal gland,

see: <http://2012thebigpicture.wordpress.com/2013/07/24/the-pineal-gland-crystal-transducer/> and

<http://fedgeno.com/documents/crystal-in-the-pineal-gland.pdf>. These crystals are

birefringent meaning that they have dual refractive indices, thus, according to Dr. Saskia Bosman, enabling them to send and receive scalar waves in the NMPR (Non-Material

Physical Reality) medium, see: <https://www.scribd.com/doc/249841175/Research-Study-on-Pineal-Gland>. Another possible source of photons is crystalline DMT, which is reported to be

piezoluminescent by David Wilcox. As far as anatomy reveals, there is an indirect neural pathway between the pineal gland and the optic nerve via the hypothalamus and the superior cervical ganglion

which is classically considered the pathway by which the pineal is informed as to when it should step up melatonin production. In a reverse manner, this may be a pathway for the pineal gland to send imagery to the visual cortex via the optic nerve, or it may be that the pineal gland sends instructions to the visual cortex to access specific stored imagery.

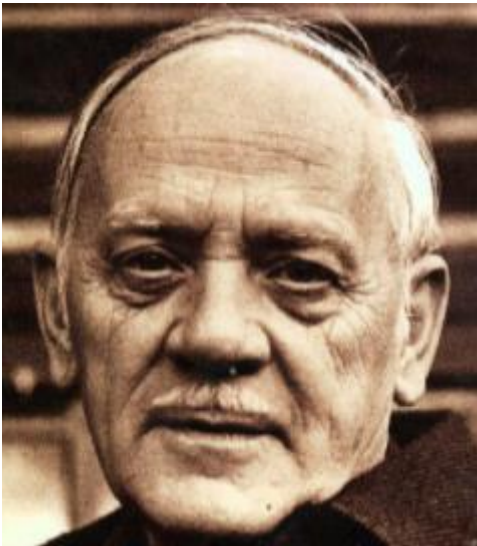
Not only is the source of visual imagery to be considered, be it primary or secondary input, but also the nature of the storage of visual imagery. The closest thing to the brain that we know is the computer, so it is natural to presume that the brain and the visual process in some way resemble the computer: where signals travel down discrete neuron pathways and access stored images and concepts that are stored in discrete locations in the memory storage areas in the brain. That's the way computers work, not brains. It is beginning to emerge that there is nothing discrete about the operation of the brain, there is no discrete storage area, no discrete circuits: the organization of the brain is decentralized, non-local - it is holographic. Any one individual part of the brain contains access to all the information in the brain; the same, it appears, goes for the universe itself. This is an extremely difficult phenomenon to comprehend from our linear Newtonian point of view, but cutting-edge scientific research is heading in the direction of the holographic organization of intelligence, perception, and consciousness. See: <http://www.wakingtimes.com/2015/01/09/nature-mind-holographic-brain/> and <http://sciexplorer.blogspot.com/2012/04/holographic-univ>. In addition, there is a great deal of research into the development of holographic memory systems for computers, because it is the most efficient form of memory storage, visit: http://www.dmphotonics.com/Femtosecond_Holography/Burr%20Holo%20Data%20Storage.pdf

Research by Dr. Draulio de Araujo of the Brain Institute at the Federal University of Rio Grande do Norte, Brazil has verified that the visual activity produced by DMT inspired imagery stimulates the exact same brain centers as does normal vision, though the imagery source is not from the optic nerve but from the frontal cortex which may be in turn stimulated by the DMT enhanced thalamus, visit: http://www.researchgate.net/publication/51647290_Seeing_with_the_eyes_shut_Neural_basis_of_enhanced_imagery_following_ayahuasca_ingestion

Out-of-body Locales and Bandwidth

Robert Monroe is one of the best documented out-of-body, or *ecsomatic* explorers. The term *ecsomatic* derived from the Latin: *ec*, outside, and *soma*, body, was coined by Anthony Peake in his book *Out-of-Body Experience*. Monroe's gift came to him unbidden and he developed his theories gradually over the years after having hundreds of experiences. He wrote the book: *Journeys out of the Body* followed by two more and founded Monroe Mind Research Institute of Faber, Virginia where he developed the Gateway Voyage program using Hemi-Sync sound technology. He also developed a classification system to describe the destination environments of *ecsomatic* experience using the term

“locales”. His YouTube series: <http://www.youtube.com/watch?v=CBiiO6UyWwY> is extremely interesting. Earlier in this article we discussed the various conditions that could instigate a METAtonin episode now we are discussing the various categories of destinations that these episodes can encounter, be they METAtonin, DMT or otherwise instigated.



Robert A. Monroe founder of the Monroe Institute

Monroe described the locales of the OBE as follows:

Locale I – are local ecsomatic experiences where one travels about the physical plane not too far from the body which can be seen below (bi-location) and observes the environment usually from above. Most mild NDE (Near-Death) experiences and most ecsomatic experiences launched from a waking state, such as a METAtonin episode, tend to hover near the body and the general surroundings. Most likely, the secondary visual platform is being used to translate visual information scanned from the physical plane memories and used to create a virtual image of the surroundings, if one actually tries to touch an object during an OBE, they may be surprised. The image of the body has been placed where the body is in relation to disembodied consciousness, but disembodied consciousness may not be able to interact with physical reality.

Locale II – would be viewed as the “dream world” environment, a fantasy world peopled with archetypal characters as well as persons known to the traveler. It is possible to interact with these astral beings and to be guided or misled by them. All the while, one is in a lucid, seemingly fully conscious, self-knowing and self-directed state, that is, the lucid dream state. In this state, one can become aware of their second (astral) body also known as the subtle body or etheric double. Some of the more powerful NDE and DMT induced episodes lead to this locale. One can manipulate the environmental parameters with the power of thought since the environment in Local II is a product of one’s own personal psyche.

Locale III – while Locale II is primarily generated by the subject’s personal memory, Locale III environments are actual parallel dimensions that have their own discrete unchangeable definition. One is a visitor here; one can travel about at will, but cannot change the definition of the environment and in many cases must make many return visits to learn how to navigate themselves to preferred destinations. South American shamans,

ayahuasceros and tabaqueros (who use highly concentrated amazonian tobacco) must receive extensive life-long training and guidance to learn how to navigate the realm of natural primal archetypal levels in order to obtain information on specific herbal healing combinations. Entheonauts who smoke synthetic DMT sometimes end up in parallel intelligent realms – extensive futuristic geometric cities peopled by alien beings who have highly advanced technology and who are eager to communicate with us. (This is one interpretation of Locale III)

Those of us who have had Locale II and III experiences have some great stories to tell, but unless we can somehow verify these experiences, they remain resident in the realm of extremely significant personal experience, the certainty of which cannot be verified. People who have accompanied an ayahuasca guide into the herbal realm can verify their shared Locale III experience with their guide. Proof of the “reality” of this type of experience is also evident in the shaman-revealed herbal combinations that are either divulged or sold to pharmaceutical manufacturers who then synthesize, refine, test and manufacture the product. As stated earlier 74% of today’s pharmacopeia originates from this source. Visit Joe Rogan podcast #1133 with Dennis McKenna for details on ethnobiologic research in the Amazon: <https://www.youtube.com/watch?v=9OQ6wFocx9M>

For the majority of us who have had an ecsomatic experience in Locale I, the real time “real” world, the one question always remains: “was it real?” It certainly felt real, unmistakably real, even though we were floating about separated from our body. As mentioned earlier, author Anthony Peake after an exhaustive investigation has, to his surprise and disappointment, concluded that the ecsomatic Locale I experience is not actually a perception of true physical reality. Peake finds anomalies in every proof indicating that what is “seen” is an internally generated hologram that closely, but not completely, parallels the real world. Thus he concludes that the “mind’s eye” is always turned inward, which is not surprising, for, despite hundreds of research studies undertaken in university and hospital environments by dedicated scientists, no conclusive scientific evidence has yet to emerge. This could be a disappointment to those of us who have had very meaningful life-changing ecsomatic experiences. Disappointment because we have experienced a change, and this personal transformation would be seemingly more “certified” if what we had witnessed from above was scientifically verifiable.

Let’s take a technical look at some of the assumptions that led Mr. Peake to this conclusion. For example, we’ll observe the famous remote viewer Mr. Ingo Swann who worked with Professor Harold Putoff and Russel Targ of the Sanford Research Institute. Suppose Mr. Swann is remote-viewing an object 100 feet from his body that he is trying to verbally describe. One could assume that Swann’s consciousness has detached itself from the host body and has located itself 100 ft. away, above the object. What is the exact nature of the connection by which consciousness transfers visual information to the secondary visual platform of the physical brain through space, be it feet or light years away? This cord could be a multi-stranded mini-wormhole phantom DNA field that folds space via quantum entanglement as detected by Dr. Garjajev of the Russian Academy of Science, and as also suggested by Stephen Hawking. This could be the “silver thread” that is often referred to by many psychics, or could it be some other space-traversing phenomenon such as Penrose/Hammerhoff microtubular coherent light proposition? Whatever the connection is, the question remains: can this non-physical, non-electromagnetic connection transmit (or “stream”) as much visual data to the viewer’s brain as the human optic nerve is able to? most probably not. This is simply a matter of bandwidth, most likely the image definition sent to the second visual platform of the brain is of poorer resolution.

Furthermore, since the temporary remote viewing DMT-defined neural pathways are not as resilient as established mainstream pathways, they may be more vulnerable and subject to peripheral neural interference.



Remote viewing and the rings of Jupiter

Next, we have to consider just what exactly is the makeup of this "mind's eye" that gathers and encodes the visual image? This is even more of a challenge. This viewing-at-a-distance-consciousness has to convert the scene being witnessed into some type of signal. Based on what we know about optic transmission, this remote viewing individualized self-consciousness (which has no detectable physical presence) should also feature some kind of focusing apparatus consisting of a NonMaterialPhysicalReality lens and an NMPR cornea or similar data receiver that converts a focused image into a signal. Of course, there may be some alternative image processing phenomenon at work here as well, such as the previously mentioned Pineal Rosetta theory. One explanation given is that the remote viewer is viewing the distant object using their "subtle" or astral body complete with subtle optical apparatus. However, information still has to be transferred back to the host's physical brain or is everything being processed in the subtle brain? If so, how does the subtle brain download to the physical brain? most likely this is accomplished via the secondary visual platform which may already have its own mental imagery agenda. A remote viewer has to be very discerning in eliminating unwelcome mental imagery that may have been added the physical plane image information.

These visual image pathways may exist, and if they do, it would be most likely that once one had opened their ecsomatic visual channel, it could require a considerable learning process to become familiar with the operation of it. This could require a great deal of practice, concentration and trial and error; just as it does with newborns when they first learn to navigate their new primary visual apparatus; just as it took Robert Monroe several years to become familiar with his gift. Michael Talbot on pg. 235+ of *The Holographic Universe* discusses this same problem from a holographic perspective. As previously mentioned, it may also be that the intensity, direction and clarity of a DMT or METAtonin ecosomatic experience is determined by the particular formula of the DMT mixture that enters the brain environment. Just recently Dr. Charles Tart has published an article in the *Journal of the American Society for Psychical Research* documenting the progress in training a subject to enter out-of-body consciousness to the point where she is able to read a 5 digit number during an "OOB" session and report it after waking. This is one of the first examples of a scientifically verified veridical experience. In addition, Dr. Tart recorded brain wave activity during the session. See: <http://www.near-death.com/tart.html>

Thus the Locale I visual experience could almost be considered a handicapped or easily misconstrued form of vision, and it should not be surprising to find anomalies and aberrations in reported images in test cases. Furthermore, the brain is quite “plastic” and it has been shown that receptor site arrangements are subject to change. It is possible that there are several types of DMT-activated neural pathways that may result in both intrasomatic (within the realm of the body) and ecsomatic (beyond the confines of the body) visual phenomena or a combination of the two.

There is one OBE incident I heard of that did involve remote-viewing the real-time physical world as a means of survival. It happened several years ago to a friend of mine, Laura C., and it saved her life. At the time she was putting up with her "second, soon-to-be ex -husband, but it wasn't easy. He had a habit of beating her. In the middle of a bad session, she was laying on her side with her head covered as he was raining blows down on her. She thought she was about to die. All of a sudden she found herself up in the corner of the ceiling looking down on the situation. She looked about desperately and suddenly she saw what it was that she was looking for. It was something solid, something nearby she could grab on to that she could do damage with, like a hammer or a flashlight. She immediately returned to her body, reached out for the object defended herself and made it to safety. To this day she doesn't remember what it was that she grabbed, but it saved her life. This is an example of how setting and mindset can determine the nature and goal of a transcendent out-of-body experience. The DMT-based neurohormone that her pineal secreted had a specific directive: this was to be a Locale I experience with no interference. There is no doubt that many a battle-hardened soldier and many a victim of torture has had such an experience as well. It could be said that the pineal/OBE mechanism is, among many things, one of our tools for survival.

A further variable to consider that may determine locale is the particular modes of the DMT brain penetration process, including the topographical DMT delivery pattern, the concentration of the DMT infusion, and the speed of the DMT cascade. Rick Strassman's volunteers experienced a rush of chemically pure DMT delivered directly to the bloodstream with MAO present; ayahuasca, on the other hand, gradually delivers an organic DMT/MAO inhibitor infusion that enters the bloodstream gradually via the digestive system. There are also smoked and snorted forms ayahuasca that have their own distinct delivery characteristics. The method of ingestion can affect the nature of the experience as detailed in chapter 4 *The DMT Diaries* by Steven Turner.

Last, but not least, there is the internally induced METAtenin/pineal gland pathway - which is responsible for the great majority of the spontaneous **OBE** experiences experienced by the general public, artists and spiritual practitioners. METAtenin may be just pure unadulterated DMT, but additional enzymes and co-hormones that are byproducts of the DMT methylation process may be present also. These modifiers may be generated according to specific instructions received by the pineal gland to enhance or direct the **out-of-body** experience in a specific direction or at a selective sensitivity. In addition, glutamate production can further modify the outcome. It may also be discovered that out-of-body consciousness is not just limited to a modification of the brain circuitry; it may involve several centers in the body. Another possibility is the shifting of consciousness from the left hemisphere of the brain to the right or the two functioning in unison.

Bear in mind that there are two basic forms of DMT; the predominant one is N,N-DMT , a rarer form, 5MeO-DMT also occurs in nature but is not endogenous to the humans and is considered to be

more powerful. it is also described in the aforementioned *The DMT Diaries*, chapter 6 and is the main subject of James Oroc's *Tryptamine*

Palace. Visit: <https://www.youtube.com/watch?v=rH1bfZ1p6sg> for a description of 5MeO effects or visit Section 3 which describes the work of Dr. Martin Ball who uses it for his therapy.

Peake's Quantum Peak

Anthony Peake, author of *The Infinite Mindfield*, has long pursued the concept of micro-wormholes created by the brain while under the influence of DMT, basically it is his theory that the mind can access certain locales such as parallel realities via the holographic memory field that exists as a dark matter phenomena which is accessed by quantum level micro-wormholes, a concept supported by Stephen Hawking and scientifically known as Einstein-Rosen wormholes. These wormholes create a segue to the Zero Point Field. The Zero Point Field is a thermally null energy field where entropic realities cease to exist, where space and time as defined by entropy have no meaning. Since there is no space, there is no distance and since distance is required to measure velocity and acceleration, there is no time. Since it is a point with no other object to compare it to, it has no size and within it there resides a spaceless field, a holographic field that when accessed gives access to everything at once, the akashic record. This is the realm of the Bose-Einstein Condensates where all the physical laws of our realm are turned upside down and inside out.

The one problem in this theory that needs to contend with is "thermal decoherence" as described by Stuart Hammerhoff. How can a phenomenon that requires absolute zero conditions take place in the warm moist environment of the brain? The answer is that it takes place at a quantum level in the micro trabecular lattice of microtubules. This lattice is made up of dipoles that are 7 to 9 nanometers in diameter. In 1968 Dr. Herbert Frolich discovered that these nanoscopic dipoles could achieve a Zero Point coherence at temperatures way above absolute zero known as "Frohlich coherence". A full explanation of this theory is in Mr. Peake's aforementioned publication. Further information is available at the website of Dr. Bernard Haisch www.calphysics.org. The Zero Point Field and quantum holographic reality are more than a theory, functional MRI, or fMRI was developed by Dr. Walter Schempp and is based on this phenomenon.

Who knows, there could be a myriad of different categories of out-of-body destinations, particularly when one considers the wide range of Locale III destinations that have been reported: from unpleasant alien abductions to super-futuristic techno worlds on to heavenly worlds of wise angelic beings, the throne of God and everything in between.



Setting, and the three phases of Mindset

When Dr. Rick Strassman set up his DMT testing procedure it was necessary for him to follow the rigorous guidelines of the National Institute of Health in all his procedures due to the controversial nature of his experiment and in doing so he had to ignore the classic entheogenic launch guidelines of “set (mindset) and setting” first described by Timothy Leary and endorsed by most experienced entheonauts, the same guidelines Strassman described in his own book, *Inner Paths to Outer Space*. Strassman had little latitude when it came to providing a supportive setting, but, as one of the participants in the movie *DMT, The Spirit Molecule*, Susan Blumenthal, stated: “the DMT rush was so incredibly sudden that set and setting were unnecessary considerations.” The “setting” of a typical hospital room and the presence of two or three onlookers with clipboards in their hands was hardly the relaxed, loving, supportive, protective, restive environment that is usually desired. Perhaps someday the same experiment can be launched from a proper supportive setting, it would be interesting to see if the tone and texture of the DMT experiences become more stabilized and focused. James Oroc in his book *Tryptamine Palace* also supports the theory that even with the DMT experience (in this case 5-MeO-DMT) which is essentially an out of body experience, setting is still a relevant concern. The body left behind needs to be attended to, especially in the event that there are signs of anxiety. Also, proper setting also buffers the return to the realm of normalcy.

Dr. Strassman did have some control over the mindset of his participants, though, in that he specifically chose participants who exhibited consciousness flexibility, that is, they had previously experienced altered states of consciousness and were more accustomed to the sometimes unnerving sensation of consciousness transition. It should be noted that the complete concept of mindset involves more than just consciousness flexibility; it also includes the factors of mindvector and mindoversight.

Consciousness Flexibility

This is not an endorsement for people to experiment with consciousness-altering substances, but it is a fact that psychoactive drugs, preferably called entheogens, can help open the mind to new levels

of awareness and mental function. This unique property is being utilized by present day therapists to help unlock the grip of depression, addiction and the existential distress of approaching death as described by author Michael Pollan: <https://massivesci.com/articles/pollan-lsd-psychedelics-review/>. When used wisely and respectfully, one can unlock the grip of past trauma and furthermore experience heightened levels of visual, auditory, intuitive, creative, mental and empathetic sensitivity resulting in a shift in consciousness, spiritual connectivity, and self identity. In the wrong hands or with the wrong intention in mind, these drugs can be viciously destructive – and in a great majority of situations, they are. Like any other very powerful tool, psychoactive drugs need to be handled and used very respectfully - preferably in the company of a guide or loving protector in a secure, stable environment. There is no doubt that the spiritual expansion of the 1970's was mainly a result of the doors of perception that were opened to many an experimenter. Note: DMT is labeled an illegal psychedelic drug but is really not a mind-altering drug – it doesn't alter consciousness- it reboots it... temporarily. It is a consciousness displacer, displacing consciousness from its habitual environment to another palpable reality. Furthermore, some of these other realities are intelligent, interactive and not necessarily human. Having originally experienced these altered mental states brought on by external chemical stimuli, many consciousness adventurers have sought natural, traditional methods of mental and physical discipline that would result in the same or similar state of heightened awareness. Thus came many sages west.

What is also gained from being experienced with psychoactive drugs is a familiarity with the *transition experience*, that is, the ability to sense the onslaught of a consciousness shift without developing mental panic. This is especially acute for individuals who like to be in absolute control of their world, for one has to be open, trusting and willing to be relieved of their familiar state of normal consciousness when the doors of perception begin to shift to a more insightful and at the same time unfamiliar territory - a territory that one has not experienced before. In most cases, one must willingly yield control, in order to enter into a state of helplessness, before new ground appears. If the transition is not embraced, it can quickly degrade into panic and paranoia. Those who wish to experiment might take some advice from Dr. Albert Hoffman who on page 338 of *The Spirit Molecule* explains his fondness of enjoying the subtle effects of very small doses; a practice called microdosing, see James Fadiman's video: <https://youtu.be/6AfFM8pfy4s> . Those who have personally experienced the presence of the Divine during an entheogenic experience might consider taking part in the Johns Hopkins spiritual experience survey: <http://flyer.psychedelicenscounteringthedivine.org/>

Entheogens are now experiencing a rebirth as a therapeutic tool for dealing with PTSD, depression and addiction, for information regarding this development read Michael Pollan's *How to Change Your Mind* and be sure to visit the website of the Beckley Foundation: <https://beckleyfoundation.org/about/the-foundation/>

Mindvector

If one is going to psycho-launch their mind into an uncharted territory with DMT, ayahuasca or some DMT derivative, it would behoove them to create in their mind an actual destination: the mindvector. The more destination-focused one is, the greater the chance of success. It's quite probable that a synthetic DMT launch, as explosive as it is, would benefit from some guidance. The question is how can one determine a destination when entering a realm that one has never been to? One of the most obvious destinations could be Heaven. Why not? That's our basic concept of where we go to when we die. Unfortunately, Heaven or Hyperphysical Reality, The Mansion Worlds.. etc. is a rather extensive reality.

This is like saying “Oh, just drop me off on Earth” – you could end up in Borneo, Siberia, the Sahara or downtown Missoula. Heaven, the Beyond, too, is a vast reality peopled with tens of thousands of tribes and localities – many of which have been described by artists, mystics and fantasy and science fiction writers throughout the ages. The question remains, where does one choose to go? The answer may lie in the concept of the *Extraphysical Hometown*, as developed by Dr. Waldo Vieira who is mentioned later in this article

The concept is quite simple: each of us has arrived here at boot camp Earth from a specific hyperphysical home base that is peopled by a specific hyperphysical root race and it is this hyperphysical homeplace that we will return to when we have finished our tour here. Basically its hOME, it's where we come from. Many individuals who have returned from OBE's and NDE's describe how they had felt “at home” in an extremely profound level never experienced before. This can happen to eternal beings locked into a temporary timescape, or to those who have struggled with being out of place all their lives and suddenly find themselves at home, like Nina Simone in Liberia. Perhaps you have seen an illustration of a place that you felt extremely familiar with, such as a painting by Maxfield Parrish or have met someone that you immediately resonated with effortlessly at a very deep level, keep these impressions of place and personality in mind and cultivate them for they will help you construct the concept of your very own Extraphysical Homeground, Campo Spiritual, or Place of Eternal Origin. It may be a destination that has been experienced in a lucid dream.

Concentrate on this locale; maybe even give it a name, Avalon, for example. For visual inspiration there hundreds of heavenly and fantasy landscape images and meditation videos available. If you need inspiration on a mental/logical level you can read the descriptions of the Mansion Worlds, Havona, The Sea of Glass, Life on a neighboring Planet or Paradise in the *Urantia Book*. If you seek inspirational thought imagery, you can read The Final Frontiers section (p.189+) of *Multidimensional Man* by Jurgen Ziewe, visit: <http://www.multidimensionalman.com>, the Chapel of Sacred Mirrors: <http://cosm.org/>, The City of Light as described in *The Eternal Journey* by Dr. Craig Lundahl or *Afterlife a Guided Tour of Heaven and Its Wonders* by Emanuel Swedenborg. Any and all of these will help you build your very own concept of your Heavenly Homeplace. Perhaps someday someone will publish a book portraying various spiritual homegrounds or perhaps Waldo Vieira's academy (IAC) already has.



Waking in Heaven

Mindoversight - Meditation

Thousands of people have written about their hyperphysical experiences and many have commented on how difficult it is during an experience to maintain the delicate balance of being conscious of events while not becoming too conscious – whereupon the excursion ends with a sudden return to the physical body. Just as an athlete must repeatedly practice to perfect physical performance, the entheonaut must develop a mental over-coach who observes the play of mental activity and moderates the intensity of the thought process while remaining anchored in

hyperphysical awareness. For when one moves above the physical plane they enter the mental plane where conscious thoughts have the power to mold reality. As Ziewe says "one is moving from the level of matter-over-mind to the level of mind-over-matter." In one way, it involves the development of an additional sense: the sense of space.

Just like taming a wild horse, taming the mind/thought process takes patience and persistence, there are no short-cuts and no one other than one's self can do the work it requires. We are not born with the overseer, we have to consciously make the effort to claim it – and it may be one of the most important challenges of a lifetime. The mental muscle that needs to be developed doesn't even exist when one first starts trying, but it develops with effort. The exercise is not complicated – yet it lasts a lifetime. The exercise is deceptively simple: stop thinking, better yet, learn how to distance the thought process - to diminish its distracting power, actually, to encourage the thinking process to sleep, while at the same time consciousness manifests beingness. How long can you stop a new thought from entering your mind? ten seconds? The problem is... that the harder one tries, the worse it gets! Welcome to the seemingly ridiculous practice of meditation. It's no longer: "I think, therefore I am", not quite..slowly it becomes "I think *and* I Am" - meditation makes this distinction.

Why would anyone want to step outside their thought process? Don't we spend our waking lives traveling down an endless river of thoughts and sensations? Why would anyone want to control the flow? And how is it done? One has to mentally think the words "stop thinking" in order to begin the process of halting the thinking process, if that makes any sense. However, it can be done and it has been practiced for thousands of years and is actually the keystone of the Buddhist practice of meditation. There is a way to do it and many methods available. One can read about meditation, even conceptualize it, but this is worthless; basically, it just has to be done and then it begins to work. The result is that one gently removes the thought process from center stage. Thinking is a natural brain process; it really can't be stopped, but central focus can be realigned by developing visceral space awareness: actually, it is not that thoughts are set aside but more that awareness develops a new anchor. One is shifting awareness from the realm of the march of time to an awareness of centralized space. In this calm state of spatial centeredness the ego is quieted, thoughts are muted and consciousness is able to access background information here-to-fore inaccessible.

Meditation sessions usually last 35 to 55 minutes while sitting with a straight back, hips rolled forward. Within 15 minutes the experienced practitioner begins to experience a vertical energy field that is centered in the third eye area and extends upward and downward. In time the field begins to coalesce and a sensation of inner space begins to prevail. This is not a visual or auditory sense; it is an entirely new and different sense: space is felt as having its own beingness. In a way space becomes visceral and one becomes part of that solidity that is bonded in stillness. Just as a potter forms a shapeless mass of clay into a tall slender pillar, directed awareness creates a vertical spinal column anchored in space and centered around the spine - being so well defined that one can feel resistance to it when the body moves: visceral space awareness, a central core of silent being. Thoughts are still present but have moved to the periphery like the wind in the trees in the corner of the eye. Cool air reaching into the upper passages of the nasal cavity energizes the base of the brain much in the way a gentle puff of air on an ember causes it to glow and as it travels down the windpipe it empowers and solidifies the central core. This in many ways describes the beginning phases of Tibetan *maitri* meditation with a focus on space consciousness and universal compassion, <http://www.shambhala.org/maitri.php>. Meditation is the palace of manifest silence and space. As Jack Kerouac describes it: "The silence is so intense that you can hear your own blood roar in your ears but louder than that by far is the mysterious roar which I always identify with the roaring of the diamond wisdom, the mysterious roar of silence itself, which is the great Shhhh reminding you of something you've seemed to have forgotten in the stress of your days since birth."



Our consciousness is embedded in a physical/radiative reality but
the Silence of Meditation gives it access to Holographic perception
Where every object becomes a mirror of the entire Universe,
And Every now is filled with Eternity

Visceral Space Consciousness

Space Awareness is slowly formed by the focused and quiet mind in the environment of the stilled body. Breath control, including the diminishment the breath, can encourage awareness stability and growth. Visceral space is tactile. The organ that actually perceives it is consciousness itself. Visceral space starts as a pillar that occupies the spinal cord and can be sensed within the body core during meditation. This is the beginning of the process where consciousness begins to define its placement. The pillar resists movement. Consciousness stilled in the core of the mind gently anchors it to the holographic background. The experience of visceral space awareness cannot be detected on the physical level, only consciousness can experience it in a way that may seem physical, but this is a physicality rooted in holographic vectors. From the central core, visceral space expands outward to envelop the surrounding environment, and space becomes manifest to infinity. Unlike the original 5 senses, we are not born with this sensitivity – it must be cultivated. And yet when the other 5 senses fade, it remains. It is our anchor, it is the canvas that the other five senses fill. It is the core of meditation. It is the space consciousness and timeless transcendent presence that Hospice workers refer to when dealing with the destiny of death: <https://yorkspace.library.yorku.ca/xmlui/bitstream/handle/10315/10011/CJS0005.pdf?sequence=1> It is the timeless core of space that our other senses fulfill in our physical life which, according to Eckhart Tolle, <http://communicate.eckharttolle.com/news/2014/09/12/inner-space-consciousness/>....is consciousness finding itself.

Visceral spacetime meditation

Gen Kelsang Nyema in her Youtube presentation: *Happiness is all in your mind* (<https://www.youtube.com/watch?v=xnLoToJVQH4>), says that there are 2 types of meditation: the one that monks do in monasteries and meditation done by regular active people. The goal is to bring the profound centered stillness developed in monastery discipline into daily motion through a series of steps. Starting with Yoga > Posture > Chanting > Breathing > Thought Displacement > Visceral Space Perception > Embodied movement > and finally: Entering the world of time while embracing space. Following is a suggested program:

5+ minutes of yoga to stimulate the chakras including the plank for 2 minutes.

Assume a straight-backed sitting posture so the spine can assume a rested, balanced state.

Perform 21 Om Chants slowly rising from the stomach starting at as low a pitch as possible then gently rising.

10 minutes: pranayama breathing through the nose. The in-breath stimulates the back of the upper nasal cavity and energizes the brain, the pineal gland and the spinal cord. The out-breath, expelled through nose is an uplifting thrust that raises the body gently upward. While breathing, exercise the

thought displacement process.

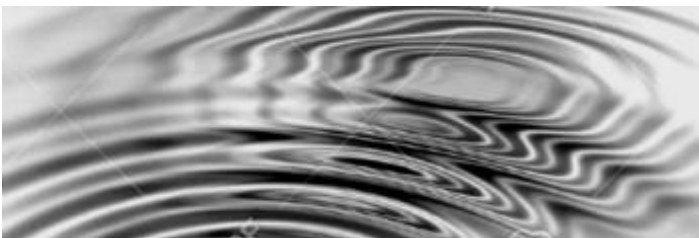
Thought displacement: do not try to stop the thinking process but try to displace thoughts to the sidelines; thoughts are still perceived as part of the consciousness process but no longer at the center of consciousness focus. Of course, one can't think this; consciousness has to gently move the thought nexus to a side space.

35+ minutes: Visceral space awareness: as prana energy enters the head direct it down the backbone and remaining still as possible, begin to quiet the breathing process, slow it to a minimum and let stillness enter from above, like a gentle drizzling mist of falling droplets so small that they can barely be detected. The stilling effect of the mist induces space tactility, a sense of firming up and gentle solidification along the core of the backbone column which will begin to feel slightly immovable, slightly frozen in place, rigid and at the same time sensitive to the slightest movement. Eyes still closed.

Strengthen the column and slowly let the spatial core expand – it can fill the whole room and more....breathing will keep the sense of space strong, yet it is delicate.

Then: maintaining the breath, open the eyes slowly, keep the centered space core strong. With the breath steady, raise the hands and arms to horizontal, then vertical then in all directions. Slowly embrace movement; space is centered and movement has begun. Breathe steady, slowly rise to standing, as in Zen walking meditation, and slowly walk around the room three times with small steps in cadence with the breath.

Then walk out of the room.....



Contrary to conventional thought, space is not empty. The FedEx motto is: "The World on Time", well, the motto for meditation is: "The World on Space". From the quantum perspective, space is absolutely full (zero point field or ZPF). Space is like the ocean and physical reality is a wave that travels on it. When a wave is moving across the ocean surface, nothing is really moving, the water molecules are not moving forward or backward, they just momentarily rise and fall back to their original state – the wave is a temporary perturbation and then it is gone. Space is the background (ocean) and physical reality is the foreground that ripples on it. This concept is extremely hard to grasp and yet it is one of the fundamental cornerstones of quantum theory that is being brought to the forefront by writers such as Ervin Laszlo, Bernard Haisch, and many others, for further information visit <http://www.mindmattermapping.org/>, a project sponsored by Princeton Engineering Anomalies Research Institute.

The grounding in space that meditation promotes is what provides grounding for our consciousness - a consciousness of consciousness.

In light of this perspective, one might consider the question: what creates the ripples on the surface of space? The animating principle seems to be consciousness itself; the breath of life that gives form to the physical plane. This universal animating field of life consciousness was fully potentialized before the "big bang" and then reverberated through space in the great selective subtraction that was

actually an implosion of organization, a disassembly. Before the big bang, or big deconstruction, every potential future was present; after the big bang, only primal matter and energy remained to recombine again down the tube of time. This raw material is destined to evolve through time into the many futures that were fully present before the big subtraction. These futures are being molded by the unfolding of the ever-pervasive field of universal life intelligence rippling through space – which some might call God or universal consciousness restricted to linear time. The concept of the universal field of life consciousness intelligence is being promoted by Robert Lanza his book, *Biocentrism* (<http://www.robertlanza.com/>), and by David Wilcox and his *Source Field Investigations* (<http://divinecosmos.com/>), Rupert Sheldrake and many others. The big subtraction is a concept promoted by Dr. Bernard Haisch in his book *The God Theory* (<http://www.thegodtheory.com/>). The inspiration for his conception may have evolved from a passage in the second book of the *Conversations with God* by Neal Donald Walsch (<http://www.nealedonaldwalsch.com/>) series in which God explains why it created the physical universe: a platform for existential reflectivity evolving through time.

Further evidence or the benefits of meditation has been verified by British Scientist, Maxwell Cade (<http://www.mindmirroreeg.com/w/MaxwellCade.htm>) who developed mindmirror biofeedback technology and the resulting brainwave therapy (<http://www.brainwavetraining.com/brainwave.htm>). Dr. Cade discovered that in addition to the four standard brainwave patterns there was what he called the "5th state" or awakened state of mind that synchronizes both sides of the brain. This state of consciousness synchronicity can be attained through meditation. Recently, it was reported in the Scientific American Nov. 2014 issue that experienced meditators sustain an EEG pattern of 25-42 hertz, which may be this 5th state. The article also mentions that meditation increases the volume of gray matter in particular parts of the prefrontal cortices and decreases the volume of the amygdala, an area of the brain involved in fear processing. A further benefit appears to be increased longevity; at the cellular level meditation tends to lengthen the telomere segment at the end of a DNA strand, thus increasing its ability to further replicate.

This concept of the 5th state refers to the classic designation of 4 brainwave states encountered during the normal waking state, in ascending order: Delta, Theta, Alpha, Beta; going from 0 to 32 cycles per second. Gamma brain waves (the fifth level) takes off from where Beta ends from 32 to 100 cycles per sec. Contemporary researchers have since added more discrete levels of activity (Mu, Epsilon, Lambda, etc.) so that the full spectrum now includes up to 12 levels. Gamma still defines the state of 32 – 100 hertz and is generally described as an elevated level of consciousness that is attained in meditation, hypnosis, moments of insight and epiphanies and also in sessions involving entheogenic awareness, as in ayahuasca ceremonies where DMT is the active agent of illumination. Gamma level spikes have also been detected in the brains of dying rodents: <http://www.ncbi.nlm.nih.gov/pubmed/23940340>, as well as larger mammals and humans. It has been suggested that pineal secreted endogenous DMT, METAtonin, may also elevate dominant brainwave frequency to the gamma level as well during Out-of-Body and lucid dreaming experiences. It is also important to note that brainwave activity may be detected in just one or several regions of the brain. In the study involving two volunteers on ayahuasca, the gamma brainwave presence was global. See: <http://q4lt.com/the-mystery-of-gamma-waves> for further discussion.

For further scientific meditation research, *Siddhartha's Brain* by James Kingland and *Altered Traits* by Daniel Coleman and Richard J. Davidson give a historical view of meditation research from the 1970's to date and ongoing scientific studies into the benefits of meditation are being pursued at the Mind and Life Institute in Boston: <https://www.mindandlife.org/> and at the Max Planck Institute for Human Cognitive and Brain Science, Leipzig, Germany: https://www.mpib-berlin.mpg.de/en/search/apachesolr_search/mindfulness.

In fact, it may not matter what method is used to achieve a meditative state. Be it Zen, Vipassana, Taoist, Mahavishnu, or Benedictine, it may make no difference. The only thing that counts is dedication. If one makes a concerted effort to sit still with a straight back, to listen to the breath, to give the mind a rest or a diversion with a mantra....it will manifest. Just keep doing it. The meditative state arrives **despite** the mind, and perhaps, despite the methodology. It's the effort that counts....the willingness to discipline oneself to continue....this is it what encourages the meditative state of inner peace to eventually manifest, and it may take many long hours, but it will come. And.... It's not so much the method that counts....It's the Process. Just do it

Since consciousness itself is proving to be a fundamental building block of the universe and meditation is an exercise in focused clear consciousness, it may be that combined or synchronized meditation may prove to be a formative power in the development and evolution of our reality. Several groups are attempting to research the phenomenon of collective, even global, synchronized meditation, including www.1giantmind.org, <http://globalmeditation.chopra.com/>, <http://gabbyb.tv/> and <http://theintentionexperiment.com/the-experiments>.

Group Meditation: A Squadron In Silent Singularity -O-

The Trinity of Consciousness

Through the lens of Christian perspective, the concept of consciousness, based on the ancient holy trinity of the Father, the Son and the Holy Ghost, would be seen as follows: The Holy Ghost is the non-local holographic spacetime, the akasha, the information-dense repository field of all information regardless of time and space. It has no thermodynamics, there is no arrow of time. It contains all the information the universe will ever have, its waveform is flat and parallel, seemingly infinite and eternal. There are no centers of reference, it is all-pervasive, all information is accessible from everywhere equally and its appearance on the physical plane, of which there is barely any at all, may be somewhat ghost-like. The Son is the physical plane: local, time-locked, thermodynamic, entropic, individuated, radiative, dense and mortal, and its waveform is curved. It is here that selective information of the holy ghost reality is collapsed along the line of time according to internalized mathematical formulas for fractals, golden mean, and other mathematical ratios that are embedded in DNA, thus architecting life as we know it. It is here that consciousness can occur as individuated life forms. The Son and the Holy Ghost both occupy the same space and are undetectable to each other. And the Father is consciousness itself, the knowing, the I that is am, and it can access both the Son and the Ghost as a particle or as a wave. It is the bond between them, the knowing that allows the Son and the Ghost to mirror each other, the Father is the creator of this great division of totality, and the segue between them as all three resonate together. This trinity can also be viewed through the lens of Islam, Buddhism and Taoism: The Creator, The Radiative Manifest and the Holographic Akasha

Spacetime. This is really the essence of what this page is about. A visual metaphor for this relationship can also be found in the nonagon concept of the kabbalah on the video <https://www.youtube.com/watch?v=e7tmQX8BRRM&feature=youtu.be> at 3 minutes and 20 seconds.

Left Brain Dominance

During meditation one is focusing on increasing awareness of consciousness and shifting that consciousness from the domain of the past/future logical self-centered left brain hemisphere to the cosmic all-enveloping here-and-now intuitive right brain non-local spatial environment. This is beautifully described not by a Zen monk, but by brain anatomist Dr. Jill Bolte Taylor who was forced to retreat to her right brain as her left brain died, slowly losing its blood supply due to a stroke. Luckily, she was able to survive and recover her language skills. Her testimony is most moving: http://www.ted.com/talks/jill_bolte_taylor_s_powerful_stroke_of_insight?language=en. Her book is *My Stroke of Insight*. Additional insight into the result of left brain dominance is discussed by Tony Wright and Graham Gynn authors of *Return of the Brain of Eden*. Perhaps there was a time when humans were not as adversarial as they are now, at least that is their presumption. Simply put, our fruitarian arboreal ancestors who lived approx 200,000 years ago were non-confrontational peace-loving beings with brains 10% larger than ours today (this much has been verified). Presumably, that additional 10% was the crowning touch that bought out the best that humanity has to offer although modern-day anthropologists claim just the opposite. Climates and ecosystems change and as they do, so does the diet of those who must survive. As the human race "evolved" from an arboreal fruitarian diet to a savannah grain-based meat-eating diet, it lost the endocrine support of flavonoids and beta carbolines provided by fruits. According to Graham and Gynn the new diet accentuated the increase of testosterone and steroids that shortened the development time of the adolescent brain and altered the timing of melatonin secretion decay as well as the performance of the pineal gland. The ultimate result of this shift was the emergence of the dominant left brain. According to Wright and Gynn, there was a time when our logical and intuitive/creative sides were in balance, but we have since lost this balance due to this subtle nutritional shift - almost impossible to recognize. Their book provides a number of anthropological, biological and historical references to support their thesis as well as an in-depth investigation into the function of the two sides of our bicameral brain.

Visit: <https://www.youtube.com/watch?v=UnEom7OjXvo>. Perhaps researchers will be able to focus tCDS (transcranial direct current stimulation) and other therapies to temporarily calm the left half of the brain so that individuals can experience the normally recessive right brain consciousness.

The concept of the bicameral lateral shift of consciousness is also the subject of Anthony Peake's *Opening the Doors of Perception* in which he compares the effects of several brain disorders: migraine aura, temporal lobe epilepsy, schizophrenia and Alzheimers which he categorizes as a *Huxleyan Spectrum* of symptoms that are related to various degrees of temporary and sometimes permanent bicameral brain consciousness shift. Perhaps this is a description of our shift into the kali yuga.

Some of us don't have to meditate, in some cases the lessons of mindfulness can be woven into the progression of life's circumstances. Dr. Milton Erickson, eminent psychiatrist, encountered many ordeals in his lifetime that honed his humanistic perceptions. He had a severe case of polio at age 17 and at age 51, a relapse, and at another time he almost died from anaphylactic shock. While trapped in a body 95% paralyzed, he was forced to spend a great deal of time observing humankind and he began to discern the great divide in human behavior between what we say and what we are. When we are conversing in thought forms, ie words and figures, there is always another conversation in gestures, postures, and eye movements, a conscious message and an unconscious message. Though we think we are mainly conscious most of the waking time, the unconscious is always present – listening and processing. Dr. Erickson was able to perceive and to speak to both of these aspects of a person. Perhaps we're talking right/left hand brain. He was usually able to treat most mental ailments in two or three visits, sometimes just one. Usually, most of his "prescriptions" involved giving

patients very specific tasks to complete, and, in almost every case, it was the very task needed to bring about a complete healing. Visit: <https://www.wizardofthedesertmovie.com/>. Most of the solutions to our specific problems emerge from our unconscious, our core or true self, and, in many ways, meditation is a way to arrive at that same place. In meditation one is gently reminding oneself that the chatterbox is a member of the orchestra, not the conductor.

An interesting insight into left/right brain dominance is discussed in the book *The Orchid and the Dandelion*. The author, pediatrician Dr. Thomas Boyce, has observed that roughly 20% of the child population exhibits Differential Susceptibility, DS, which is a noticeable overall increased sensory susceptibility regardless of all differentiating factors such as economic, social and hereditary backgrounds. In order to delve deeper into possible causes, he took his search to the National Primate Research Center in Portland Oregon. Working with macaques, found a correlation between the occurrence of DS and disparities in R/L tympanic, ear, temperatures. Those macaques who exhibited a noticeably higher temperature in the right ear were also the group that exhibited DS. This relationship also extended to human children. Since the relative blood flow to the right or left ear is indicative of relative blood flow to the right and left hemisphere of the brain, it was deduced that children with greater blood flow to the right side developed a dominant right brain physiological makeup. This results in a more sensitive, subjective and intuitive mindset which is less logical and objective. Dr. Boyce's research: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4677150/>.

“Ember” meditation for the pineal gland

As mentioned earlier, one method of meditation enhancement is to focus on the upper nasal cavity while meditating. As cool fresh air enters the innermost cavity of the upper nasal cavity, there is a cooling sensation. Though the effect is cooling; it can also be felt as energizing – as in a gentle puff of air on an ember. As the air blows the ember glows. Keeping this image/sensation in mind, one can direct this energy to energize visceral space awareness and it can also be directed to energize the pineal gland, but first the pineal gland needs to be located so that there is a directive for the ember energy.

It is very difficult to “feel” the pineal or feel where it is, in fact, there may be no sensation nerves in the central brain at all. However the pineal gland is located just below and central to the paired lobes of the thalamus, and something centered there can possibly be “felt”. We’re talking about “feeling” consciousness, for it is quite likely that the thalamus is the main resting place for the core of consciousness. So how does one go about feeling consciousness? It is a slow process but not so difficult once one begins to try it. While meditating just concentrate on the body and search for the thinking process. Where exactly are thoughts coming from in the body? In the head, of course, but go one step further – try to pinpoint the exact location in the brain as to where each next thought is emerging from. It can be done. Trace each thought as it emerges and sense a location in the matrix space of the brain. “Feeling” thoughts seems, indeed, a strange concept, but it can be practiced until one can “feel” the origination point of thoughts in the geography of the brain space. With practice, it will become easier to locate this exact point. Just below this locus of consciousness rests the pineal gland. This is pineal space point where the “ember” energy needs to be projected.

There are further aids as well. The "baragan" stick can be used to support the arms while the fingertips point to each temple. The yoga posture of Khecari Mudra can be practiced: <http://www.aypsite.org/108.html>. Continual repetition of a mantra can help calm the mind. One general purpose mantra is the word "consciousness" itself - for it is the very word we use to describe the meat of what we are dealing with during meditation: consciousness in of itself, consciousness beyond the distraction of our physical portals, consciousness that has an essence of its own, an essence that reveals itself in the concentrated silence of awareness. Descartes was right to declare "I think, therefore I am" at that period of human consciousness development, however, ultimately, thinking is not being. Thinking is an aspect of being. Being is the core of the thing. And that is the goal of meditation: in which thinking doesn't cease, it just becomes part of the background. Thinking slices space, Being is manifest in space. Another meditation enhancer could be a drop of niacin or similar stimulant placed on the third eye location will also help with stimulation. There are also many multimedia pineal stimulation presentations on YouTube Virtual reality as well as sound presentations using the Solfeggio scale: http://www.somaenergetics.com/forgotten_in_time.ph

Virtual reality technology is also being explored as a venue as well, Dr. Deepak Chopra has begun with his first production, see:

<https://melmagazine.com/is-virtual-reality-the-medium-that-buddhism-has-been-waiting-for-7a0f9c2a5169#.uo2mn3wxm>

Quantum Aspects of Meditation

Meditation in its deepest state may depersonalize the meditator to such a degree that there is no longer an observer present. As we know from quantum physics, it takes an observer to collapse probability waveforms into a particle. Without the observer, locality is null, non-locality begins to prevail and matter begins to dissolve into a waveform holographic field.

When we observe the world as a point-source consciousness we interfere with the scalar based holographic universe; this interference between scalar and point reality results in the appearance of a point-sourced image that we experience as physical reality – though there is nothing "physical" about it at all – it is just a form of rearranged energy. In meditation the point dissolves, and pointlessness or non-local consciousness begins to prevail thus revealing holographic space-time and the presence of its binding force: Consciousness, the final frontier <https://www.youtube.com/watch?v=l0oX2ZdElQ4>

Om to Ong

By simply modifying the ancient chant of "Om" it is possible to send sound vibrations more directly into the base of the brain. The chant is the same except that closing off the mouth chamber with the back of the tongue as in saying "Ong" the sound becomes concentrated at the top of the nasal cavity. Starting with the lowest sound possible in the lungs as the chant moves up the throat the note rises in pitch until it peaks at the end, reverberating at the very top of the nasal cavity just below the pituitary/thalamus/pineal complex.

Remember who you are: <https://www.youtube.com/watch?v=ZjItNZNslk&feature=related>



Please consider donating to pineal gland research, see research section at this end of this article

Out-of-Body Consciousness and the Evolution of the Human Race

Can the phenomenon of the Out-of-Body Consciousness be a contributing factor to the evolution of the human race? According to Brazilian researcher and writer Dr. Waldo Vieira, the experience of lucid consciousness projection is absolutely essential, and he speaks with some authority for he has experienced and documented several thousand OBE's since the age of nine and has made a thorough study of consciousness in and beyond the body. He calls the study of consciousness in all its manifestations *conscientiology*, and the study of lucid consciousness projection *projectiology*. In his massive book, *Projectiology*, he draws on over 2000 references and creates his own vocabulary to describe the many aspects of his knowledge. In 1981 he founded the Center for Continuing Consciousness which later evolved into the International Institute of Projectiology and Conscientiology (IIPC) in 1988. There are now 58 offices of IIPC throughout the world with their Center for Higher Studies of the Consciousness at Iguassu Falls, Brazil and the International Academy of Consciousness (IAC) in Portugal. The IIPC has over 74 research projects, over 100,000 members, several education centers and it has printed over 43 books and periodicals. Visit: <http://www.iacworld.org>

Conscientiology is not a dogma, in fact, Dr.Vieira exhorts: “ Don't believe in anyone or anything, including the information you receive here at the Institute. Experience. Have your own experiences”

Among the many topics Dr.Vieira covers, he talks about *thanatology* which is the study of the psychological, social, cultural and religious impact of the inevitability of death. Most certainly our attitude towards death plays a major role in how we view the meaning of life. However, when one has experienced the continuity of consciousness and its indestructibility....when one has consciously traveled beyond the confines of the physical body and returns to their *extraphysical hometown* which is the original hyper-physical residence of fundamental personal consciousness, their understanding of the significance of our conduct here in this physical lifetime and how it affects our future lifetimes will enrich our experience of every moment here and now in this physical lifetime. As more individuals become familiar with this knowledge and experience, it is Dr. Vieira's firm belief that human society and the human race can evolve collectively to a higher level. Consolidation of the Human Race may result from the challenge of facing a common enemy or, better yet, it may evolve collectively pursuing a common goal - such as the one suggested by this organization.

Dr. Vieira does not concern himself with the existence of any kind of physical mechanism related to consciousness projection, that it is a purely *energetic* phenomenon. He does not recognize the role of the pineal gland as part of the support mechanism of OBC.

As Captain Picard, in one of the *Star Trek* series, said, when commenting on human existence: "Our very life is defined by our mortality". It looks like Dr. Vieira is trying to change that definition and galvanize the direction of the human race.

The Pineal Gland and Reincarnation



The pineal gland's higher function indirectly supports the existence of reincarnation in several ways. The METAtenin secretion at time of death escorts our individual/eternal consciousness as it separates from our transient ego/body consciousness on its return higher consciousness and in a reverse manner during gestation and early childhood it eases the introduction of our eternal being to the material world and human society at a gentle pace all the way up to age 8. Why would such an endogenous neurochemical segue exist if there was not a higher consciousness to revert to? One must also consider the similar life after death insights reported in Near-Death-Experience studies. Reincarnation pioneer Dr. Ian Stevenson of the University of Virginia Department of Psychiatry, Division of Personality Studies interviewed over 2000 individuals who had accurate verifiable memories of past lives. Not surprisingly, the subjects who had the clearest memories were those between the ages of 3 and 8; see: <http://reluctant-messenger.com/reincarnation-proof.htm> or read *Life Before Life* by Jim Tucker M.D. who worked with Dr. Stevenson. Author Deepak Chopra, in his book *Life After Death: The Burden of Proof* is an inspiring book about the afterworld and David Wilcock in his latest book *The Synchronicity Key* provides several arguments for reincarnation. The Judeo-Christian culture does not generally accept reincarnation although Jesus was never known to directly denounce it, in fact, some of his references supporting reincarnation can still be found in the New Testament. It is believed that biblical scholars deliberately obliterated any reference to reincarnation, and especially ignored the writings of Greek philosopher Origen, due to political pressure from the church for obvious reasons. A good explanation of reincarnation begins on page 28 of *The Ultimate Frontier*, by Eklal Kueshana.

Beginning with Emperor Constantine at the Council of Nicea in 325 AD any references to reincarnation were thoroughly expunged during the finalizing of the New Testament. Furthermore at the Second Council of Constantinople in 533 AD the Roman government officially outlawed the concept of reincarnation on pain of excommunication, even death; this was reaffirmed twice again at Councils in Lyons and Florence in 1274 and 1439. There is no doubt that the Christian church chose to thoroughly expunge the concept of reincarnation from Western consciousness to keep firm control over the gates that lead to Heaven or Hell - the supposedly only possible destination for the afterlife. Due to this bias, it is quite possible that acceptance of the implications of the higher functions of the

pineal gland may meet with some resistance. Coming to terms with reincarnation is coming to terms with the ecology of spirit; nothing is wasted.

Quite probably there are many future and past lifetimes awaiting us as well as parallel universes and the holographic space-time reality, but let us not forget how privileged we are to live here and now on this uniquely beautiful planet. Each one of us is extremely precious as is all life; hopefully, each of us will someday learn to appreciate the special gift bestowed us each and learn how to express respect and gratitude for this planet and all the beauty we have been blessed with as well as the beauty of every passing moment. We are precious beings in a precious reality: <https://www.youtube.com/watch?v=ZjItNz-NSIk&feature=related>

At the same time, let us not forget that there is something behind DNA and its myriad of fractal protein productions, something behind all things that we call “life”, from paramecium to homo erectus to the tall redwoods: there is a grand intelligence, far greater than anything we humans can fathom and far older than any of our wisdom takes us...at least 4.5 billion years. We are something, and we are nothing... but amoebas under a microscope.

When a student of Tibetan teacher Chogyam Trungpa was discussing reincarnation and asked his teacher, what is it we bring with us when reincarnating into the next life? Trungpa answered: “our neuroses”.

Reincarnation on a Short Stick

GOD, The First CPA.

The being who we conveniently call omnipresent God, is also an accountant.

Like any large operation, the administrator on top does not follow the minute actions of every member of the organization. The organization has established rules that keep it running smoothly, time-worn rules and protocols that are easy to understand by every member of the organization.

It is based on the four human virtues of Kindness, Integrity, Patience and Humility.

Every individual in the organization makes decisions every day, and these decisions are measured and recorded in the individuals’ memory record, known as the karma account.

Kindness, Fairness and Lovingness is the best way to treat others.

Integrity has to do with honesty and keeping ones’ word.

Patience usually helps in most situations.

And Humility, remembering that we are part of a much greater organization, even though we may not be able to witness the grandeur of it except for ,perhaps, in our dreams, epiphanies, or in the art of others.

When this lifetime is over, we return to our source.

One of the first things we do after we move on, is to have a life review.

The life review event has been recorded by thousands of patients who have experienced a near-death experience, or NDE.

During the review, one also considers their credit rating.

Not the credit rating of their financial life -

But the credit rating in the Bank of Love.

Balancing out our actions in terms of love given and received and the opposite.

Maybe we'll find that things have gone well and that we've made a concerted effort to exercise love whenever possible, as most sages suggest. The Golden Rule is not an option....It's a Rule.

Or, we may find that our index is wanting, and that we may need some more fine-tuning and, thus, volunteer to sometime return to the refinery, the battlefield, boot camp earth or a similar proving ground. Re Incarnation.

The wheel turns, and as it turns it grinds our karmic information, which is stored in the Akashic record.

Which has been organized.....

by the being

we

call

God

DMT and the Transition of Death

Since the fifteenth Century when the Catholic Church published the book *Ars Morendi* Western culture has been concerned with the easing and enhancing of the inevitable death process. There is extensive Oriental literature on the subject as well including the Egyptian and Tibetan Book of the Dead (8th century) that describe the death process and ascension into the afterlife in great detail. With the emergence of entheogens in the 1960s researchers such as Aldous Huxley and Dr. Richard Alpert considered the use of properly administered entheogens at the moment of death to ease and clarify the transition process. Henry Luce, the founder of TIME Inc, was known to use LSD to transition his death and there are many others. At the same time, researchers such as Dr. James Fadiman began to investigate the practice of (previously mentioned) microdosing, that is, using fractional amounts of a full dose of an entheogen to enhance subconscious perspective especially in creative pursuits, see: http://www.huffingtonpost.com/entry/psychedelic-microdosing-research_us. Perhaps the combination of these two practices using DMT (with a MAO inhibitor) to

support the natural transition process would prove to be an effective therapy. Theoretically, the pineal gland secretes a dose of METAtonin, endogenous DMT, at the moment of death to aid in the separation of conscious awareness from the body. DMT is the only entheogen known to facilitate this separation process, though there may be others. But DMT is unique in that it is a natural byproduct of human biochemistry and found throughout the natural world. Microdosing DMT would support and encourage the end-of-life pineal process, especially if the pineal gland has been compromised in some way.

Several institutions such as Hospice, The Living/Dying Project, Upaya Zen Center and Mettainstitute have developed protocols for establishing a supportive atmosphere and a progressive treatment procedure for those who are dying. Since a full dose of DMT works rapidly and the experience usually lasts less than 15 minutes it would prove problematic to try to administer a full dose of DMT at the moment of death, however it could be administered continually at a fraction of full dosage so that it would be in effect at the moment of death. With microdosing administration, the DMT would be working at below perceptual levels but would still enhance the transition process especially if the pineal gland is compromised due to calcification from heavy exposure to public water supply fluoride or other pollutants. The goal in mind is to remain conscious throughout the death process so that the experience becomes a graduation instead of a termination. Microdosing a neurological enhancer such as DMT (or 5-MeO-DMT, preferred by James Oroc and Dr. Martin Ball) might be an option to consider in attaining this goal. Visit: <http://www.livingdying.org/>, <https://www.upaya.org/being-with-dying>, www.mettainstitute.org/, and www.hospicefoundation.org.

It's interesting to note that one of the most widely recognized stages of the death process is the life review. If you ever think that you are being watched, you probably are - you are being watched by your future self in the process of returning to your eternal self. See: <http://www.near-death.com/science/research/life-review.html#a01>. Not only will you experience every act and emotion of your earthly existence; the life review is "panoramic" meaning that it includes *all* Akashic information: not only will you experience all your emotions, but also the ramifications of all your actions and the emotions on all of those whom you have interacted with, i. e, your emotional wake. Surprisingly, seemingly small acts of unconditional spontaneous love and generosity that may not even be remembered will sometimes be noted as some of the most significant acts of a person's life as well actions and decisions that contribute to spiritual evolution; embodying truth, beauty and goodness. The implications of the life review are discussed in *The Eternal Journey* by Dr. Craig Lundahl and in great detail at the website: <https://www.near-death.com/science/research/life-review.html>. Saint Patrick is on the payroll of the church, he can now be retired; we are each our own Saint Patrick and will be given the chance to judge ourselves using our own consciousness, consciousness itself being a gift of God, or God itself.

The Concept of Lifetime Partners: several religions and philosophies suggest that we have a lifetime etheric partner with whom we are entangled. A partner who we journey with during this lifetime and with whom we are destined to fuse with at a later date. This is discussed as the "sense presence" of an accompanying guide as suggested by Anthony Peake in his *Opening the Doors of Perception*, the concept of the *fravashis* in Zoroastrianism, the concept of *parakletos* in Christianity, and the concept of the Mystery Monitor or Thought Adjuster in the *Urantia Book*. Healer Dr. Gary Holz has written several books on the concept of personal guides. These life-long silent partners lovingly (and patiently) accompany us during our lives. Furthermore, he suggests that if this guide is given permission, it can also channel healing energy to all those whom we meet throughout our lives, but it is upon us to grant them permission.



If you don't have an Out-of-Body Experience before you Die
You definitely will, when you Do
And if you have an OBE before you Die,
You'll have a much better Idea
Of what Death is
And What it
Isn't

Endogenous DMT and the establishment of Religion

Dr. Steve Barker of Louisiana State University and a member of the Cottonwood Research Foundation (http://www.lsureveille.com/legacy/article_4a851c42-036d-11e2-b3fb-0019bb30f31a.html) has been investigating the neurotheological paradigm. He recognizes, as most of us do, that the tendency to be religious is an innate human trait, but he takes this supposition one step further, he sees a reason behind it – a neurochemical reason. Most religions are founded upon and are continually supported by founders and members who have witnessed a religious experience. Religious ecstasy, rapture, and religious revelation are part of the common vernacular, and sometimes the stated goal of many religious sects. Once a member has had such an experience, they graduate from being a “believer” to becoming a living endorsement. Dr. Barker suspects that the source of this experience is not due to some outside religious avatar as most religious belief systems would ascribe it to, instead, he points to endogenous DMT, METAtonin, small amounts of which can be detected every bodily fluid: blood, spinal fluid, lymph etc.



This ubiquitous psychedelic or enthoegen is created in many organs and glands including the lungs, kidneys, the retina and, as is suggested in this paper and is being verified by recent research, the pineal gland. A likely societal consequence of this phenomenon is the emergence of the religious

experience and the study of this phenomenon is known as neurotheology, a term that first appeared in the novel *Island* by Aldous Huxley.

According to Johnathan Parajasingham (<http://nirmukta.com/2011/10/26/the-god-of-mind-exploring-the-implications-of-neurotheological-research/>), psychopharmacological research has investigated the effect of DMT and other serotonin-based neurochemicals that act on one specific type of neuroreceptor called serotonin 2A (or 5-HT_{2A}) receptors, which are found all over the cortical surface of the brain. 5-HT_{2A} receptors are stimulatory; that activated receptors increase production of serotonin in the brain, and that this gross overstimulation can lead to what is interpreted as a neurotheologic religious experience.

In terms of neurotheologic activity; religions that perceive God-as-without tend to encourage their members to converse or appeal to God as an outside being, such as in the act of praying, are known as mildly neurotheologic institutions. Religions that perceive God-as-within such as Buddhism or Sufism pursue active mental (meditation) or physical (dancing) exercises to awaken the God-within are more neurotheologically active for they intentionally modify their mental/physical state in such a way as to stimulate neurotheologic perceptions. Then there are societies that live each moment in a constant religious state, waking each day to a wholly uncertain future but faithful that if they read the signs of their creator with focused sensitivity in each moment, they will be led to safety each night. Many aboriginal tribes lived in this manner - embracing a fully neurotheologic reality. These societies were easy prey to their less neurotheologic brethren and were usually disdainfully misunderstood and decimated in a short time. One such group are the Australian Aborigines and there are many more long gone and forgotten. The book *Of Water and the Spirit*, by Malidoma Patrice Some, is an excellent attempt of an indigenous African tribesman to describe just what is lost when modern Western mankind imposes its concept of reality on an innately spiritual indigenous culture.



Malidoma Patrice Some, author of *Of Water and the Spirit*

Several other authors including Laurence O. McKinney, Dr. Andrew B. Newberg, and Eugen Drewermann have published books on neurotheology.

There is also the *theoneurological* approach, which is the subject of Dr. Rick Strassman's latest book *The Soul of Prophecy*. The theoneurological perspective assumes that higher intelligence exists and may manifest in human experience in many ways, usually through enhanced neurologically induced states of consciousness, the DMT-activated state being one of the most probable ones since it is found in many organs throughout the body including the pineal gland, and is one of the few compounds that are welcome to transverse the blood brain barrier. In the DMT survey he performed at the University of New Mexico, Strassman observed that at the peak of the short-lived DMT

experience, most of his subjects encountered interactive intelligent beings who attempted to communicate or reveal information.

This interactive encounter is one of many possible scenarios, but a predominant one, since DMT is one of the major endogenous entheogens produce by the human body, though there are others, such as ketamine. If DMT predominates, then there must be evidence of these inspired encounters, and there is plenty – in the writings and prophesies of religious mystics and savants. Dr. Strassman chose the Old Testament as a focus of his investigation and found a great deal of evidence. A thorough discussion of his exploration can be found in Episode 40 of *The Human Experience* Podcast as well as his two podcasts related to this book: https://www.youtube.com/watch?v=udLuN_F5OI&t=60s . A further investigation into the Jewish wisdom of the Talmud and the Kabbala by Rabbi Joel Bakst is his book *The Jerusalem Stone of Consciousness* which explores the pineal gland connection as well.

Now that we've delved into the innate tendency for humans, particularly our less scientifically informed forbearers, to found and participate in religious organizations, it may be time for us to recognize some of the drawbacks of organized religion. For all that religions have contributed to the formation of present society and culture, mankind may soon need to embrace the fact that religions have served their purpose and are now inhibiting the peaceful progression of human society due to the inability of the moderates to control their extreme factions (<http://www.samharris.org/the-end-of-faith>). Religion has been essential for the evolution of human society for the past five thousand plus years. Most religions extol the virtues of kindness, integrity, patience and humility, however, organized religions are just that: an organization. In reality, religions are also political entities and are structured much like a corporation that market and sell a product- hopefully, to an expanding captive audience. Posing as a necessary intermediary between man and God, religions have found a firm footing. More simply put: most religions, posing as an intermediary with God, prosper by their ability to keep man separate from God and intolerant of other religions. Now in the 21st century, we have two sides, each side devoted to serving the same God and simultaneously dedicated to the destruction of each other. It may have come time for individuals to become less dependent on an organization and learn to develop a personal connection with God; perhaps understanding the segue of the pineal gland may help in this way. It is also hoped that the existing religions now in conflict can calm their extremes and find common ground in healing our planet and people.

Many ancient cultures/religions used DMT-rich plants in their initiations, Acacia Nilotica (tree of life) is found in Egyptian, Sumerian, Jewish, Islamic, Greek and Masonic traditions (see: <http://www.collective-evolution.com/2014/05/31/the-tree-of-life-acacia-nilotica>). Much the same can be said for previously mentioned Syrian Rue. Perhaps a greater understanding of the endogenous DMT potential of the pineal gland will help us realize that we are all entitled to experience a personal religious epiphany. This is a gift that our maker has endowed us with.



We are Makers in the Making

We are Participants in the Creation of our own Creation

Dr. John Archibald Wheeler

Participatory Anthropic Principle (PAP)

In a sense, we live in an ocean beneath the surface of the atmosphere - which contains the cloud of knowing. Occasionally one of us will rise so high as to break the surface and behold the brilliance and clarity of the realm of air and light and the cloud of knowing – but only momentarily. Most humans remain submerged in the ocean all their lives, but every once in a while, sometimes due to intention, sometimes not, one will break through to the surface. If this breakthrough occurs in the context of a religion then the breakthrough experience becomes a verification of that religion, whichever religion it is. In fact, there is a University program devoted to collecting reports of religious experiences: <https://www.uwtsd.ac.uk/library/alister-hardy-religious-experience-research-centre/>

It is inevitable that a certain number of people will experience this breakthrough at random – an inevitable condition of the human experience. There's no telling who it could be - and that person will be burdened with trying to explain what they have experienced to others. But experiences, especially ones that are out of the ordinary scope of normal existence, are very difficult, almost impossible, to transfer. In some cases, the breakthrough experience will be slowly dismissed other times it may serve as an inspiration and in some cases, if the experience was powerful enough, it may result in the birth of a new religion, philosophy, political movement or scientific discovery. There are points in time when small wheels of the lives of individuals, sometimes groups of individuals, become enmeshed with the big wheel of human evolution, thus human history is created. One historian, Dr. Richard Tarnas, has made an effort to make sense of the unfolding of Western Civilization in his book *Cosmos and Psyche*.

In his first book *The Passion of the Western Mind*, Pub. 1991, Dr. Parnas Tarnas presents a history of thought with a level of insight and understanding that reaches depths previously not considered possible for an introductory work. Not only does the reader get the particular ideas of each philosophy and era of thought, but also the cultural influence and the context out of which each philosophy arose. What fueled each thinker? What particular convictions influenced philosophy of the era? What pressing concerns building in history of thought motivated each thinker to construct their

particular system? His book has been well received and is used in many universities to familiarize students with the evolution of Western thought to this day. He then spent 6 years writing *Cosmos and Psyche* where he describes a distinct and irrefutable correlation between major human events and the angular relationships of the four outer planets of our solar system. He believes and verifies that the unfolding of our evolution is directly related to the unfolding of our solar system and can be understood in the context of what he calls Archetypal Astrology.

Visit: <https://cosmosandpsyche.com/> If Tranas is right, then we have "fleshed out" the morphogenetic field with a full spectrum of archetypes and their relationship to the flow of time

Is it possible to attain a permanent state of connection with higher intelligence? Enlightenment, Satori? There are those among us who have had a momentary breakthrough experience, maybe one or two, but is it possible to attain a continuous permanent state of heightened awareness as in the many realized gurus who came west in the 1960's and 70's mainly from India? Many of these beings were truly gifted with remarkable levels of continuously heightened awareness. Perhaps, it may be that if one can maintain a pineal gland elevated state for a long enough period or for enough repetitions, the elevated brain circuitry becomes fused, resulting in a permanent state of cosmic consciousness.

Pineal Gland Research

A concerted effort is being made by researchers in the U.S. to verify that the pineal gland can and does produce DMT. The Cottonwood Research Foundation is playing a key role in this research. The foundation came into existence in 2007 and is presided over by Dr. Rick Strassman, MD with the help of Steve Barker Ph.D and Andrew C. Stone. Dr. Barker's lab at Louisiana State University has developed a new super-sensitive and super-specific means of measuring endogenous psychedelics, critical to the pineal research effort:



Dr. Rick Strassman, author of *The Spirit Molecule*

Verificaton of DMT production in DNA pineal tissue: Nicholas Cozzi PhD's research group at the University of Wisconsin in Madison has been investigating the gene that codes for the enzyme critical to the synthesis of endogenous DMT, and has discovered high levels of activity in rhesus macaque retina, spinal cord, and pineal gland. There appears a close association between the DMT synthesizing machinery and the sigma-1 receptor. The sigma-1 receptor may be involved in pain mechanisms as well as the psychedelic effects of ketamine and PCP.

At first, INMT RNA was not detectable in the rhesus pineal using standard Northern Blot Analysis (this protocol is used to detect the presence of RNA) so it was suspected that the INMT RNA

in the pineal gland is inducible. This means that it is a dormant gene whose expression is either responsive to environmental changes or a specific signal. Shifting subsequent immunohistochemistry work in their lab revealed a pronounced but erratic presence of INMT RNA in these tissues. Thus the potential for pineal DMT production was verified.

Visit: <http://www.neurophys.wisc.edu/~cozzi/Indolethylamine%20N-methyltransferase%20expression%20in%20primate%20nervous%20tissue.pdf>

Advances in analysis of DMT metabolism have taken place as a result of collaboration between Jordi Riba, PhD at the Drug Research Center, Hospital de Sant Pau, in Barcelona Spain and Dr. Barker. While not directly related to DMT pineal synthesis, such research advances our ability to assess DMT dynamics in the body overall, and will make the determination of pineal DMT synthesizing potential more effective. For example, it turns out that a major metabolite of DMT, the psychologically inert DMT-N-oxide is excreted in the urine at levels 10-20 times greater than DMT itself after ayahuasca administration. Similarly, N-oxide levels in blood were four times greater than DMT. This is the first time this metabolite has been reported in humans following DMT administration by any route. Detection of DMT-N-oxide as an indicator has greatly increased our ability to understand how the body deals with DMT.

Sampling pineal gland secretions in living subjects: Jimo Borjigin's laboratory at the University of Michigan School of Medicine is sampling the pineal environment in the brain of living rats using brain microdialysis probes. The samples they gather will be sent to Dr. Barker's lab at LSU to be analyzed for endogenous psychoactive materials. As previously mentioned, Dr. Barker is a member of the Cottonwood Research team.



Dr. Jimo Borjigin, Endogenous DMT Research

Verification of the presence of DMT in the pineal gland of the living mammal brain: May 23, 2013 the Cottonwood Foundation of New Mexico announced the acceptance for publication of a paper documenting the presence of DMT in the pineal glands of live rodents based on the efforts of Dr. Borjigin and Dr Barker. The paper appears in the journal *Biomedical Chromatography*, see: <http://www.cottonwoodresearch.org/wp-content/uploads/2013/11/Pineal-DMT.pdf>. See section 4. Congratulations Cottonwood! a new chapter in the science of consciousness and the human experience begins.

Future Research: As stated on the Cottonwood Website: "The next step is to determine the presence of DMT in cerebrospinal fluid (CSF), the fluid that bathes the brain and pineal. CSF is a possible route for pineal-synthesized DMT to effect changes in brain function. Successfully establishing DMT's presence in this gland adds another link in the chain between the pineal and consciousness and opens new avenues for research." Perhaps advanced imaging technology combined with selective dyes will help reveal the presence of endogenous DMT, thus eliminating the need for using probes. When this is accomplished it will be possible to monitor the environs of the

pineal gland in real time. We will then be able to monitor the pineal gland when transcendent states are being experienced and possibly during the death process, as well as during gestation. In his podcast of February 1, 2017 (Optimal Performance series) Dr. Strassman mentions that the results of the latest research will soon be published.

Support Research

These are important developments and your help is needed to continue this groundbreaking work to fruition. **Please consider supporting Dr. Barker's and Dr. Borjigin's research by donating to their cause.** You can donate directly to the Cottonwood Research Foundation by going to:

<http://www.cottonwoodresearch.org/donate>

YOUR CONTRIBUTION IS DEEPLY APPRECIATED!

Environmental assaults on the pineal gland

Calcification: The pineal gland typically shows increased calcification with aging which can manifest as early as age 5 and slowly build up. Calcification occurs with the proliferation of hydroxyapatite crystals also known as "brain sand". If the calcification level reaches a high saturation level, it is theorized that this can diminish melatonin production. Calcification may have an effect on one's "sense of direction" as related in the report: "Pineal gland calcification and defective sense of direction." (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1419179/>); this may be a result of magnetite crystals becoming locked into the calcification lattice (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1419179/>) Furthermore, calcification may affect on sleep patterns: (www.unboundmedicine.com/.../Degree_of_pineal_calcification). However, recent research indicates that calcification does not permeate pinealocyte cells themselves, instead, it appears to calcify the tissue surrounding and supporting these cells, but may not interfere with cell function. Pineal gland calcification has also been linked to a higher incidence of breast cancer, see: <http://www.ncbi.nlm.nih.gov/pubmed/81365>. For research on the physical and chemical properties of pineal calcification: <http://link.springer.com/article/10.1007%2FBF02008213>

Melatonin production is important because recent discoveries have shown that melatonin is vital for the immune system, decreased levels of melatonin are associated with prostate and breast cancer (www.ncbi.nlm.nih.gov/pubmed/8320637) two major causes of premature death. It also regulates blood sugar metabolism. Studies show that night-shift workers seem more likely to develop Type II diabetes than their day-shift counterparts. Seasonal Affect Disorder (SAD) is also linked to deficient levels of melatonin and serotonin, although the mechanism is not fully understood. Melatonin production has been implicated in a variety of health functions: (http://www.lef.org/magazine/mag2008/aug2008_Beyond-Sleep-New-Medical-Applications-for-Melatonin_01.htm). If melatonin production is diminished at adolescence, premature puberty can result. Melatonin has another unique property, it enhances the regeneration of damaged nerve tissue, especially in the case of severed peripheral nerves, see: <http://www.ncbi.nlm.nih.gov/pubmed/19682645>

The actual cause of calcification has not been determined, however once it is present, it becomes a repository for fluoride. Several research papers report a correlation between the presence of fluoride and calcification. There are also several websites devoted to pineal gland decalcification such as: <http://decalcifypinealgland.com/> and <http://www.mypinealgland.com/> and there are many

more. While there is no doubt that the advice in these and similar articles may possibly inhibit further calcification, there appears to be no set protocol for measuring the level of calcification and there is no research available in *pub med* or *google scholar* that verifies that the pineal calcification can be reversed.

Fluoride effects: Until the 1990s, no research had ever been conducted to determine the impact of fluoride on the pineal gland. Fluoride is a routinely (and sometimes mandatory) additive to almost all municipal drinking water, allegedly to prevent tooth decay. Its use has always been highly controversial and research on the side effects is often discouraged. Increase fluoride presence does not necessarily result in calcification.

Melatonin, created in the pineal gland and other body tissues as well, not only helps regulate the onset of puberty but also helps protect the body from cell damage caused by free radicals. It is now known -- thanks to the meticulous research of Dr. Jennifer Luke from the University of Surrey in England -- that the pineal gland is the primary target of fluoride accumulation within the human body.

The soft tissue of the adult pineal gland contains more fluoride than any other soft tissue in the body -- a level of fluoride (~300 ppm) which is more than capable of inhibiting enzymes. The pineal gland also contains varying amounts hard tissue (hydroxyapatite crystals), and this hard tissue accumulates more fluoride (up to 21,000 ppm) than any other hard tissue in the body (even the teeth, which it is supposed to protect).

Realizing that the pineal gland was the target of so much fluoride, Dr. Luke conducted animal experiments to determine if the accumulated fluoride could negatively impact the regulation of melatonin, reference: (<http://www.icnr.com/articles/fluoride-deposition.html>). She found that animals treated with fluoride had lower levels of circulating melatonin. This reduced level of melatonin was accompanied by an earlier onset of puberty in the fluoride-treated female animals.

Luke summarized her human and animal findings as follows:

"...the human pineal gland contains the highest concentration of fluoride in the body. Fluoride is associated with depressed pineal melatonin synthesis by prepubertal gerbils and the accelerated onset of sexual maturation in the female gerbil. The results strengthen the hypothesis that the pineal has a role in the timing of the onset of puberty

....

The levels of pineal gland fluoride examined in the study were high enough to inhibit enzyme production. When enzymes are damaged, it can lead to collagen breakdown, eczema, tissue damage, skin wrinkling, genetic damage, and immune suppression. One enzyme mentioned earlier, methyltransferase, is necessary for the pineal gland to produce METAtonin. If this enzyme is inhibited, then DMT production is inhibited as well. For a complete bibliography of articles on fluoride research visit: <http://www.slweb.org/bibliography.html>

The Terrible Two of the Twenty-First Century: Bisphenol and Glyphosate.

One of the major contributors to the fall of the Roman civilization was environmental lead, particularly concentrated in the environs of the Roman aristocracy. In our case the toxins are more subtle but just as pervasive; they may change the very norm of what it means to be human in terms of sexual and social identity

in a few generations. Bisphenol (BPA), used in plastics and thermal print paper (as in receipts at a grocery store), is an estrogen mimic that disrupts the normal sexual maturity of the human embryo and glyphosate, the agricultural toxin (Roundup) that clears fields of weeds so GMO crops can freely grow, disturbs our gut bacteria balance by interfering with the shikimate pathway of the digestive process resulting in decreased production of serotonin, melatonin and dopamines. This directly affects the pineal gland resulting in sleep disorders linked to autism, depression, dementia, anxiety disorder and Parkinson's disease. Despite Monsanto's claim that Roundup deteriorates in 24 hours, glyphosate has been detected in drinking water, rain, soil and air samples up to 100 days after application, We are all exposed to this chemical, even if we avoid GMO foods. A recent survey: <https://www.ewg.org/childrenshealth/monsanto-weedkiller-still-contaminates-foods-marketed-to-children/> has revealed that common breakfast cereals such as Cheerios can have glyphosate levels at 400% more than acceptable levels

see: <http://www.scirp.org/Journal/PaperInformation.aspx?>

Glyphosate information: <http://naturalsociety.com/dr-stephanie-seneff-mit-scientist-explains-synergistic-effect-aluminum-glyphosate-poisoning-cause-skyrocketing-autism/> as well as: <http://www.pesticides.news/2018-08-19-the-link-between-glyphosate-exposure-and-autism.html>

Bisphenol information: http://www.nrdc.org/living/chemicalindex/bisphenol-a.asp?gclid=CjwKEAajw8oSoBRCss4qDrP3Y7yUSJACKumZ9nwyqVxBu9U4FB7_o-FBQIiExExkf82-NgQ61TWGxoCldrw_wcB and https://en.wikipedia.org/wiki/Endocrine_disruptor



Electromagnetic Wave Deterioration: Studies with hamsters showed that exposure to GSM-900 (cell phone microwave) signal significantly reduced the pineal glands ability to generate melatonin during night cycles, reference: (<http://www.irpa11.irpa.net/pdfs/8e6.pdf>). "...the acute magnetic field exposure was again found to blunt the increase and suppress the duration of the nighttime melatonin rise."

Studies with human subjects who were exposed to 60Hz magnetic fields also showed this anomaly, reference: (<http://www.aje.oxfordjournals.org/content/150/1/27>)

. This is distressing to learn, since we are all literally surrounded by 60Hz electrical fields in our homes, at work and outside where power lines tower over almost every street. There is no escape from this type of radiation except to flee to remote, unpopulated areas.

However, research done by Italian scientists comparing serum melatonin concentration of kestrel embryos nurtured in strong magnetic fields (kestrels whose habitat included high voltage

lines) compared with embryos raised in natural surrounding revealed no significant variation, see: <http://www.sciencedirect.com/science/article/pii/S1532045609001306>

Blue light and impaired melatonin production. Since 2001 it has been discovered that cool blue light between the wavelength of 415 to 445 nanometers interferes with melatonin production, this kind of light is prevalent in flat screen monitors and compact fluorescent bulbs, see: <http://www.health.harvard.edu/staying-healthy/blue-light-has-a-dark-side>. To be more exact, the research of Dr. Ignacio Provencio of the University of Virginia has revealed that there is a third photoreceptor in the human retina called the ipRGCell that utilizes a newly discovered photopigment called melanopsin to detect blue light. Daylight subtly shifts from 2000Kelvin at sunset to 3500K an hour later and to 5500K+ and noon and then reverses. The ipRGCell senses this cycle and sends a message to the pineal at sunset so that melatonin production can begin. Unfortunately, most monitors and flat screens operate at 6500K and some interior lighting is as high as 10,000K, thus inhibiting the normal process when experienced at night. New variable temperature lighting technology is being developed to take this into account. Visit: <http://www.talkaboutsleeeep.com/the-circadian-pathway/> . For further information on the ocular-endocrine system do a search on the ocular-endocrine system in google books and it will take you to *The Tao of Detox* by Daniel Reid.

Autism and Pineal Gland Malfunction

Abstract Title: Autism Viewed as a Consequence of Pineal Gland Malfunction - An Apothesis

from: [http://www.securennet.net/members/aaxt/html/AndreaPaperNewFormat\(2\).pdf](http://www.securennet.net/members/aaxt/html/AndreaPaperNewFormat(2).pdf)

The aforementioned environmental factors may have had an increased effect on the general population due to the heightened use of wireless communications during this decade and the accumulated effect of fluoridation in public water supplies over several generations. Fluoridation was introduced into U.S. Public Health policy in 1951 and had reached 50 million people by 1960. The author of this abstract recognizes the deteriorating effect of electromagnetic fields and trauma on the pineal gland but does not mention fluoridation as a possible agent of infant pineal gland malfunction since calcification occurs later in life.

Author: Andrea Axt, Ph.D, RPP, FQM

Craniosacral/Polarity Associates of Montreal

First published (in English) in the Polish scientific journal

"Farmakoterapia w Psychiatrii i Neurologii," Number 98, 1, pages 112-134

A synopsis of the abstract:

In the annals of pineal research there is some speculation that the occurrence of schizophrenia is due to low, but still debilitating, levels of endogenous DMT in the body. However, this is one of the first investigations to theorize that the cause of autism is due to a similar condition: the presence of unwelcome neurotransmitters possibly contributed by a malfunctioning pineal gland.

Dr. Andrea Axt has studied the connection between autism and the pineal gland for 20 years and concludes: “autistic individuals manifest all of the characteristics that are associated with a malfunctioning pineal gland”. Autism is defined as a lifelong inability to properly process sensory input and the resulting inability to learn, communicate or to understand human emotional signals. Her research indicates that this condition is a result of the following: erratic melatonin secretion, the secretion of improperly modified melatonin derivatives, the destruction of melatonin-producing pinealocytes which do not regenerate after birth and/or the influence of environmental factors including electromagnetic fields and chemical pollutants. Pineal gland malfunction can also result from the destruction or improper fetal development of the gland itself or of the neuronal pathway that connects the optic nerve with the pineal gland via the spinal cord and the superior cervical ganglion. Proper pineal gland function is also essential for the health of the cerebral spinal fluid which must maintain a delicate balance of several essential neurotransmitters.

The pineal gland is the first gland to be formed in the emerging embryo; if for some reason it begins to malfunction at the fetal stage, it could have a profound effect on all the endocrine glands that develop later on since they tend to influence each other, possibly creating a major systemic imbalance. Melatonin is found throughout the natural world and in living organisms as far back as 3 billion years and is one of the fundamental hormones essential for establishing and maintaining homeostasis. In conjunction with the optic nerve, the pineal gland synchronizes melatonin production with the daily cycle of sunlight to establish the circadian rhythm which is the default operating cycle for the human body. If this essential time link to the outside world is not established it can evolve into a form of psychological vertigo where the victim can find no anchor and thus lack a basic framework for a healthy ego to form in. Without a stable ego, one has no reference from which to make decisions, to form a personality or to recognize other personalities. The pineal gland helps the individual transduce the physical world.

There is a further area of malfunction, and that is the possibility for abnormally generated melatonin to chemically evolve into consciousness-enhancing indoleamines at a stage in life when such enhancements prevent the individual from experiencing normal development. Melatonin can undergo cyclic dehydration to form 10-methoxyharmalan, a powerful hallucinogenic substance and, as stated earlier on this webpage, melatonin can also be modified to form METAtonin, endogenous DMT, also a very powerful enhancer.

Dr. Axt fully develops the above concepts in her abstract; she then presents a summary table that itemizes the possible links between the common symptoms of autism and a malfunctioning of the pineal gland. Dr. Axt has had extensive therapeutic experience with five hundred autistic children for over 20 years; she then describes 7 case histories where the patient's condition was markedly improved with melatonin supplementation and bodywork. Dr. Axt recognizes that a great deal more research is needed to validate her hypothesis and provides suggestions as to how this research could proceed. See glyphosate link in the previous Environmental Assaults section.

It could be pointed out that several of Dr. Axt's arguments for autism could be used to describe the onset of schizophrenia with the difference being that one disorder evolves at a prenatal stage and the other after puberty; since the brain is at a different stage of development, the symptoms of the disorder will also differ. In fact, Dr. Axt mentioned that in the early days autism was called "infantile schizophrenia". Recent research is considering the role of glyphosates as well: <http://www.pesticides.news/2018-08-19-the-link-between-glyphosate-exposure-and-autism.html>

Pineal Gland Healing and Activation

There are several articles and practices that suggest the pineal gland can be cleansed, decalcified, and/or activated. To date, there is no scientific evidence that verifies the validity of these practices. These include: cleansing diets, herbal supplements (tamarind, borax, liver cleanse: <http://in5d.com/activating-your-pineal-gland>, zeolite, and iodine) multimedia (sound and imagery) stimulation, acupuncture, yoga postures, saunas, holotropic breathwork, see: <http://holotropicbreathworkla.com>, <http://www.globalhealingcenter.com/natural-health/everything-you-wanted-to-know-about-the-pineal-gland/> and www.paradigmshiftmagazine.com/Issue29sample.pdf) also flashing light sequences (Lucia Light) and light itself as nutrition/medication or sungazing: (<http://charbelmaklouf.wordpress.com/2013/06/08/nasa-confirms-super-human-abilities-gained-through-sungazing/>). As for supplements, tamarind appears to be most effective, see: <https://www.ncbi.nlm.nih.gov/pubmed/15105030>. Also, there is the website: <http://decalcifypinealgland.com/pineal-gland-third-eye-research-evidence/>, Recent scientific research does indicate that decalcification is possible under certain conditions:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6017004/>

All of these are worthy of investigation and perhaps someday unique environments or virtual reality cyberscapes combined with meditation, breathing technique, acupressure, acupuncture, magnetic fields, transcranial direct current stimulation and nutritional supplements may yield results. Please keep us posted if you hear of any developments or scientific studies related to healing or activation of the pineal gland. The two main acupressure points are GV20 at the top of the head and a bit towards the posterior and the third eye spot between the eyebrows. A discussion of the pineal gland and sensitivity to geomagnetic fields can be found at: http://www.psi-researchcentre.co.uk/article_10.htm



Focused breathwork, pioneered by Stanislav Graf, is a simple yet exceedingly powerful healing tool. Heretofore, it was believed that the autonomic nervous system could not be manipulated by the conscious mind. The phenomenal Dutchman, Wim Hof (<http://www.icemanwimhof.com/vice-documentary#vice-video>), who has developed a directed breathwork program, is living proof of our ability to tap into our hidden human potentials. He has scientifically proven that we can consciously modify the performance of the immune system, the rate of metabolism, adrenal production, and hypothalamus function. Cold exposure releases cold shock proteins such as RNA binding motif 3 (RBM3) that is linked to regeneration of synapses. Visit: <https://www.focusperformance.co.uk/blogs/your-health/heat-shock-cold-shock-proteins> Mr Hof is also extending the scope of his work to include holotropic breathwork, a type of breathwork, it is suggested, that encourages the lungs to produce endogenous

DMT in the lungs. Visit <https://www.youtube.com/watch?v=My95s6ZryPg> by www.dmtquest.org for information on the latest developments in his work. Go Dutchman!



Wim Hof, The Iceman

As mentioned earlier, there may be a connection between lucid dreaming and pineal gland METAtenin secretion during REM sleep. If this is the case, then it is most likely that supplements that are known to encourage lucid dreams are also stimulating the pineal gland to secrete METAtenin. Here is a list of some of the better known supplements, which also appears in the lucid dreaming article: *Calea zacatechichi*, the Mexican dream herb, *Silene Capsensis*, the South African Dream herb, Mugwort, from the sage family, an European dream herb, Choline, an amino acid that also promotes production of acetylcholine which may stimulate the pineal gland, Galantamine, an alkaloid synthesized from a combination of plants, known as the "lucid dreaming pill." Huperzine-A - a powerful ancient Asian lucid dream supplement. Also, there is the supplement 5-HTP, known to enrich the dream experience.

Dr. Walter Pierpaoli, <http://www.drpierpaoli.com/ENG/Melatonin-Prolongs-Your-Life-e91bc700>, suggests that daily intake of natural melatonin can be of great benefit to the pineal gland: "Melatonin supplementation prevents aging-related diseases, delays your aging, and automatically prolongs your life by impeding and diminishing the progressive hypothalamic alteration of feedback hormonal regulation, as described by Dilman. This is not a direct process, none the less, it effectively maintains youthful pineal function! The nocturnal administration of melatonin prevents the aging pineal gland from initiating this alteration process. The presence of exogenous supplemental melatonin in the blood sends a "do not work" signal to the pineal and not only protects the "central hormonal director", it also encourages a recovery of its regulatory capacity to modulate hormonal cycles. As a result, the pineal gland is rejuvenated.

As Pierpaoli says: "Not only is the pineal our central daily "life clock", it also actively influences our aging in the course of life with an aging and death "program" (14). Clearly genetically and evolutionary originated mechanisms in the pineal gland modulate the course of our life and also generate the signals to initiate the end of our life program. This is shown in the experiments we reported in a recent work (15). Therefore, the basic mechanisms of our aging must be sought in our pineal gland and also its links to the entire neuroendocrine network (16). We age because our "pineal network" is "programmed" to deteriorate (12) and therefore we must use exogenous night melatonin in order to maintain its integrity and thus prevent the typical course of the aging syndrome inside the pineal gland. Only natural melatonin can protect the pineal gland from programmed aging!" The links to the above footnotes can be found on his webpage. The many benefits of maintaining a healthy level

of melatonin are fully discussed in Dr. Pierpaoli's book *The Melatonin Miracle*. Recently, the sale of melatonin has been banned in several European countries and Canada, for reasons that are not entirely clear, see: <http://www.thecanadianencyclopedia.ca/en/article/melatonin-banned/>

The Pineal Gland and Its Relationship to Light

In terms of activities that encourage the pineal gland to grow in size, there is one study of note. NASA has been studying the potential of human photosynthesis for space travel. They have been studying the HRM sungazing method (<http://solarhealing.com/>) and included in the results it has been observed that the pineal glands of volunteers have grown in size. These practitioners observe the sun when it first rises for up to 44 minutes and have fasted for over 200 days with no noticeable effect on body weight. There are only a few volunteers, so at this point, pineal gland growth is an observation, not a clinical conclusion. Pineal gland measurement has been part of the NASA procedure because it is indirectly linked to the optic nerve - necessary for melatonin production. See the above link for further information. Hopefully, NASA will release more information in the near future. Recently, a young German filmmaker, Peter Scorchner, has released a full-length movie *Eat The Sun* on this topic as well as the documentary *In The Beginning There Was Light* at: <http://www.lightdocumentary.com/> also visit: <https://charbelmaklouf.wordpress.com/2013/06/08/nasa-confirms-super-human-abilities-gained-through-sungazing/> Sungazing manual: <http://sunlightenment.com/wp-content/uploads/2008/12/livingonsunlight2ndeditionnew.pdf>. In addition, the blog: <http://scienceblogs.com/insolence/2012/04/27/eat-the-sun-sun-worshipping-fantasy-versu/> questions the validity of such claims. It is interesting to note that in the case of overwhelming amounts of light, as above, and in complete deprivation of light, as in the Taoist Light Deprivation Pineal Activation Experience (http://www.universal-tao.com/dark_room/enlightenment.html) that both have an effect on the pineal gland.

Verification

Pineal calcification levels can easily be determined by present-day imaging techniques, so it would be very easy to verify if a particular pineal "cleansing" technique was actually effective in reducing calcification. Detection of pineal METAtenin activation is a much more demanding challenge. Presently the only way to detect the presence of endogenous DMT or METAtenin in the proximity of the pineal gland is by using invasive brain probes - which could prove to be very problematic. Hopefully, advanced imaging technology combined with special dyes will enable scientists to verify that the pineal gland secretes METAtenin into the cerebral spinal fluid surrounding the thalamus at a point in time when a volunteer has naturally achieved a state of enhanced consciousness - an event that may happen only once in a lifetime.

Skeptics view of Pineal Gland DMT Production:

Leading psychopharmacologist, Dr. David E. Nicols, has published an article in Psychopharmacology Journal and posted a YouTube presentation, : <https://www.youtube.com/watch?v=YeeqHUIC8Io> refuting the pineal gland DMT production theory. In his presentation he points out that the extremely small 175 milligram pineal gland could not possibly produce the minimum amount of DMT required to elicit an effective DMT experience, which is at least 55 milligrams for intravenous injection. It would be physically impossible for such a small gland to be able to produce this prodigious amount of hormone. In fact, when the pineal gland does produce the recognized hormone, melatonin, it does so at rate of 5 micro grams per hour, that is, at a rate of 1/10/000th the rate of production required for a DMT experience. However, this comparison needs a closer look, particularly with the parameters of location and proximity in mind.

In considering the minimum dosage of 55 milligrams for intravenous or inhalation absorption, the result is that the DMT is diluted into the full volume of the body tissue, and furthermore, there is the presence of blood-borne monoamine oxidase, the quick-acting DMT scavenger which further diminishes the DMT concentration. On the other hand, the pineal gland is at ground zero of the brain where there is no need to deliver the DMT less than a millimeter, this being approximately 1000 times closer to the target and delivering the DMT at an equal or higher concentration than it would be if had been diluted throughout the whole body. Furthermore, the pineal gland is tucked into the cleavage between the two lobes of the thalamus, which is the central switchboard of the brain; it couldn't be more proximate to where it needs to be.

One way to test this argument would be to determine the minimum dosage actually required to elicit a DMT experience when this entheogen is delivered directly to the third ventricle of the brain instead of at the 60 cm distance from the forearm.

Physiology of the pineal

gland: Visit: <http://www.neuroradiology.ws/pinealomasphysiology>.

Internet Resources for further information

PINEAL GLAND/METAtonin, Endogenous DMT CONNECTION

www.rickstrassman.com Author of the groundbreaking book *The Spirit Molecule* which now been made into a movie

www.thespiritmolecule.com The official website of the movie version of *The Spirit Molecule*

<http://www.cottonwoodresearch.org>, Dr. Strassmans foundation that is sponsoring research in the Pineal/EDMT, METAtonin connection

<http://www.anthonypeake.com> Anthony Peake is one of today's foremost writers on the subject of hyperphysical phenomenon, consciousness and the out-of-body phenomenon.

<http://www.dmtsite.com/> James Oroc's *Tryptamine Palace* highly informative website on DMT and 5-MeO-DMT,

http://neurotheology.50megs.com/whats_new.html An excellent article on DMT.

http://www.realitysandwich.com/meditations_pineal_gland An article about verification of the link between meditation and pineal gland activity as determined by real-time MRI brain scans.

<https://www.dmt-nexus.me/forum> An excellent forum on all aspects of DMT including speculation on the pineal gland connection

www.lysergia.com/LamaWorkshop/lamaEndohuasca.htm A website devoted to *Endohuasca*, another term to describe endogenous DMT and experiences related to it.

<http://rashidaanurse.blogspot.com/2011/01/pineal-gland-third-eye.html> An Islamic perspective of the pineal gland, considered to be a "meta" organ.

http://www.ayurvedacollege.com/print/articles/students/pineal_gland The Mysterious Pineal Gland (by Michael Anderson C.A.S.), a very readable history of the pineal gland.

<http://ajitvadakayil.blogspot.com/2010/05/pineal-gland-third-eye-capt-ajit.html> A beautifully illustrated website dedicated to the pineal/dmt/pinoline connection

http://www.aton432hz.info/Blog/Entries/2013/10/28_Ananda_Bosman_Pineal_Power_Science.html. Ananda Bosman discusses her work with

Dark Room Retreats which encourage the production of pinoline, an essential adjunct to DMT function.

http://www.dmtsite.com/dmt/experience/descriptions_of_experience.html. The DMT experience described

OUT-OF-BODY CONSCIOUSNESS/LUCID DREAMING RESOURCES

<http://www.multidimensionalman.com>, Jurgen Ziewe's website describes the many dimensions of

consciousness as discovered in his many OBE explorations as well as a gallery of his art which depicts many of the realms he has experienced. He is the author of *The Multidimensional Man* www.astralinfo.org/, William Buhlman's website. He is the author of *Adventures Beyond the Body and The Secret of the Soul* and is a veteran of many OBE travels.

www.oberf.org/: Website of the Out of Body Experience Research Foundation (OBERF)

<http://www.gesund-im-licht.at/en/the-hypnagogic-light-experience/introduction.html>, The Lucia Light Simulator webpage that describes a specialized light generator that stimulates a shift in consciousness similar to a mild METAtonin event.

<http://howtolucid.com/lucid-dreaming-blog> a very informative and inspiring website about lucid dreaming.

<http://www.dreamyoga.com/> a website devoted to a specialized form of yoga exercise and lifestyle that promotes lucid dreaming.

www.spiritualtravel.org An extensive resource for information on both OBEs and NDEs.

www.obe4u.com/ An extensive resource for information on both OBEs including instructions on how to direct OBE travel to different destinations as well as the free download book: *School of Out-Of- Body Travel – A Practical Guide*.

www.robertpeterson.org/obebook.html Robert Peterson is the author of *Out of Body Experiences, How to have them and What to Expect*. This book can be read in its entirety on this website.

<http://www.baytallaah.com/bookspdf/132.pdf> : is an online book by

William Buhlman, *Adventures Beyond the Body - HOW TO EXPERIENCE OUT-OF-BODY TRAVEL*

<http://www.lucidity.com/> Stephen LeBerge's website for the Lucidity Institute that offers training workshops for OBEs

www.drbrucegoldberg.com/newlart3.htm Website of Dr. Bruce Goldberg, author of *Exploring The Fifth Dimension: Parallel Universes, Teleportation and Out-of-Body Travel*

www.world-of-lucid-dreaming.com Rebecca Turner's extensive NDE website. Ms. Turner has been lucid dreaming since she was 14 years old.

NEAR-DEATH CONSCIOUSNESS RESOURCES

<http://www.near-death.com/> An extensive website devoted to Near-Death Experiences and the Afterlife that is fully documented and approaches the NDE from almost every possible perspective.

<http://www.nderf.org/> Website of the Near-Death Experience Research Foundation, the world's largest NDE website now published in 23 languages.

www.pimvanlommel.nl Cardiologist Dr. Pim van Lommel's NDE website, a very scientific approach.

<http://pmhatwater.com/> PMH Atwater, Ph.D has written six books on NDEs including those experienced by children.

<http://iands.org/home.html> Neurosurgeon Dr. Alexander Eban's well-documented website devoted to NDEs, based on his own personal life-changing NDE experiences.

<http://aleroy.com/> Ken Katin's educational website dedicated to explaining NDEs.

MEDITATION/CONSCIOUSNESS RESOURCES

<http://holofractal.net/>, a blog for all consciousness-nauts.

<http://www.ithou.org/node/1958> Shows a video of the Dalai Lama and his comments on phowa meditation which is a means of separating consciousness from the body and entering a state of bardo consciousness.

<http://www.yhousenyc.org> Investigating the implications of Artificial Intelligence and the emergence

of consciousness thereof.



Mind and Life.org

<http://www.iacworld.org> Waldo Vieira's International Academy of Consciousness based in Brasil.

<http://icrl.org/basic-research/> ICRL is an international, interdisciplinary, and inter-generational consortium of some 75 members, most of whom have been associated with the Princeton Engineering Anomalies Research (PEAR). Presently about 5 consciousness related research projects are underway.

<http://www.closetotruth.com/topics/consciousness/consciousness> Is an excellent series of interviews with today's leading pioneers of consciousness research.

<http://academy.resonance.is/exploring-unified-physics-delegate-level-1-v3/>. Welcome to the Resonance Academy and explore the world of consciousness

<https://www.actualized.org>. Ego vs. Eco: will our planet survive the human race? Leo has some answers.

<http://www.freemeditations.com/benefits-of-meditation-increased-telomerase.html>. A study done by the *Shamatha Project* has shown that intensive meditation can lead to increases in telomerase, an enzyme important for the long-term health of cells in the body and longevity.

[http://journals.lww.com/neurologynow/Fulltext/2012/08040/Meditation as Medicine.9.aspx](http://journals.lww.com/neurologynow/Fulltext/2012/08040/Meditation_as_Medicine.9.aspx) Neurology Now Magazine article by Amy Paturel describes how meditation stabilizes the brain's default mode network, DMN, or default waking consciousness, also noted is a thickening of gray and white brain matter.

<http://www.noetic.org/library/book-reviews/irreducible-mind/> a review of the book *The Irreducible Mind: Toward a Psychology for the 21st Century* a scholarly investigation into the significance of unexplainable consciousness experiences such as NDEs, paranormal abilities observed in meditators and yogis and mystical experiences.

<http://www.amrityoga.org/more-teachings/thirdeye-meditation.html> An article by Yogi Amrit Desai about the significance of Pineal Gland focused meditation.

<http://www.livingwordsofwisdom.com/third-eye-meditation.html> A webpage devoted to Pineal awareness meditation

<http://www.mythaphi.com/#/> a website devoted to an anticipated evolutionary shift in consciousness in its many manifestations

<http://www.eman8.net/human-evolution-who-are-we-becoming/> describes the 8 stage consciousness evolution process as developed by Professor Clare Graves of Union College, Go Dutchmen!

Podcasts: Strassman, 2/2/17, Optimal Performance with Ryan Munsey

Conclusion

I hope I have inspired you, dear reader, to do further research yourself. Probably the first place to start is by reading Dr. Rick Strassman's book, *The Spirit Molecule*. This book is fully documented with an extensive bibliography. Dr. Jeremy Narby's book, *The Cosmic Serpent, DNA, and the Origins of Knowledge* may prove worthwhile as well, as well as the work of Dr. Pim Van Lommel, Anthony Peake,

Dr. Eban Alexander, Michael Talbot and many of the authors mentioned in this article. A simple search on the Internet using terms such as: OBE, DMT, Pineal gland, DNA morphogenetic consciousness, remote viewing, Shakti Kundalini, nonlocal quantum communication, the eight circuits of the brain theory etc. will provide further information. Each of us has been endowed with this gift and each of us will discover it in our own way.

Any serious scholars, writers or scientists who are interested in pursuing this phenomenon have our full support. I also welcome any comments or suggestions that would help improve the scientific legitimacy of this research resource. If you are engaged in a project that involves the pineal gland and have a question about any of the concepts presented in this paper or need any further information, please contact us at Chemistryofconsciousness@gmail.com and we will do our best to support you in any way we can. If we can't provide the answer, we can probably put you in touch with someone who can.

This internet-based pineal gland research resource and conceptual artwork was created as a result of a life-changing METAtone event that occurred in 1974 in Pownal, Vermont, near Bennington. It wasn't until the year 2000 that this writer was encouraged to inquire into the origin of the experience, brought on by a series of seemingly spontaneous events. Please excuse any errors that you may have encountered and please inform us so that we may correct them.

Upstairs, Pownal Country Store



Thank you, dear reader, and thank you, too, all who have knowingly and unknowingly helped me gather and assemble this reference, may this resource provide you with plenty of food for thought as you wrestle with some of the concepts we present. Very few of these words are originally mine, almost all have been gleaned and polished from the writings of others. So, too, for the majority of the images which came from Google images. Martha Barrett Schwerdtle provided the drawings and there are personal photographs as well.

Many thanks to Drs. Kim, Kim, Chang, Kim, Je and Rhyu of Korea University who present an alternate strategy of synchrotron X-ray imaging, which can visualize the morphologies of acervuli (brain sand) in 3-dimension (3-D) over entire human PGs (pineal gland) and give access to quantitative analysis. Phase contrast based on strongly collimated synchrotron hard X-rays^{32,33} produces images of excellent quality due to strong edge enhancement between different regions^{34,35}. Furthermore thick specimens can be examined with high resolution as required here, thanks to high-penetration power of hard X-rays^{36,37} <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3523289/>

*Melatonin is actually a misnomer. It is based on the Greek term "mela" meaning black and "tonin" which may have been borrowed from the word serotonin or perhaps may mean "to shrink" as Strassman suggests. When melatonin was first discovered as a secretion of the pineal gland in 1958, it was observed that it could lighten dark discolorations of the skin. Later on, the neurological function of melatonin was discovered, but the name remained. The term "serotonin" is something of a misnomer as well and is based on the English terms "ser" as in serum and "tone" as in "to firm". The name reflects the circumstances of the compound's discovery: serotonin was first identified as a substance in blood serum that constricted or toned blood vessels; its neurological significance was identified later on.

The term METAtonin originated as a typographical error on a word processor at that very time we were searching for a generic term that would describe the endogenous DMT-based secretion of the pineal gland, it being a secretion very similar to melatonin that functions at what we perceive to be a higher octave, and the name seemed to fit perfectly. Ten years later we found the term metatonin in the book *The Invisible Landscape*, pg. 65, by Terrance and Dennis McKenna, 1994 - apparently a typo as well. The first four letters are capitalized in the beginning of this article so as to differentiate its similarity to melatonin with which it is easily confused. Other appropriate terms for this endogenous pineal secretion could be the acronym EDMT (EndogenousDMT), Spiritonin (as in Spirit Molecule), Anavatonin (from the Greek: ascension), Peratonin (from the Greek: beyond) or perhaps the term Endohuasca that was suggested by Jonathan Ott, ethnobotanist and author of *Ayahuasca Analogues Pangaeon Entheogens*, which is probably the first book that ever exposed me to the concept of the spirit molecule.

The actual chemical progression of the creation of DMT in the pineal gland has been described as follows: The serotonin concentration in the pineal gland would usually be destroyed by monoamine oxidase (MAO) but the presence of beta carbolines produced by the pineal gland (harmalines and pinoline) prevents this absorption. As for DMT production, serotonin is synthesized into melatonin by the action of N-acetylating enzyme into N-acetylserotonin or melatonin. Melatonin is then synthesized into 5-MeO-Tryptamine by the action of O-methylating enzyme (HIOMT). 5-MeO-Tryptamine can then be activated by indole-N-Methyl (INMT) and synthesized into 5-MeO-Dimethyltryptamine or, with the removal of a CH₃ group, be reduced DMT. DMT has the simplest chemical formula of all the entheogens and is the most readily absorbed by brain tissue.

Supplemental Pages:

Here are four more pages that are germane to the pineal gland, METAtonin and the study of consciousness:

PAGE 2: The Entheological Paradigm: Is a discussion of the work of Dr. Martin Ball who maintains that the proper use of entheogens can bring about a positive development in our society and culture by expanding the borders of our consciousness and our relationship with Higher Intelligence. [GO TO PAGE 2](#)

PAGE 3: The Development of Consciousness in the Human Brain: Including the role that endogenous DMT may play a role in this process, [GO TO PAGE 3](#)

PAGE 4: Dreamtime: An article about a branch of the human race that quite possibly exercised their pineal gland in everyday life as a guide to their survival. [GO TO PAGE 4](#)

PAGE 5: Consciousness to the Fourth Power: An inquiry into the nature of consciousness as it functions at different scales of the universe. [GO TO PAGE 5](#)

Contact the author, email: chemistryofconsciousness@gmail.com. Any comments, suggestions or inquiries are welcome

Drawings "Vitae" and "Pineal Power" compliments of Martha Schwerdtle, copyright, 2002

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Please consider supporting Dr. Barker's and Dr. Borjigin's research by donating to their cause. You can donate directly to the Cottonwood Research Foundation by going to:

<http://www.cottonwoodresearch.org/donate>

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