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Fusion

Cosmic Harmony

Brain <----->TA <-----> Mind

Matter <-----> Mind <-----> Spirit

Adjutant Mind <-----> Spirit of Truth <-----> Cosmic Mind

Intellectually <-----> Mindfully <-----> Morontially

Involuntarily <-----> Free Will Control <-----> Volitionally

Physical <-----*coherence*-----> W i s d o m <-----*coherence*-----> Spiritual

W o r s h i p

C o u n s e l

K n o w l e d g e

C o u r a g e

U n d e r s t a n d i n g

I n t u i t i o n

P r o t o p l a s m

P e r s o n a l i T r e e

Plausible physiological mechanisms that may involve Thought Adjuster communication.

“Every impulse of every electron, thought, or spirit is an acting unit in the whole universe.” (56:10:14)

Can we connect an electron to the whole universe? Can we connect science and spirit? Can we harmonize brain functions, spirit senses, sights, and insights? Let’s examine some of the laws of physics that might be involved in the interactions between the eternal and the temporal, the infinite, and the finite, the spiritual and the mindal, the morontial and the material, spiritual activities and the brain.

“Always should the domains of the physical (electrochemical) and the mental response to environmental stimuli be differentiated, and in turn must they all be recognized as phenomena apart from spiritual activities.” (65:7:8)

Our mind differs from our brain. The brain is a tangible part of the body, whereas the mind is the consciousness of our brain’s activities and therefore, intangible. The brain has prioritized and pre-prioritized activities. Let’s look at some of the prioritized “living electrochemical” activities of our animal brain and see if we can find some of those intangibles that determine how we consciously prioritize things to become more spiritually minded. (Ref 0:5:7)

There are different states of consciousness.

- unconsciousness - disrupted connectivity in the brain.
- sub consciousness - repressed brain stem activity.
- deep sleep - delta wave dominant, immune system strengthening, body repairing.
 Note: Microglia, a type of neuroglia or glial cell in the brain and spinal cord, are macrophage, cleanup cells, and work primarily during deep sleep.
- hypnagogia - the creative transition from wakefulness to sleep
- light quiet sleep - hypothalamus shut down.
- rapid eye movement (REM) - active dream sleep.
- wakefulness - beta wave dominant, free will controlled thinking.
- superconsciousness - pre-prioritized brain activity not overtly involved in input analysis or decision making.

Looking at our multiple states of consciousness prompts the question; what influences these various states of our brain’s activity? What extracts or filters active thoughts from stored memories? How does our awareness shift from material to spiritual, from “me” to “we”, from adjutant to cosmic thinking? Let’s use our creative wakefulness (and perhaps our hypnagogia and our superconsciousness) to look for some logical connections between cellular interactions and spiritual growth.

Physiology of body consciousness.

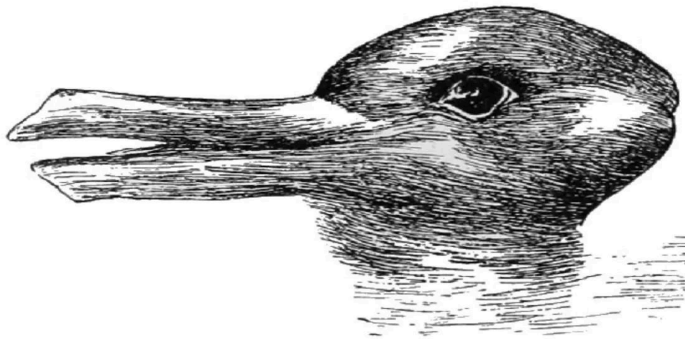
Our digestive system is involved in all these consciousness states. Our gut (sometimes called the second brain) has capabilities that may surpass our brain’s intercommunication ability. It has its own nervous system, known as the enteric nervous system. The cells in our body communicate with each other and they have a direct pipeline to the brain via the Vagus nerve. Our gut’s food processing mechanism moves serially from acidic to alkaline (think charging the battery) and it is electrically aided by being grounded through our connection to mother earth. The processes of extracting the necessary building blocks for the cells of our body co-evolved with us. Life Carriers designed us to be energetically active (think discharging the battery) and we will try to see how we can wisely direct that electrical discharging process.

Our cells communicate with each other by mechanically contacting nearby cells and transferring electrically patterned hydrophilic (water repelling) peptide and hydrophobic (water repelling) eicosanoid signaling molecule and their nature is determined by the electrical surface properties of the peptide protein molecules. Eicosanoids are mainly immune system

related so we are going to focus on peptides. Peptides form the basis of non-immune system signaling molecules and there are up to seventy different types of peptides. Peptides are small portions of digested or manufactured proteins, and form signaling molecules like endorphins, hormones, and neurotransmitters. These signaling messenger molecules connect the cells of the body's endocrine (bodily functions), and nervous systems, cascading electro-chemical messages between cells, along nerves, up the spinal cord, to the brain stem, the amygdala, the hypothalamus, the thalamus, the pineal and pituitary glands, and then on to other areas of the brain for appropriate responses. These peptides form the base of the periaqueductal gray (PAG) area of the brain stem which is the hub for self-awareness and pain mitigation. This is also the hub for our qualia, the internal and subjective sense of our perceptions, the introspectively accessible aspect of our brain. The qualia are a self-organizing, self-referring and self-actualizing psychosomatic network. There are no emotion control circuits in the brain. Our emotional responses are not hard wired. Peptides are the biochemical overcontrol of our 34,000 possible emotions and play a crucial role in assisting the activities of our immune system, by integrating mental, emotional, biological activities and eventually our spiritual wellbeing. They color, predict, and change our behaviors, our moods, and our unique emotional tone.

“At any moment of time, in the blood stream of any human being there exists the possibility of upward of 15,000,000 chemical reactions between the hormone output of a dozen ductless glands.” (65:6.6)

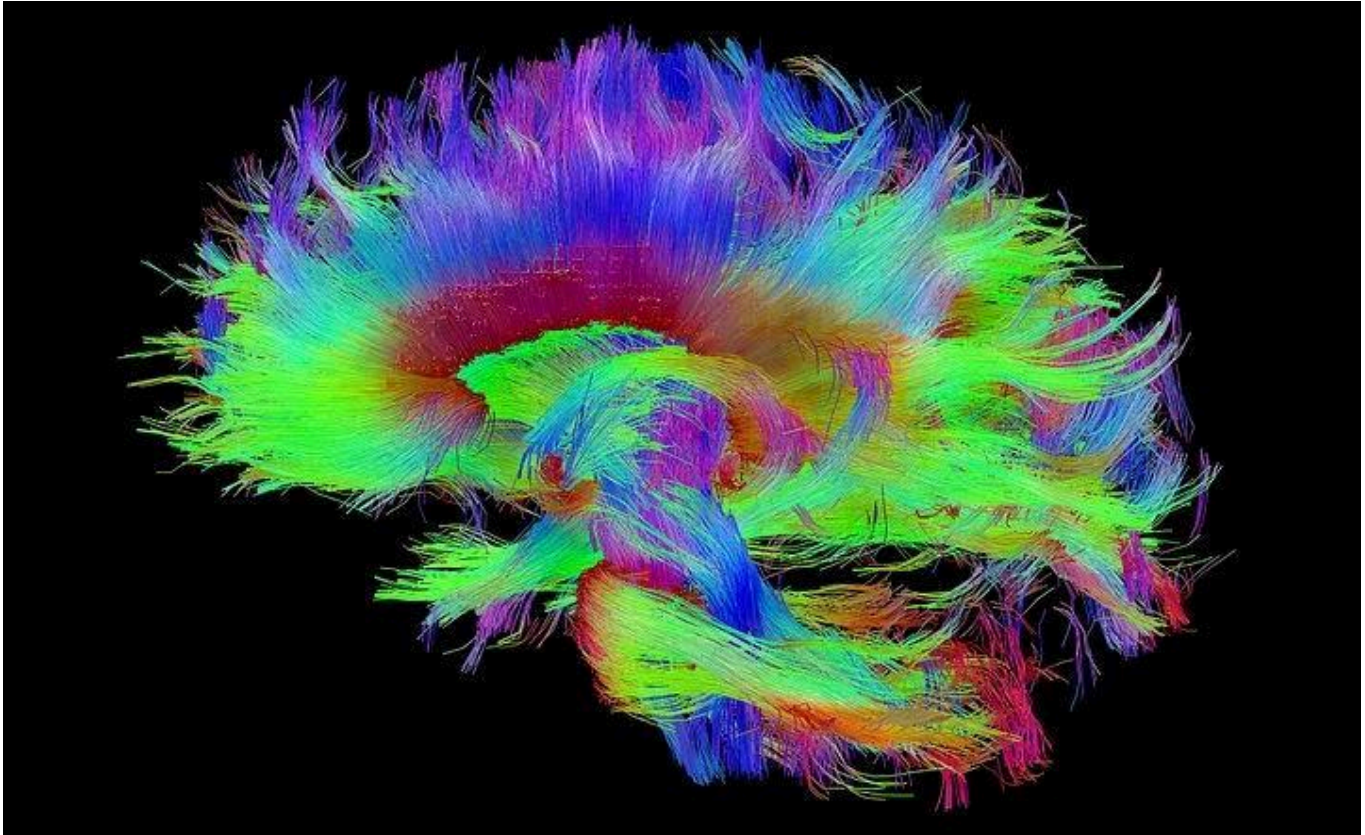
As these peptide-based messages cascade along nerves, their “critical first stop” is the brain stem and medial limbic region of the brain, where they are sorted and prioritized before furtherance to the neocortex or for memory storage. Sensory inputs are dealt with via the amygdala and the sympathetic (fight or flight) nervous system and balanced by the parasympathetic system which regulates “rest and digest” functions.



To handle the continuum of signals that need consideration, the brain has about 86 billion neurons and 100 trillion synapses all capable of intercommunication. This is 10 to the millionth power of possible states, so the flow of information is more like constantly moving three dimensional images. For example, the brain can form a three-dimensional image from the electrochemical signals received as light from an object hits dozens of parallel stacked disks in the rods and cones of the retina. Each disk has a seething liquidity of receptor molecules moving in a “random” manner. A light triggered molecule collides in this semi liquid sea, with a nearby molecule, transferring a smaller signal molecule amplifying the signal. Similarly, other cells in the body have “random” motion collisions with neighboring cells that transfer messenger molecules which determine their interactions. In the case of the eye, these interactions cascade electrochemical signals in a chain reaction down the optic nerve to the brain which creates the visual image, but our conscious image is made up of much more than just the visual image. Our consciousness image includes everything that is happening, along with all our memories, related thoughts, gut reactions, future intents, and current actions. It is interesting to note that there are ten times as many neural connections coming back from the various cortex areas of the brain, as there are going out from it, so the mid brain is sharing the current inputs with all other associated areas of the brain for continuous reflecting, cross referencing and choosing. In effect, we are continuously observing and relating our current self with our past self. Is it a Duck looking left or a Rabbit looking right?

“The human mind does not create real values; human experience does not yield universe insight. Concerning insight, the recognition of moral values and the discernment of spiritual meanings, all that the human mind can do is to discover, recognize, interpret, and choose.” (196:3.10)

Side note: The most important part of the brain, the neo-cortex, is almost the same everywhere. It manifests material uniformity.



“Ideas are not simply a record of sensations; ideas are sensations plus the reflective interpretations of the personal self; and the self is more than the sum of one’s sensations.” 133:7:7

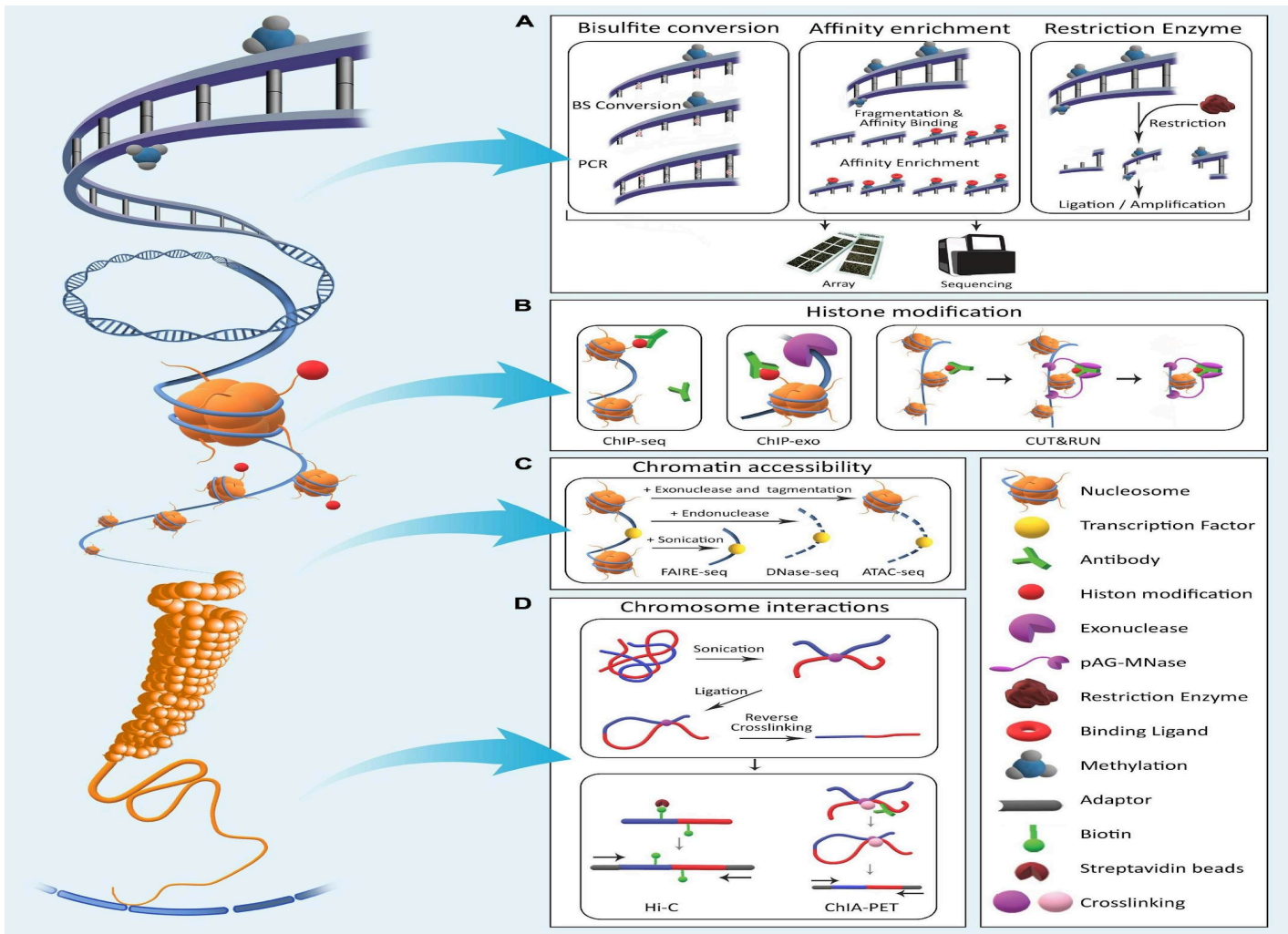
Brain wiring shows fewer links to frontal lobes and more links to visual networks.

Our body’s sensations support the mind to help us to discover, recognize, interpret, and choose. Let’s see if we can find some mechanisms of weaving in some spiritual influence.

Intercellular Communication

Communication between individual cells of the body is aided by cellular cytoskeletal structures, eicosanoids, and nerve cells. Let’s first focus on the nerves of which there are two types, sensory (incoming) and motor (outgoing). The sensory nerves are made of many sections varying in length from 0.1 mm to a meter. Nerve stimulation has a trigger voltage below which there is no response and above that voltage the nerve fires. The frequency of firing is the information encoded in the signal as it is transmitted via the peptides and action potential along the nerve. Each segment intercommunicates at their intersections and these intersections do not actually touch, instead, they have a 40-nanometer gap between them called the synapse. At one end, are the synaptic vesicles which contain peptide neurotransmitters. These are chemical messengers, and they are released, to communicate, unidirectionally, to the next nerve segment. Peptide neurotransmitters transfer messages as they are released and themselves can be modified by two main processes: epigenetic methylation (the replacement of a methyl group in place of a hydrogen atom on the appropriate DNA gene segment) and our emotional predisposition. An example of this would be when a gene expression

triggers catechol-O-methyltransferase (COMT) enzyme to break down the neurotransmitters, dopamine, epinephrine, and norepinephrine.



Epi (above) genetic DNA change techniques

Epigenetics

Let's talk for a minute about epigenetics. Our 1.8-meter-long DNA strands are present in most of the cells in our body and the thing that determines whether it acts like a brain cell or gall bladder is the way it is folded or its "gene expression". Gene expression is called your epigenome and the thing that controls gene expression (the way the protein is folded) are DNA segments which act as "enhancers" and methylation which change the final folded shape and the final folded shape determines its function.

It is hypothesized that neurons in the human brain have over 4000 unique enhancers which are not shared by other species. Gene expression (the DNA folded pattern) determines which proteins are produced and that shape can be changed by the addition of methyl groups at strategic locations along the DNA strands. This is called tagging. There are

three other major methods of “epi” (above) genetic tagging or modification: histone acetylation (adding an acetyl group to histone proteins), chromatin compaction (wrapping the DNA around another protein) and nuclear organization (spatially arranging the chromosomes).

There are long-term gene expressions (think brain or gall bladder) and short-term ones. An example of a short-term gene expression would be when some comment angers you. An emotional response causes changes in the gene expression of certain cells, which does things like increase your blood pressure, adjust your breathing, tense your muscles, or stand the hair up on the back of your neck.

Epigenetic changes involve the manufacture and release of peptide neurotransmitters and some of their main influences are as follows:

Serotonin (95% of which comes from the gut): anxiety, current happiness, sense of wellbeing.

Dopamine: unexpected benefit, motivation, pleasure, future happiness

Note: Alcohol or sugar levels increase dopamine levels by activating the nucleus accumbens (pleasure/reward center) and this sets the “current expectation level” above which dopamine is then released. This is called “The Pleasure Trap”.

Glutamate and Gamma-Aminobutyric Acid (GABA): balance, excitement versus the urge to be calm.

Note: The blend of these determines our level of maturity.

Norepinephrine (aka - noradrenaline): alertness

Acetylcholine: focus

Oxytocin (a hormone and a neuropeptide with more pronounced, prolonged effect): orgasm, social recognition, pair bonding, anxiety, group bias

Endorphin (neuropeptide): current pleasure, self-esteem

Neurotensin (neuropeptide): like dopamine, but specifically for the differentiation of “good” from “bad” thoughts (stems from a survival perspective but may be involved with moral choices as well)

The chemicals that are released from a synapse when triggered, are a function of the genetic and epigenetically modified synapse chamber shape and their current electrical status. Their electrical predisposition (which is influenced by previous activity) is determined by the local concentrations of calcium, potassium, and sodium ions in, and around the neurotransmitter chamber itself. For example, brain-derived neurotrophic factor (BDNF or Brain-Derived Neurotrophic Factor) is a signaling protein that can enhance neuroplasticity and its levels can be boosted by exercise, ketosis, magnesium (L-Threonate) intake and good sleep. One emotional condition, fear, involves the presence of calcitonin, a gene-related peptide, which is created by all fears and this peptide relays signals to other areas of the mid brain. Fear is mediated by dopamine from the amygdala.

Side note: Current research shows that fears can only be mitigated by building new stronger neural chemical pathways rather than trying to ignore the old ones.

Life Carriers (36:2:15) get huge credit here for engineering intricate channels in our cell walls that creatively change shape with electrical potentials to open and close allowing this flow of these motivating chemicals in this dynamic environment. The flow through the cell walls of the chambers and their surrounding conditions are affected by previous stresses, anxieties, and fears of the future (among other things). A major component in maintaining homeostasis is the hypothalamic-pituitary-adrenal (HPA) axis, which is an intricate, robust, neuroendocrine mechanism, that has similar physical attributes to neurons. It mediates the effects of stressors by regulating metabolism, immune responses, and the

autonomic nervous system (ANS). The HPA axis cascades down endocrine pathways that respond to negative feedback loops involving the hypothalamus, anterior pituitary gland, and adrenal glands.

“Anxiety was a natural state of the savage mind. When men and women fall victims to excessive anxiety, they are simply reverting to the natural estate of their far-distant ancestors; and when anxiety becomes actually painful, it inhibits activity and unfailingly institutes evolutionary changes and biologic adaptations. Pain and suffering are essential to progressive evolution.” (86:2.1)

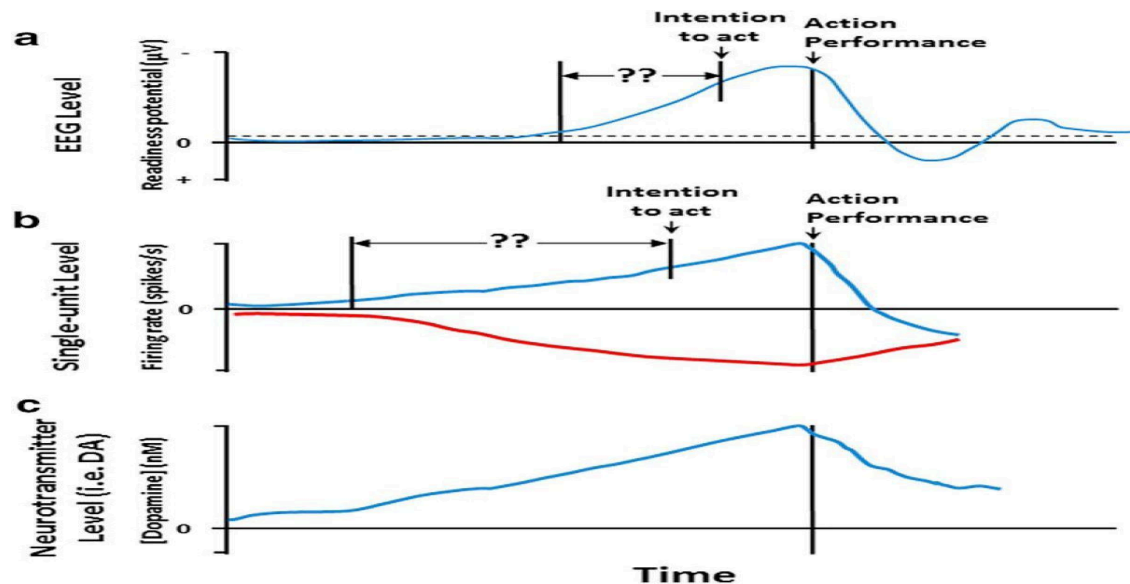
“All physical poisons greatly retard the efforts of the Adjuster to exalt the material mind, while the mental poisons of fear, anger, envy, jealousy, suspicion, and intolerance likewise tremendously interfere with the spiritual progress of the evolving soul.” (110:1:5)

Our initial emotional conditions relate to our calmness, which in turn relates to our trust in God. Above this calm or frenetic initial electrical energy state, there is an on/off, nerve firing, transmission mechanism. The intensity and duration of the firing voltage, and frequency of firing repetition, determines which neurotransmitters are released from the synapses. High voltage, high frequency, longer duration stimulations, are involved in the more intense reactions and can be calmed by low, meditative frequencies.

“Jesus taught the appeal to the emotions as the technique of **arresting** and **focusing** the intellectual attention.” (152:6:4)

Brain Waves

Benjamin Libet conducted experiments that demonstrated that we unconsciously think about an action, up to 300 milliseconds before we are conscious of that thought. This implies that our superconsciousness or mid mind is really in control.



One pulse of a neuron firing.

Imagine this preemptive action happening at all our brain wave frequencies from the lowest at 4 Hz up to our highest functioning range of over 100 Hz.

All this neuro-peptide electro chemical activity shows up as brain waves and these individual excitations cascade in waves of various overlapping scales of neural avalanches.

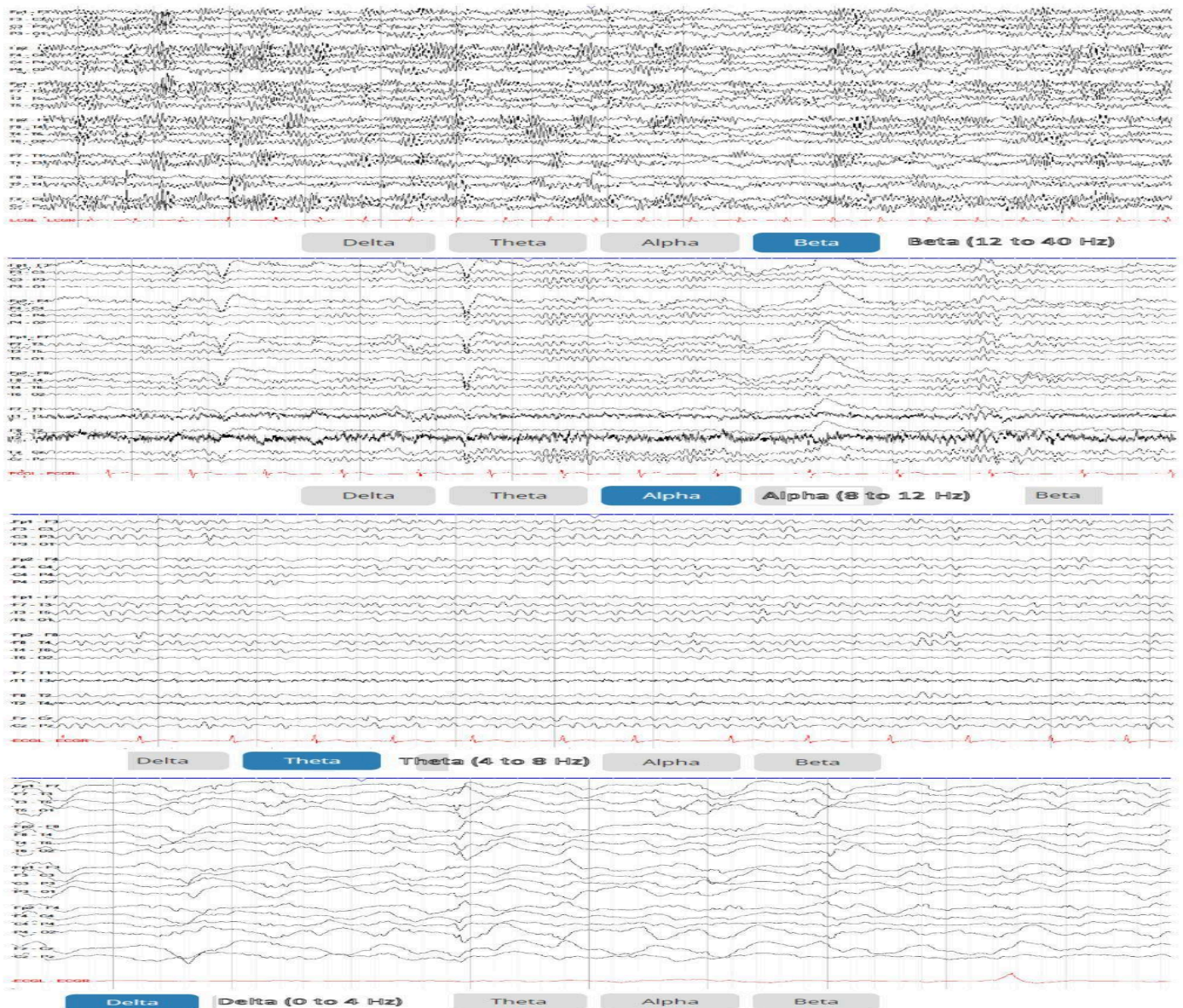
The lowest, delta wave frequencies, those experienced in deep meditation and worship, generally have the highest amplitudes, and interestingly, are the dominant frequencies in a young child's brain. At those early ages our mystery monitors function as Thought Changers.

“From the arrival of the Adjuster to comparative full growth, about twenty years of age on Urantia, the Monitors are sometimes designated Thought Changers.” (107:0.7)

The higher frequencies and more entrenched ways of thinking may become dominant by age 25, except in perhaps periods of meditation, true worship, and sleep.

Electro-chemical signals between each nerve segment are triggered at 5 to 50 times per second and a propagation signal ripples along the nerve as a wave of action potential. These ripples of action along the nerve are a pulse above the base voltage, and they shuttle the electrical pulses at between 200Hz and 300Hz. On a related note (pun intended) the frequency of this wave of action potential varies for individual events and equates to musical notes between G 196Hz and D 294Hz. This may be why music is often relaxing.

“Tuneful syncopation represents a transition from the musical monotony of primitive man to the expressionful harmony and meaningful melodies of your later-day musicians.” (44:1:13)



Our normal brain activity is quite frenetic as can be seen in this typical EEG, electroencephalogram, brain wave snapshot of the electric fields emanating from these nervous activities:

These electrically associated and massively cross-correlated electrical signals of all these synaptic interactions can be grouped and parsed into ranges reflecting their general functions as follows:

Gamma (40 to 100 Hz) – involved in recent **intellectual activity**.

Beta (12 to 40 Hz) – involved in **executive functioning**.

Alpha (8 to 12 Hz) - involved in **relaxed cognitive functioning**.

Theta (4 to 8 Hz) - involved in light **meditation** and sleep.

Delta (0 to 4 Hz) - involved in **deep meditation**.

The voltage variations in the above images represent approximately +/- 30 micro-Volts above the much higher action potential ripple voltage base (the initial conditions) of -70 milli-volts.

It may be that the lower the base voltages, the more “visible” the +/- 30 micro volts will become.

In the Thought Changer phase, Delta waves and massive cross communication between nerves dominate. The delta wave frequencies (0 to 8 Hz) can be replicated in a deep meditative state, or worship. Perhaps engaging in complete parental trust in our father would allow slower thinking and cross communication between brain cells, or perhaps in enjoying a particularly soothing piece of music, we would be able to “resemble the unsuspecting trust of the child mind” (196:0:11) and as (167:6:1) says; “Verily, verily, I say to you, whosoever receives not the kingdom of God as a little child shall hardly enter therein to grow up to the full stature of spiritual manhood.”

Thought Adjuster Reception

Related to this early child brain plasticity, is the reception of the Thought Adjuster at our first moral decision, which begs the question: What peptides in the brain are involved in moral choices? What parts of the brain are involved in moral sensitivity, emotion, motivation, cooperation, ethics, respect, and the differentiation of good and evil (think neurotensin) or other altruistic behaviors? What is different about the child brain that allows the Thought Changer to “change”, versus “adjust”, our thoughts?

In these “formative” and presumably more trusting, stress-free years, the child’s brain is more open to learning (e.g., walking, talking, socially interacting). This formation is called your “connectome” and this forming or patterning continues up to about age 25 after which this neuroplasticity slows down. It is interesting to note that the balance of glutamate to GABA, (excitement versus the urge to be calm) changes throughout childhood and into adolescence, as glutamate levels increase then level off as adulthood approaches. We are establishing our “... preconceived opinions, settled ideas, and long-standing prejudices.” (109:5:3)

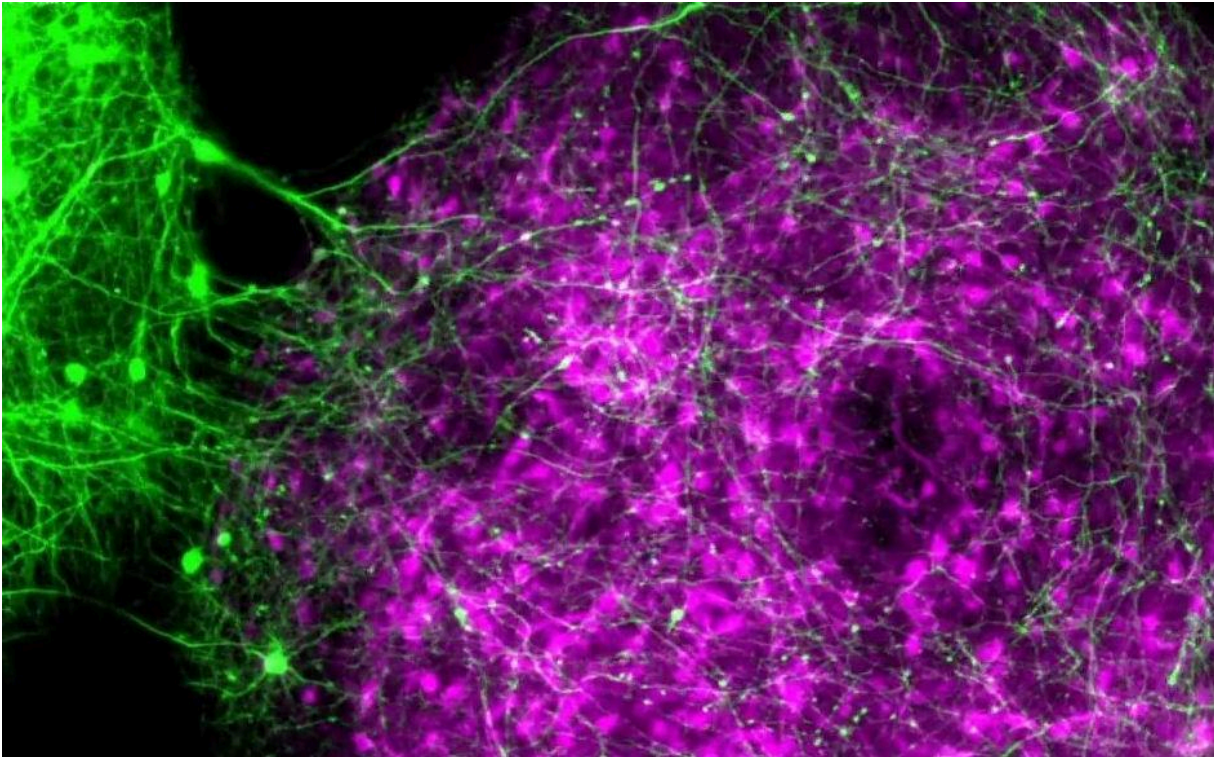
After 25 perhaps the “old dog”, Zen teaching applies: “A full cup cannot take on more water.”

Even with age, our ability to evolve or “take on more water” is still possible because our brain produces up to 700 new neurons a day and these new neurons, plus epigenetics and our free will emotional control, allow us to change our thinking habits. Our brain’s ability to adapt involves several mechanisms and this neuroplasticity helps us to shape and fine tune our receptivity. These adaptability mechanisms include microtubules, microtubule-associated proteins and activity regulated cytoskeleton (ARC) peptide proteins.

The Maturing Brain

The maturing areas of the brain include the frontal and parietal lobes, the insula, and the subcortical structures. But a more interesting feature of the maturing brain involves the “white matter” that gradually envelopes the nerve cells in all these areas. This “white matter” coats and insulates the active transmission portions of the nerves and involves the formation of myelin sheaths on the neural transmission segments. These onion skin like protein insulative coatings thicken with age and allow much faster information propagation but greatly limit their cross communication as the pathways become more defined and we become more fixed in our ways of thinking. We are defining the preferred

voltage pathways and the voltages that are required to “get out of the rut”. Before these insulating sheaths formed (up to about age 25) our thoughts are slower, much more cross connected, more influenced by emotions, socialized thoughts, and highly influenced by peer pressure.



New neurons growing from one area and connecting into another.

Changer, Adjuster, Controller

Whether young, mid-life or old, some brain functions are similar. Let’s look at how the Thought Changer, Adjuster, Controller, might interact at the fundamental level of human thinking, and how we can help that process.

“The Adjuster finds it almost impossible to register these inspiring spirit leadings in an animal mind so completely dominated by the chemical and electrical forces inherent in your physical natures.” (110:7.6)

When we are taught to “... remain for a time in silent receptivity to afford the indwelling spirit the better opportunity to speak to the listening soul.” (146:2:17) perhaps we are being taught to emulate the delta dominant wave state allowing extra time and interassociation of thoughts that affords the Thought Adjuster better opportunity for communication to our soul or superconsciousness.

Let’s think now about how the pure spirit Thought Adjuster, and other pure spirit influences, like the adjutant mind spirits, or even the unqualified absolute, might influence us in this material, electrochemical milieu.

“While the hereditary legacy of cerebral endowment and that of electrochemical overcontrol both operate to delimit the sphere of efficient Adjuster activity, no hereditary handicap (in normal minds) ever prevents eventual spiritual achievement.” (109:5.5)

How can we make “wise co-ordination of material and spiritual forces” to greatly augment cosmic realizations? (110:6.17) How might we provide the “favorable conditions” of “loyalty, sincerity, humility, and patience” that are the “fulcrums” for spirit growth? “... he speaks within the human heart as a still, small voice ...” (148:6:10). How might we

calm the high frequency cacophony and lower those voltage thresholds that might allow us to cross pollenate our thinking and hear that “still, small voice”?

Time Consciousness

The entorhinal cortex (EC) is in that early critical first stop mechanism of the brainstem/midbrain and functions as a network hub for memory, navigation, and the perception of time. Our perception of time is really our conscious perception of the patterns of electrical energy.

“Personality is uniquely conscious of time, ...” (112:0:16).

To achieve the “integration of diverse elements, relationships, or values” (Webster’s definition of coherence) we need to cross-reference time and space. To relate space, the EC has grid cells that fire when we move (imaginatively or actually) that gradually build a memory map or grid reference of our location and since we measure motion by time, the EC then needs a time reference. To perceive time, the brain needs a repeatable or stationary reference. There are a couple of ways to get a time reference. One would be from the rhythmic pulsations that are between 3.75 to 7.5 Hz coming from the limbic hippocampal regions as seen in the Theta waves. The other would be if the EC could reference or cohere to something stationary or “outside of time”. This could be the quantum influence of our changeless personality, our homeostasis, or the timelessness of the Thought Adjuster.

The EC with its time sensitive grid map, is also the main interface between the hippocampus (limbic, “fight or flight” declarative memories and spatial relationship) and the neocortex (computation, attention, thought, perception, and episodic memories). The EC-hippocampus system can time sequence the past, present, and future as related variables so plays an important role in autobiographical, episodic, semantic, and spatial memories including their formation, consolidation, and optimization during sleep. The Thought Adjuster and Theta wave periodicity are both most prominent during sleep. (110:5:5)

Side Note: Recent Alzheimer’s research has found that the EC is larger for those individuals who live longer. From the Urantia Book’s perspective, a larger EC can look further back in time and extrapolate further into the future.

“There is a direct relationship between maturity and the unit of time consciousness in any given intellect.”
(118:1.3)

This entorhinal cortex hub of the brain, with its myriad of logic circuits, continuously responds and adapts to stimuli, strengthening some connections, and weakening others. The process of intercommunicating and strengthening or weakening involves the lengthening or shortening of cytoskeletal microtubules.

Microtubules

Microtubules are tiny cylinders that are strung between cells that are made up of tubulin that are ever-changing in length from 25 to 50 micrometers. They are made up of 13 heterodimer (joined but different) filaments, arranged in parallel around a circular salt water filled cavity about 17 nm in diameter and they have an electrical polarity that can generate an internally coherent, soliton (self-sustaining) electromagnetic field along each filament and these tubules are sufficiently insulated from neighboring interference to facilitate decoherences in the order of 10^{-6} seconds. Microtubules are found in all eukaryotic cells (cells with our DNA in the nucleus) so this strengthening and weakening process is going on throughout the body although we are probably most aware of its influence in the brain. Microtubules, being made up of crystal-like protein filaments surrounding the electrically conductive water filled inner core, shuttle the electrical pulses from cell to cell as the pulses move down the individual filamentary strands by a process of cascading luminescence and the length of the tube causes a delay in the propagation called “delayed luminescence”. Signals along

tubules resonate at twelve frequencies clustered in three ranges, 0.1–0.4 MHz, 10–30 MHz, 100–200 MHz, in the mechanical (1180-to-708-inch wavelength) 1–20 GHz (11.8-to-5.9-inch wavelength) the radio wave range, at 526 and 686 cm⁻¹ (about 20 THz) in the far infrared range (molecular bond stretching and bending) and 276 and 334 nm in the ultraviolet (electron jump) range. The electro-mechanical MHz frequency range, and the optical electro-optical range, may be where we “delicately touch” (and perhaps cohere with) our morontial selves. Perhaps morontia material is optical in nature, just above our electromechanical MHz frequency range. Perhaps the bioluminescence of microtubules is why Adam and Eve “gave forth a shimmer of light” as they might have had more predominant microtubules.

“... vibrations of commingled material and morontia activities ...” (189:1:1)

The microtubules function most poignantly in the medial temporal lobe of the brain as a facilitator of cross-communication between brain cells. This is analogous to the cross communication of the child brain before the formation of the insulative myelin sheaths, but this cross communication is now controlled by the free will of our thoughts (think material light, intellectual insight, and spirit luminosity) (Ref 0:6.8).

“Human consciousness rests gently upon the electrochemical mechanism below and delicately touches the spirit-morontia energy system above” (111:1.5)

The polarity of the filaments allows their electromagnetic energies to harmonize at a quantum electrical energy level by quantum coherence. Quantum coherence is when wave properties split into two or more separate streams (in this case cascading down each of the filaments) and then these bioluminescent streams interact with each other at the quantum level. The organization and patterning of the time delays between tubules allows them to function as information modifiers. Microtubules are arranged in specific patterns and are connected by microtubule-associated proteins (MAPs). These MAPs act to create “nodes” which tune or “orchestrate” the quantum oscillations in what is called “Orchestrated Objective Reduction” (OOR). This “orchestra” gives us a pre-consciousness which allows for the consciousness of our consciousness. It does this by introducing a time delay of up to 500 milli seconds between the electrical impulses from the sensors (proprioception, vision, auditory, tactile, vestibular, interoception, and taste inputs etc.) and the post processing of these stimulations by the neural lobes.

Side note - olfactory stimulations, smells, go directly to the frontal lobes.

Roger Penrose says it this way, “consciousness arises when a large number of microtubules in the brain reach a state of quantum coherence, called a “self-collapse of the wave function.”

“... true spiritual experience, is the experiential realization of the cosmic reality of the observation of the observation of all this relative synthesis of the energy materials of time and space.” (112:2.12)

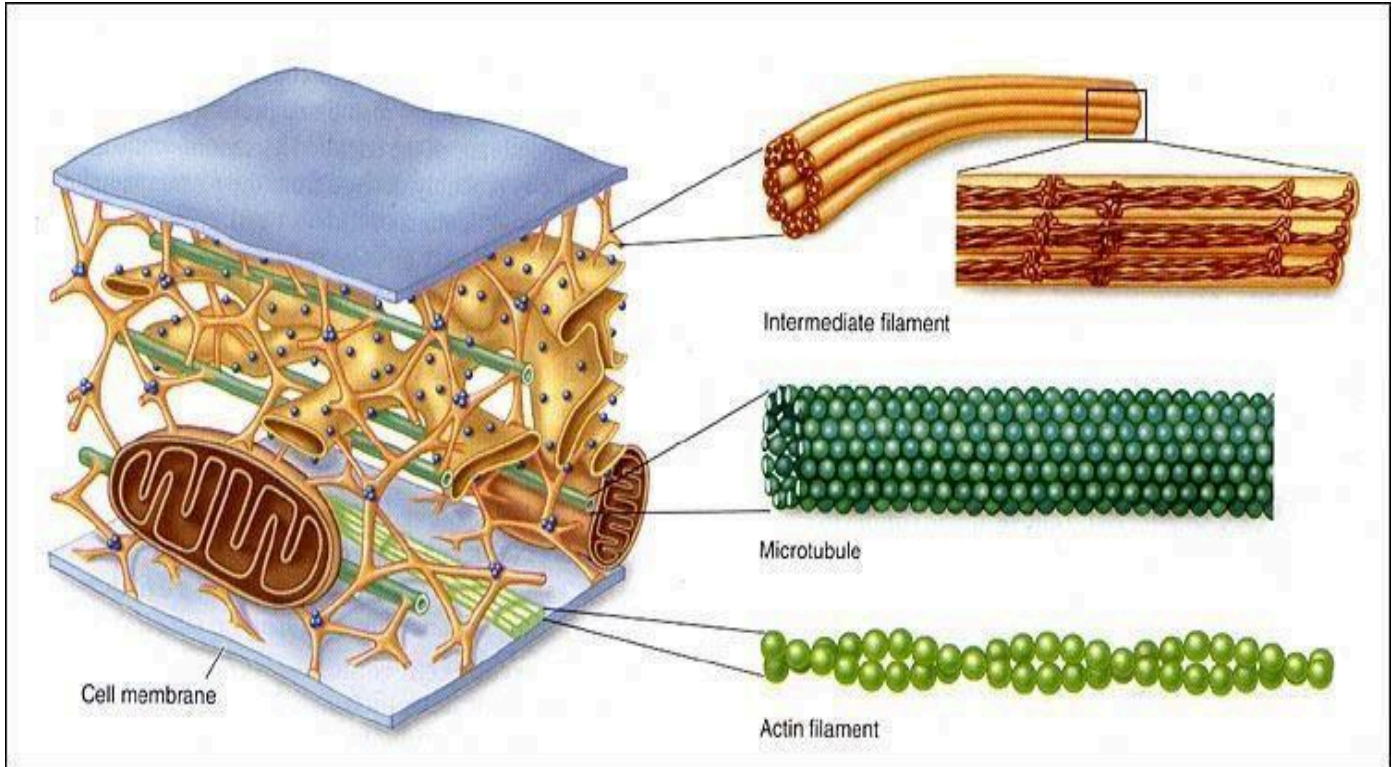
Break?

Microtubule - Quantum Coherence

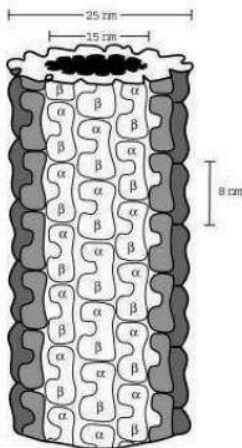
One possible common modality between material, temporal and transcendental, spiritual energies is the quantum electromagnetic energy level so let’s look at those areas of the brain and nervous system that function at the quantum level because the quantum level has some interesting overlaps with the timelessness of spirit energy like, time simultaneity, quantum tunnelling, and action at a distance. At the quantum level, things act as multiple aspects of the whole and they derive their very definition and meaning from that whole and then they interact with our material consciousness in the equivalent of the collapse of the wave function.

“The far-flung physical universe coheres in the Isle of Paradise; the intellectual universe coheres in the God of mind, the Conjoint Actor; the spiritual universe is coherent in the personality of the Eternal Son. ... Man’s

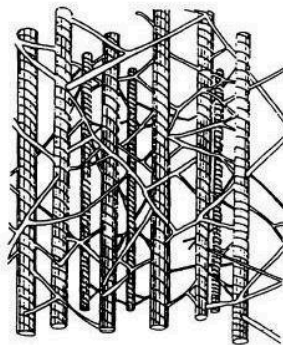
Adjuster is a fragment of God and everlastingly seeks for divine unification; it coheres with, and in, the Paradise Deity of the First Source and Center.” (2:7:7)



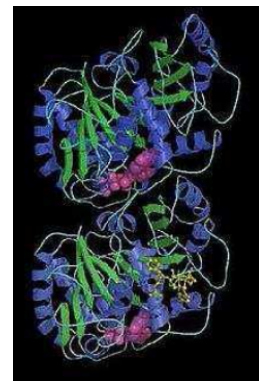
“The endless sweep of relative cosmic reality, from the absoluteness of Paradise monota to the absoluteness of space potency, is suggestive of certain evolutions of relationship in the nonspiritual realities of the First Source and Center—those realities which are concealed in space potency, revealed in monota, and provisionally disclosed on intervening cosmic levels.” (42:10.1)



Tubulins dimers A & B make up the walls



MAPs



Tubulin Dimers

Single and Multiple Quantum Coherence – SQC and MQC

Recent research into the nature of consciousness (Ref Non classical Brain Function Kersken and Lopez Perez 2022) found evidence of multiple quantum entanglement using fast nuclear magnetic resonance (echo planar) imaging, to study brain

protein physiology. They found that the thought processing areas of the brain (where about 250,000 neurons are firing per minute) function at the quantum level and using an intermolecular approach known as multiple spin echo (boosting the initial T2 echo) they found that different areas of the brain demonstrated multiple quantum coherence. In addition, there was evidence of single quantum coherence in the cerebral fluid itself showing up in the dipole-to-dipole interactions like the normal T1-T2 relaxation and rotational symmetry measurements.

Let's reflect for a moment on magnetic resonance. The magnetic resonance process involves placing the subject in a strong magnetic field and then superimposing a variable radio frequency electromagnetic field. The nuclei of the individual molecules, aligned by the strong magnetic field, are vibrated (jiggled) out of alignment, and the time taken to realign (T1 and T2 relaxation times) are a function of the properties of their nucleus. The fact that molecules *all* have this tendency to align with a magnetic field implies an overall reference field. In the magnetic resonance machine, the nuclei align with the coils, on Urania fields align with the North/South poles, in the universe fields align with the energies flowing out of Paradise. We have a magnetic relationship to Paradise.

By using cross-recurrence-quantification-analysis, to characterize and quantify the interrelationships between these nonlinear time responses, researchers also found a 300 to 450 millisecond delay between the EEG signal and the related blood flow pulse oximetry signal. This delay was found to be location specific and was a function of awareness and wakefulness.

Side note: Quantum Coherence in microtubules is temperature dissipation limited, so anything that raises our core body temperature prevents coherence from functioning. Stay cool, calm, and collected.

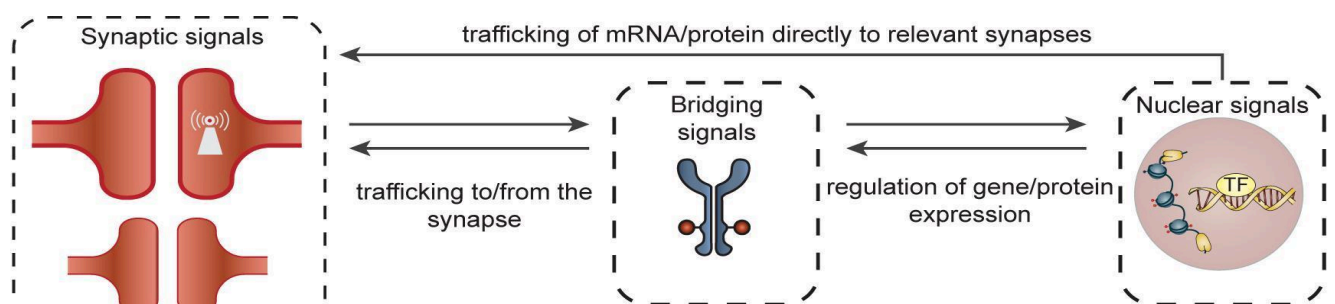
Magnetoencephalography (MEG) also involves (coheres) our magnetic orientation with the magnetic Paradise source. MEG is a tool used to study the dynamics and connectivity of large-scale brain activity and their interactions with the body and its environment in functional body and brain states. MEG measures the magnetic fields produced by the electrical activity of the brain (delta, theta, beta, gamma) using arrays of SQUIDs (superconducting quantum interference devices) or SERFs (spin exchange relaxation-free) detectors. For example, MEG shows brain oscillations in the cerebral cortex at 80 to 200 Hz that relate directly to epileptic events.

Remember the "random" nature of molecules transferring their signaling molecules as they bump into their neighbors? This so-called randomness may be another possible area of spirit influence, at the quantum level, and this would show up here as quantum coherence.

"... the phenomenon of stimulus-response is not a mere mechanical process since the personality functions as a factor in the total situation." (112:1.13)

ARCs and SAMs (Activity Regulated Cytoskeleton Peptides & Synaptic Adhesion Molecules)

In addition to the microtubules intercommunicating between cells we have activity regulated cytoskeleton (ARC) associated peptide proteins which are proteins in our brains that spread information through an mRNA like process and SAMs are the peptide glues that cements our nano-scale neural networks. Messenger RNA molecules carry genetic information and make special proteins that change the firing voltage at synaptic junctions and influence the combinations of inputs from other nerves. For memories, neurons that fire together wire together, and neurons that fire out of sync, fail to link. Out of all the possible energy states, the system will converge to a local electrical minimum, also called a local attractor state. Local attractor minima states are existing memories.



Replay and generation of molecular tags

Neurotrophins/kinases/transcription

Genetic/epigenetic

ARCs influence local minima by causing a protein to fold in a specific manner such that the delivery structure, or capsid moves from neuron to neuron creating preferred pathways. This process of RNA sharing is exchanging information between synapses for specific functions such as memory correlation.

These proteins primarily impact synapse receptors of the kind found throughout the human brain and are the foundation of human cognition and intelligence.

Some of these foundational areas are as follows:

Frontal lobe: Voluntary movement, attention, short term memory tasks, **motivation**, planning, and speech.

Parietal lobe: Proprioceptive and mechanoceptive, involved in language processing.

Temporal lobe: **Decoding sensory input** (visual and auditory) into **derived meanings for retention** of visual memory and language comprehension.

Occipital lobe: Taste, visceral, pain and vestibular functions.

Limbic lobe: **Emotions**, modulation of visceral and autonomic functions, **learning and memory**.

Note: The Thought Adjuster is likely most interested in those functions shown in **bold italics** since these are ones that help us grow our souls in “certain trying intellectual and testing social situations” (101:3.4)

These are the stable frequencies for those Thought Adjuster influenced lobes:

- Frontal lobe: 22 to 23 Hz (**motivation**)
- Temporal lobe areas: superior 10 Hz, middle 23 Hz, inferior 10 Hz (**derived meanings**)

Thought Feedback Loop

The locus coeruleus (sometimes called the “Blue Spot” of the brain) is an area of the brainstem that is the primary source of the neuromodulator norepinephrine. It is involved with our physiological responses and is critical for numerous functions including the response to stress, attention, emotion, motivation, decision making, learning and memory. The locus coeruleus-norepinephrine (LC-NE) system with its phasic and tonic microtubules functioning at a quantum level, is capable of instantaneous, and time-based influencing of our thought processes. These could be involved in our feedback loop, of thought, realization of that thought, and reflection of the consequences of that thought. Slight changes in the time delays may be one way that the adjutant mind spirits or our Thought Adjuster or for that matter the Unqualified Absolute, might ease our thinking towards mid mind functioning. The Thought Adjuster may influence our thinking by adjusting the time delays of the cascades of electrons as they flow through the microtubules of the brain on route to the executive areas and then, more importantly, back again (times 10) for reflective thinking. This may be most effective at the thought precursor stage because after that, our free will takes control of the thought processes. Exceptions may be in the case of deep meditation, and worship where the lower frequencies can be given a few more milliseconds for reflective cross pollination of our thinking.

“Come into the kingdom free from prejudice and preconception; be open-minded and teachable like an unspoiled child.” (170:2.20).

Consciousness may be our awareness of this feedback loop, between the thought precursor, the thought, and the realization that we can (with spirit guidance) physiologically influence that self-reflective thought process.

Near Death Experience - NDE

Most NDEs result in positively transforming changes and sudden spiritual growth. People often report “(a) separation from the body with a heightened, vast sense of consciousness and recognition of death; (b) travel to a destination; a meaningful and purposeful review of life, involving a critical analysis of all actions, intentions and thoughts towards others; a perception of (d) being in a place that feels like “home”, and (e) a return back to life.” The near-death

experience may have a spiritual result but let's look at some of the electrochemical physiology that might be involved in this spiritual uplift. As blood flow drops, the oxygen levels which generate the cellular electric potential also drop. After clinical death there is a burst of Gamma frequency brain activity. Our thoughts are normally separated and specifically cross connected through troughs and zones of "local minima" voltages. A reduction of available energy to maintain these voltages may facilitate massive synapse cross communication (think life review, calmness, connectedness). It may also reduce the veto power of our free will and allow the adjuster's pattern to dominate our thinking. Some drugs, like psilocybin or ayahuasca may have the similar effect of lowering the voltage walls of our thought channels allowing for massive cross pollination of visions.

"When death overtakes a human being, the Adjuster remains in the citadel of the mind until it ceases to function as an intelligent mechanism, about the time that the measurable brain energies cease their rhythmic vital pulsations." (112:3:4)

Is the brain the TV set for higher consciousness reception? What universe broadcasts are you tuned into? Is an NDE the test pattern or the white spot before a black out?

Emotional Involvement

Emotions, which are also controlled by peptides, are a function of the difference between what we anticipate and what we experience, and this is, in turn, a function of the time delayed processing of the sensory inputs that trigger those anticipations and our related reactions. Processing delays give us time to appropriately respond, rather than animalistically and immediately reacting to the sensory inputs. This delay allows us to control our emotions, rather than having our emotions control us. Happiness results when our expectations match our experiences. Happiness evolves when we trust that whatever occurs is not only acceptable but beneficial. When we have a faith-trust in "the gracious, acceptable, and perfect will of God." (143:2.4)

The ventromedial prefrontal cortex (vmPFC) comprises several distinct cytoarchitectonic areas in the medial temporal lobe. It is a key brain region supporting decision-making processes, and it has been shown to be one of the main hubs of the Default Mode Network, a superconscious network activated during resting states such as meditation and sleep. The vmPFC is a relay center that provides somatic markers connecting mental representations with secondarily associated emotions. When mental representations are being compared, contrasted, selected, and singled out, it's the somatic, gut level, (think serotonin) intuitive markers that dominate. One of the vmPFC's functions is to filter out the less relevant inputs, prioritize and connect the rest, in patterns for future reference.

Side note: The adjutant mind may be a very restrictive filter on the infinite mind, limiting our discernment to those things necessary for survival whereas the cosmic mind may be a less filtered version of mind that allows more connected reflecting.

French philosopher Henri Bergson said it this way: "The function of the brain and nervous system and sense organs is in the main eliminative and not productive.

Consciousness of the connection between our emotions and our memories, allows us to look before we leap, as we imagine God's plan, our participation in it, and anticipate any future joy that may result from it. Emotions and our creative anticipatory imagination are influenced by curiosity (self-consciousness), aesthetics (material consciousness) and ethical sensitivity (God consciousness). The prefrontal cortex can also be an experience simulator capable of both the anticipation (looking) and the realization of the consequences of that anticipation (leaping) and their related emotional reactions (reflecting). We can simulate God's plan, our potential contribution to it, and our emotional reactions from our anticipated participation in it.

Passionate emotional involvement may be particularly useful in the zeal of execution, but we may want to limit those emotions that often distract us from God consciousness in our preparatory thought processes.

“Harness your energies and bridle your passions; be calm while you await the majestic unfolding of an endless career of progressive adventure and thrilling discovery.” (195:5:10)

Thinking Processes

Some might visualize their thinking as a linear (male) process. Others may picture it as a plainer more matrix cross referencing (female) evolution of thoughts. Our thinking may be more like volumetric sculpting, and the Thought Adjuster may be able to “see” the wholeness image of our thoughts, and it may be that manipulations of the time delays would give the Thought Adjuster the ability to mold the overall sculpture. To help, we can think of changing the lighting or turning up the contrast to make the shape more recognizable. This might be done by “effortless attention” to thought precursors (continuous communion with God) and cooperating with the Thought Adjuster’s (fear not) efforts. Perhaps at times when repetitions are involved (such as in music) we can be more helpful since we have multiple chances at fine tuning that picturization. Practice with quieting the unnecessary clouding of sensory inputs from the body and minimizing non-valuable, higher frequency thoughts, may also help.

“The Adjuster... is the higher and truly internal spiritual stimulus of thought in contrast with the external and physical stimulus, which reaches the mind over the nerve-energy mechanism of the material body.” (108:6.4)

In a spiritual sense our curiosity about God consciousness and our willingness to be influenced (to share the inner life) may allow us to imagine the source of that consciousness and to creatively extrapolate, from that mental spiritual safe zone, the realization of the resultant enduring peace.

“Since this inner life of man is truly creative, there rests upon each person the responsibility of choosing as to whether this creativity shall be spontaneous and wholly haphazard or controlled, directed, and constructive. (111:4:9)

The attainment of cosmologic levels of emotional equipoise, calmness, equanimity, and happiness may involve these time delayed responses. It is like *injecting a fragment of eternal timelessness* into our frenetic thinking. It can likely be encouraged by the “effortless attention” and “restful spiritual exertion” of worship. (143:7:7) It may also be aided, by a truly relaxed approach to:

- “1. Curiosity - Hunger for harmony and thirst for beauty. Persistent attempts to discover new levels of harmonious cosmic relationships. The satisfaction associated with satiated curiosity.
2. Aesthetic appreciation - Love of the beautiful and ever-advancing appreciation of the artistic touch of all creative manifestations on all levels of reality. The calmness associated with being in beautiful surroundings.
3. Ethic sensitivity - Through the realization of truth, the appreciation of beauty, which leads to the sense of the eternal fitness of those things which impinge upon the recognition of divine goodness in Deity relations with all beings; and thus, even cosmology leads to the pursuit of divine reality values—to God-consciousness.” (56:10.5)

All these lead to the emotional calmness of knowing that it is a friendly universe managed by a loving father. Perhaps this is similar to the emotional calmness felt by Andon and Fonta after discovering how to make fire.

“Human experience is an interplay between an active and questioning personality and is equal to depth of a concept plus the recognition of its reality. This creative self-consciousness experience is driven by sensory discovery and the expectant imagination of related things, minds, meanings and spiritual values.” (102:4.2)

Sentience and God Consciousness

Let’s look at the bodily functions that help our mind to calmly relate to God as creator, controller, and upholder. It is possible that time delays, combined with quantum coherence, and these other physiological enhancements, are proportional to our degree of sentience, our self-consciousness, and God-consciousness.

“In the mortal experience the human intellect resides in the rhythmic pulsations of the adjutant mind-spirits and effects its decisions within the arena produced by encirclement within this ministry.” (117:5:7)

Intuition (instinct), understanding (rationalization), courage (loyalty), knowledge (ideology), counsel (socialization), worship (zeal), wisdom (symmetry) may be related to patterning and cross communication of brain cells. The functioning of the adjutants would then be related to microtubule lengths, their associated time delays, and their MAP patterning in the brain. Microtubules don't function until there is dissipation-less electrical energy transfer (insulation from surrounding tissue) and this is critical for allowing quantum coherence. This only occurs when microtubules are suitably insulated and are greater than 10^{-6} m in length. Is this the initial condition needed for the adjutants of worship and wisdom?

The Spirit of Truth may function to provide a bias superimposed on the overall patterning of these microtubules and their associated ARC propagation time delays. This patterning may be a general electrical bias overlayed in the white matter surrounding the brain, together with the patterning of the microtubules themselves as influenced by the flow of ARC activity. These patterns might be “the living way from finite consciousness to transcendence of consciousness” (117:3:3 & 7:7.4 & 52:5:4 & 101:3:3). This patterning may allow for the functioning of the Spirit of Truth and this patterning may have been derived from *the patterning of Michael's own structures* as he arranged them, in his own brain and body, 2000 years ago.

“On Urantia the establishment of this “new and living way” was a matter of **fact** as well as of truth.” (52:5:5)

Our biases result from the lengths of the tubules and established trigger voltage thresholds which are constantly changing. The fact that we can influence the lengths of these microtubules in these para crystalline-like structures, and our calmness (think base voltages versus trigger voltages) suggests that over time, we can develop “habits of thinking” (patterning our thoughts the way Jesus did). The stable patterns of these cascade phenomena may become our “religious habits of thinking” and our “conditioned spiritual reflex” (100:1.8) (160:3.2) and since we become more like the one we worship, (5:5:14) (133:4:9) this may be the basis for our soul growth and stabilization of purpose.

Top-Down and Bottom-Up Interpretation

Spiritually, “creator consciousness seems to proceed from thought-value, through the word-meaning, to the fact of action.” (118:5.3) From our bottom-up perspective, our progress seems to proceed from facts to thoughts, to meanings and then to the value of those meanings.

Materially, this perspective might be thought of as organizing electrical energy, volitionally. That is, to use our free will to control our thoughts and organize them to be receptive to spirit energy symmetry. Our task may be to harmonize these two reciprocal perspectives.

“Scientific, moral and spiritual insights are the self-consciousness of reflective thinking and make it possible for man to function as a rational and self-conscious personality in science, philosophy, and religion” (16:6:9) (think three cosmic intuitions).

“Matter-energy is the mathematical logic of his senses; mind-reason knows their moral duty; spirit-faith (worship) is his spiritual experience. These three intuitions, if unified by **patterning** their relationships, produce a strong combination of factual science, moral philosophy, and religious experience that validates our experience with things, meanings, and values.” (16:6:10) (think cosmic circle attainment).

It seems to me that cosmic circle attainment involves material (think epigenetics) intellectual (think emotion) and spiritual (think faith trust) progress. Education sharpens and unifies these patterns of thought processing in our mind. Civilization expresses these meanings and values, life experiences them and religion ennobles them. There is a calmness associated with the realization of their inevitable perfection.

During our formative years we are functioning primarily at the animal (fear your enemy) survival level. Once we have confidence in an afterlife and God's plan, our task becomes to invert this bottom-up, survival of the fittest, mentality to a

top-down love our enemy, cosmic perspective. This may require that we gradually, over time, change our thinking and entrench the Jesus inverted ways of thinking. I call this the Jesus flip (think, beatitudes, inevitabilities, selflessness).

"I say to you: Love your enemies, do good to those who hate you, bless those who curse you, and pray for those who spitefully use you." (140:3.15)

Experiential – Fusion

What does it mean to experience a complete, bottom to top, fear to faith, self to selfless, 180-degree flip?

“What is human experience? It is simply any interplay between an active and questioning self and any other active and external reality. The mass of experience is determined by depth of concept plus totality of recognition of the reality of the external. The motion of experience equals the force of expectant imagination plus the keenness of the sensory discovery of the external qualities of contacted reality. The fact of experience is found in self-consciousness plus other-existences—other-thingness, other-mindness, and other-spiritness.” (102:4.2)

Our free will creative control of all our experiences may be in the quantum neuron limbic cerebral feedback loop of our consciousness, and perhaps our superconsciousness, where we **objectively** (materially) and **subjectively** (spiritually) experience the phenomenon of aspiring to be at peace and eventually, to be Godlike. Our free will control may allow spirit dominance to align our neuron activity to the Thought Adjuster’s preferred path, a fusion of paths. A fusion of purposes. A fusion of minds.

“And if this choice is made, sooner or later will the God-choosing son find inner union (fusion) with the indwelling God fragment, while this same perfecting son will find supreme personality satisfaction in the worship communion of the personality of man and the personality of his Maker, two personalities whose creative attributes have eternally joined in self-willed mutuality of expression—the birth of another eternal partnership of the will of man and the will of God.” (111:5:6)

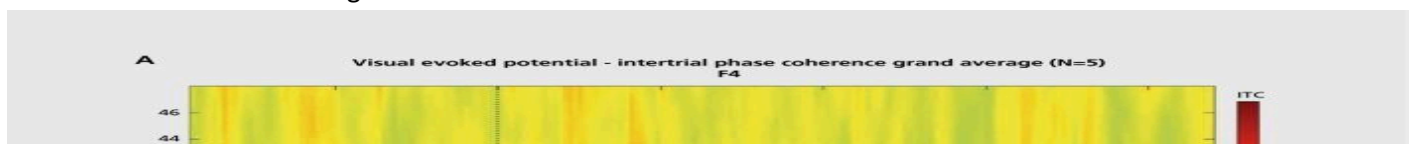
What is this “inner union”, fusion of wills? In the physical world nuclear fusion occurs when electromagnetic energies are strong enough to cause two atoms to get close enough to be retained by the uniting weak force. Fusion results in the release of the extra energies that are no longer required.

It is conceivable that fusion with our Thought Adjuster may be similar to this phenomenon, wherein our neuronal material electro-chemical energies get close enough to the quantum morontial-spiritual energies of our Thought Adjuster to be retained by this God fragment. If the Thought Adjuster’s spiritual energy runs in similar paths as our material energies, these harmonized electro-chemical neural energies might combine with our morontial energy, and both would fuse with the immediate release of the excess energy in “Chariots of fire”.

For me that’s a long way off so let’s get back to something practical. Let’s look at the overall picture.

Picturizations

A published study in Science Advances in April 2022 shows that the brain passes information like waves throughout the brain. Picture a three-dimensional volumetric cascade of electro chemical excitations. The wave particle duality of interactions within this volume cascades wavelets of activity which move and create more ripples in the mind pool. Wave peaks and troughs interfere or augment and influence other neurons. Our thoughts are cross correlated in any one memory (smells, relationships, expectations etc.). When we get to the thought controller stage of cooperation, by actively trying to align wills, we become more receptive to changing the overall patterning. Couple this, with quantum level “random” involvement and it might be seen how the adjutants or Thought Adjuster might be able to influence these general superconscious or mid mind patterns. As these patterns align, reflective thinking will adjust our thoughts via emotional, epigenetic management, and our neural activities might harmonize, amplify, and align these 3-dimensional volumetric images.



2-dimensional image slice of three-dimensional brain activity.

It may not be so much the dominance of a single frequency, as it is the harmonies of all the frequencies. When we look at the complexity and unorganized nature of the EEG traces, you can see the way the electrical activity clusters spatially and how challenging the task of the Thought Adjuster is. The larger red areas represent stronger thought drivers.

“At such times, and sometimes during sleep, the Adjuster is able to arrest the mental currents, to stay the flow, and then to divert the idea procession; and all this is done in order to effect deep spiritual transformations in the higher recesses of the superconsciousness.” (109:5:1)

The Thought Adjuster, throughout our life, is trying to “realize” our thoughts (create harmonized electrical images) as a function of the mind that “knows quantity, reality, meanings” when we “feel the mutual creation”. (111:3.6)

Soul Physiology

Let’s think for a moment of a possible mechanism to transfer these realized mental processes and harmonized images to our morontial soul and then how a snapshot of our soul’s configuration could be captured at any instant, for transfer/transition to mansion world number one.

A fully grown human adult might have between 80–100 trillion cells and about 4 trillion of them make up what we think of as our body (our musculoskeletal system, connective tissue, circulatory system, and all your vital organs). Many of the cells in our body (blood, skin, hair, nails) do not have our own genetic material so these cells are not truly us.

The Thought Adjuster might have a transcript of the salvageable thought pictures from our mind and memories. Our guardian angel may be aware of our DNA, with its epigenetic tagging, representing the current physical status of our brain and nervous system. At death, a snapshot of this information, could be reduced to a numeric sequence.

“These phases and forms of soul, these once kinetic but now static formulas of identity, are essential to repersonalization on the morontia worlds; and it is the reunion of the Adjuster and the soul that reassembles the surviving personality, that reconsciousizes you at the time of the morontia awakening.” (112:3:5)

This numeric code could be relayed to Mansion One for initial patterning of our morontia body to “... begin over there right where you leave off down here.” (47:3:7)

Summary

Microtubule lengths, microtubule-associated proteins, ARCs and SAMs, DNA enhancers, multiple types of epigenetic manipulations, several types of electromagnetic and optical quantum coherences, the consciousness of our consciousness, our creative picturization, slower lower frequency cross pollination, controlled emotional responses and super consciously patterned habits, may be what gives our mind adjutants and Thought Adjuster some influence on our spiritual progress as we discover, recognize, interpret and choose to fuse.

“... electrical and chemical reactions are predictable. But mind can profit from experience, can learn from reactive habits of behavior in response to repetition of stimuli.” (65:6.8)

“The human personality is not merely a concomitant of time-and-space events; the human personality can also act as the cosmic cause of such events.” (12:5.11)

Is this patterning of electro-chemical energies some of the physiologies that the Life Carriers used under Mother’s guidance to manage matter in her finite realms? Have we touched on some of their experiments here? Mystery remains, for a while longer while we discover Our Mother and her various physiologically ingenious ways of helping us find Father.

“As a reality in human spiritual experience God is not a mystery. But when an attempt is made to make plain the realities of the spirit world to the physical minds of the material order, mystery appears: mysteries so subtle and

so profound that only the faith-grasp of the God-knowing mortal can achieve the philosophic miracle of the recognition of the Infinite by the finite, the discernment of the eternal God by the evolving mortals of the material worlds of time and space.” (1:4:7)

Can we captain our mind ship through emotional turbulence and allow our adjuster pilot to guide our neuronal navigators in finding those calming correlations on the placid seas of peaceful existence? (Ref 111:1:9)

“Jesus possessed the ability effectively to mobilize all his powers of mind, soul, and body on the task immediately in hand. He could concentrate his deep-thinking mind on the one problem which he wished to solve, and this, in connection with his untiring *patience*, enabled him serenely to endure the trials of a difficult mortal existence—to live as if he were “seeing Him who is invisible.”” (127:3.15)

Take Home Anchor Points to Ponder

Perhaps these one-liners will trigger your own ideas of how to materially interact with your spirit helpers.

1. Your body supports your mind.
2. Your attitudes, thoughts, emotions, actions, and reactions change your electrochemical nature and spirit receptivity.
3. Be slow in your openness to thoughtful, reflective, change.
4. Have child-like faith and trust in God and adult like focus.
5. Creatively, leap from a stable, calm, confidence in God’s plan.
6. Where your thoughts go, energy flows.
7. The physical to psychological link is bidirectional.
8. Emotions make epigenetic modifications to your gene expression on an instant-by-instant basis.
9. Align your anticipations with a top down, eternal perspective.
10. Let Paradise be the stable reference source of your electromagnetic fields.
11. Let your Thought Adjuster be your stable time reference for your material motion.
11. Invert your consequential thinking patterns to those of Jesus.
12. Stay cool, calm, and collected, your microtubules are counting on it.
13. Get good deep sleep or worship often.
14. Be still, and know, that Mother’s processes, guiding us to find Father, are unfolding as they should.

Descartes’s famous saying “I think therefore I am.” becomes:
“My thoughts improve my electro-chemical responses; therefore, I am, and I will be.”

—

Inputs influence your nerves, which influence your amygdala, which influences your hypothalamus, which influences the release of peptides, which influence emotional and physical responses, which influences future reactions to similar inputs either towards inner calm or chaos.

Be a positive influence.

Said differently:

Your thoughts guide your physiology.
Your physiology guides your reactions.
Your reactions guide your character.
Your character guides your values.
Your values guide your intent.
Your intent guides **your thoughts**.

Let **your Thought Adjuster** be your guide.

Thank you.

Any thoughts? or are you still looking for that “philosophic miracle” to makes sense of all this?

Glossary of concepts:

Microtubules:

- Hollow tubes that connect and communicate between cells.
- Lengths increase and decrease as a function of cellular interactions.
- Lengths are proportional to the time delays between reactions and responses.
- Can only exist if hollow, electrically cored, and isolated.
- Can be influenced by quantum coherence.
- Resonances are in the mechanical, far infrared (bond stretch), and UV (electron jump) ranges.
- The two optical ranges may relate to where “delicately touch” our morontial selves.

Microtubule-associated proteins (MAPS):

- Proteins that cross connect microtubules.
- Reinforced by repetitions of thinking patterns.
- Substitutes for cross communication that resulted from myelin sheaths.

Activity regulated cytoskeletal memory reinforcing peptides (ARCS):

- Peptides functioning in an mRNA like process that lays down memory tracks and sets up the ways we process thoughts.
- Creates “... preconceived opinions, settled ideas, and long-standing prejudices.”

DNA enhancers:

- Genetically inherited and epigenetically controlled gene folding that supports higher level thinking.
- 4000 are specific to humans.

Epigenetic gene manipulations:

- Modifications to DNA that influences gene folding and the resultant protein shape and function.
- Influenced by our emotions, focus and repetitions.

Electromagnetic quantum coherences:

- Influences “random” motions.
- Implies that random motion is controllable by such things as, Thought Adjusters, mind adjuncts, Unqualifies Absolute.
- Shares “part and the whole” functionality. E.g., Individual/Supreme, material/spiritual, experiential/existential.
- Demonstrates coherence with Paradise.

Consciousness of our consciousness:

- Thought, realization of the thought, and reflection of the consequences of that thought.
- Also involved in superconsciousness and soul consciousness.

Creative picturization:

- True creativity happens in the mind since it circumvents antecedent causation.

Slower lower frequency cross pollination:

- Taking time to consider the social, cosmic, and eternal ramifications of thoughts.
- Equivalent to the injection of a fragment of infinity into temporality.

Controlled emotional responses:

- Feelingly experiencing, without allowing emotions to hijack our intentions.

Super consciously patterned habits of thinking:

- Learning to use Spirit of Truth (mind of Jesus) like thinking.
-

Quotes are from the Urantia book unless otherwise noted.

Definition of terms for none Urantia book readers:

Thought Adjuster – a spirit fragment of God (spirit spark) in you.

Thought changer until about age 25, Thought controller after about age 40.

Fusion – Combination of our energies with the indwelling God fragment, Thought Adjuster.

Soul – a mechanism for salvaging the best of your experiences.

Adjutant Mind – a level of consciousness limited to animal functioning in 7 variants (5 animal and 2 human).

Cosmic mind – a level of consciousness that makes us more aware of our part in the whole.

Life Carriers – Biological engineers involved with our material assembly.

Personality – Our unchangeable uniqueness as an individual.

Morontia – Energy existing between the material and spiritual levels.

Isle of Paradise – Material center of the known universe.

Conjoint Actor - God of mind, combination of God the Father and God the Eternal Son.

First Source and Center – God

Mother – Ubiquitous nature of God.

Spirit of Truth – Greater deity awareness made available on Pentecost by Jesus.

Michael – Jesus

Andon and Fonta – First humans.

Mansonia One – First heavenly world.

Foot Note: Schroedinger, in his famous 1944 Book entitled "What is life", argued that certain aspects of living organisms, such as both us and mutations (changes in the DNA sequence of a cell's genome or a virus), might not be explainable by classical physics but required quantum concepts, for instance quantum leaps.

Foot Note: H. Fröhlich suggested in 1950 that macroscopic quantum coherent phenomena may be responsible for dissipation-free energy and signal transfer in biological systems through coherent excitations in the microwave region of the spectrum due to nonlinear couplings of biomolecular dipoles.

Foot Note: A.S. Davydov, proposed that solitonic excitation states may be responsible for dissipation-free energy transfer along the α -helix self-trapped amide in a fashion similar to superconductivity: there are two kinds of excitations in the α -helix: deformational oscillations in the α -helix lattice, giving rise to quantized excitations ("phonons"), and internal amide excitations. The resulting non-linear coupling between these two types of excitations is a Davydov soliton, which traps the vibrational energy of the α -helix and thus prevents its distortion (solitons are classical field theory configurations with finite energy).

Foot Note: S. Hameroff and R. Penrose, noted that one may view the tubulin protein dimer units of the microtubules as a quantum two-state system, in coherent superposition.

Foot Note: John Eccles proposed that each of the 40 million dendrons is linked with a mental unit, or "psychon", representing a unitary conscious experience. In willed actions and thought, psychons act on dendrons and, for a moment, increase the probability of the firing of selected neurons through quantum tunneling effect in synaptic exocytosis, while in perception the reverse process takes place.

https://en.wikipedia.org/wiki/How_the_Self_Controls_Its_Brain

Foot Note: Magnetoencephalography, shows brain oscillations of a certain number of hertz can be found in the cerebral cortex. E.g.. localized 80 to 200 Hz is related to epilepsy events.

Foot Note: There is a "brain atlas" (voxel map) that shows the various frequencies that dominate the areas of the brain.

Foot Note: Neoteny (the preservation of juvenile traits) may be part of the evolutionary civilizational process that encourages reversion to the "child-like mind".

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