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Continuing with A Vision of the Field,

So. What is never visible from the field? Even though all of us recognize it to be a material reality, what thing is essential for everything else that we have ever witnessed in our experience of life, though it is always with us but never directly seen? Here I am not talking about the invisibility of the field intervening between and integrating in a material manner all the visible parts.

That thing would be the back of our head. I have never seen the back of my head. I have seen the back of a lot of other peoples and other critters heads, but never directly my own, without the aid of a mirror or camera. Well, except for a very brief out-of-body episode where I hovered over that body as I fell asleep, before the alarm of what was happening snapped me back into place and fully awake. So I assume most of you have never seen the back of your head. -1/

Being felt but not seen in the field.

I can reach up and feel the back of my head, however, so I know it is there. I assume most of you can too. The back of the head is essential in holding in the brain; and a large part of the brain, especially at the back, is essential for processing the visual input of the eyes; and the eyes are essential for navigating the world in choosing between risk and opportunity. That risk might be seen as innocuous in living a cloistered existence as an author and that opportunity, as dangerous in volunteering to be on the first manned mission to Mars, so choosing carefully requires a clear vision of life circumstance; or you can just plow headlong into whatever is happening because it feels right as the time. Note that in this use of the terms, seeing and feeling goes beyond the immediate sense to a contextual cognitive understanding of the terms.

—2/

Integrating vision and feeling.

Oscillating between the two has been my choice. In addition to the back of my head, beyond the backside of my eyelids, in none of these instances of clarity and obfuscation have I been able to glimpse the inside of my head; my brain.

Obviously, the function of the brain is to interact with the environment in which our organism is living, body and mind; to observe its placement in the biosphere outside of us, to recognize any threats and benefits that it might encounter, and to choose an appropriate course of navigation through the field in a manner that will sustain us.

—3/

The illusion of Independence.

Any feelings, thoughts, emotions, or bodily sensations that are part of that process of living, we tend to recognize and identify as us, as an organism independent from the environment in which it lives and moves, even though most of these organisms are tethered in one form or another to a common source of oxygen. With eagle eye focus soaring above the earth, as individuals we might be viewed from outside as dependent features of a single evolving biosphere, like leaves on a living tree that sprout and grow and in time fall off. For each of us, whether you understand us as real or simply effective souls, we tend to observe the forms and processes of that biosphere as a functioning objective environment, while we tend to recognize the feelings, thoughts, emotions, and sensations, as processes functioning through our mind as a subjective reality of a different sort than our brain. In turn, we may look at the intersubjective capacity of our species as an interactive functioning of spiritual intent or effect.

---4/

Gödel's Incomplete, Incompleteness Theorem: Feeling what cannot be seen while it is being felt.

Since we cannot see the structural mechanism of our brain in action, we will turn to ChatGPT for an idea of the cognitive throughput involved in its operation. The copied output from Chat listed according to the logical breakdown of the functional topics has been color tagged and resorted in a few cases, with the original numbers retained, to align with the thinking of these threads and the Essential Trigon. All of these cognitive functions should be considered the effect of intentionality, first as the rational result of a survival intent imposed by nature or nature's divine source and second as the result of an analogous rationality that has given rise to the current understandings of neurological science. The color coded breakdown is to give a preliminary understanding of the general categorization provided by the cognitive capacities of a normal brain in differentiating between what an informed human being might believe is material in nature as driven by inertial interactions, what is ideal in nature as modified by the mental capacities to form and alter thoughts and thereby direct material change, and what is spiritual in nature as the motivational capacity to initiate that change and to recognize that same capacity in other living forms and processes.

—5/

Cognitive Breakdown

[Z] Red represents registration of observational data of nature understood as the inertial functioning of material interactions

[Z,Y] Orange represents a degree of processing that data involving an innate recognition capacity and actionability, and for humans, an innate, unselfconscious capacity to process subjective forms as thoughts.

[Y] Green represents the operation of the mental capacity to process ideas or ideal representations in conscious recognition of material and ideal forms and processes.

[Y,X] Blue represents the subjective and intersubjective cognitive processing of mental forms, concrete and abstract, with interactive intent.

[X,Z] Purple represents cognitive processes which initiate that interactive intent in moving the body and through speech and emotional processing to activate that bodily motion in others to effect a desired change in the mind of a soul, as when jumping up and yelling, "Fire!", in a theater, if required. Because the capacity of intent, aligned with the X axis in an earlier post, is present in either thought or action, or at the moment of triggering, both, it is grouped with either the Y or the Z axis in the following cognitive breakdown.

—6/

A correlation of the brain and the cognitive field of axial awareness.

If we go back to the thread section A Part of the Field, we can find some correspondence between the association of these functions and the three axes of that thread. In the following transcription, the visual axis from the eyes to the back of the brain in the occipital lobes is the [Z axis] corresponding to a focus on the inertial capacity of material nature. The auditory and language axis between the ears and the temporal lobes with their related emotion and social processing corresponds to the [Y axis] for a scanning and alerting focus in the community and natural environment, where sound is often precursory to its location in the visual field for confirmation in recognizing an existential threat or benefit. The axis leading from the base of the spine to the crown of the head and the parietal lobes in which sensory perception is integrated and spatially processed with bodily attention and awareness corresponds to the [X axis] and the focus of that intentional capacity preparatory to an existential response as a function of the spiritual nature. In such response to a risk or opportunity recognized in the parietal lobes, we metaphorically "stand up" along that [X axis] and rotate with attention and intention into the of the executive capacities of the frontal cortex, moving out and into the field along the [Z axis] to complete a cycle of interactive experience. From this series of functional cognitive relationships we can see, feel, and realize that the orthogonal axial orientations of a soul in the field, though qualitatively generalized here, is not arbitrarily designated in delineating the making of a choice.

Four Chats about cognitive flow.

For metaphorical understanding in querying Chat GPT, we have only been concerned with the four principal lobes of the cerebral cortex of the outer brain, the occipital lobes at the rear of the cranium, the temporal lobes on either side, the parietal lobes at the pate, and the frontal cortex at the front of the cranium. From the information presented by Chat we can recognize a general flow of sense data from the eyes and ears to the occipital and temporal lobes, where the data isprocessed for recognizable form, from there integrated with the other senses in the parietal lobes and recognized as a corporal form and identified as an individual self or soul in an external environmental context, to be naturally modeled in a holistic worldview for an understanding of the placement and movement of the soul in the existential field, while learning through the frontal cortex to function with intent in a self-aware, ideal manner as that soul within the intersubjective social, biosphere, and environmental framework of the objective material and subjective ideal world.

—8/

to AI: What is the function of the occipital lobes?

"The occipital lobes are regions of the brain located at the back of the head, primarily responsible for visual processing and perception. The main function of the occipital lobes is to receive and interpret visual information from the eyes. Here are some key functions associated with the occipital lobes:

[Z] 1. Visual Processing: The occipital lobes contain the primary visual cortex, which is responsible for basic visual processing. It receives visual stimuli from the eyes and decodes them into meaningful information, such as shapes, colors, and motion.

[Z,Y] 3. Visual Imagery: The occipital lobes also contribute to the generation of mental visual imagery. They enable us to form mental images, visualize scenes, and imagine things in our mind's eye.

[Y] 2. Object Recognition: The occipital lobes, along with other regions in the brain, play a crucial role in recognizing and identifying objects based on visual information. This includes recognizing faces, objects, and spatial relations between them.

In summary, the occipital lobes are primarily responsible for visual processing, including receiving, decoding, and interpreting visual information from the eyes." -9/

to AI: What is the function of the temporal lobes?

"The temporal lobes are regions of the brain located on the sides, near the temples, and they play a crucial role in several cognitive functions. Here are some key functions associated with the temporal lobes:

[Z] 1. Auditory Processing: The primary auditory cortex, located in the temporal lobes, is responsible for receiving and processing auditory information, enabling us to perceive and interpret sounds.

[Z,Y] 2. Language Processing: In the dominant hemisphere (usually the left), the temporal lobes are involved in language comprehension, including the understanding of spoken and written language.

[Z,Y] 3. Memory Formation: The temporal lobes, particularly the hippocampus and surrounding structures within, are involved in the formation and consolidation of long-term memories, including episodic memories (events and experiences) and spatial memory.

[Y] 4. Object Recognition: The ventral portion of the temporal lobes, specifically the inferior temporal cortex, plays a critical role in visual object recognition. It helps in identifying and categorizing objects based on visual information.

[Y,X] 5. Emotion and Social Processing: The temporal lobes, along with other brain regions, are involved in processing emotional and social information. They contribute to recognizing facial expressions, interpreting emotions, and understanding social cues.

It is important to note that these functions are distributed across various areas within the temporal lobes, and the exact roles can vary between individuals." -10/

to AI: What is the function of the parietal lobes?

"The parietal lobes are regions of the brain located near the top and back of the head, and they serve several important functions. Here are some key functions associated with the parietal lobes:

[Z] 1. Sensory Perception and [Z,Y] Integration: The parietal lobes play a central role in integrating and interpreting sensory information from various senses, including touch, temperature, pain, and proprioception (the sense of body position and movement).

[Z] 2. Spatial Processing: The parietal lobes are involved in processing and perceiving spatial information, such as spatial awareness, depth perception, and spatial navigation.

[Z,Y] 4. Attention and Perception: The parietal lobes are involved in attentional processes, focusing on relevant information, and directing spatial attention.

[Y] 3. Body Awareness: These lobes contribute to the perception and awareness of one's own body and its parts. They play a role in tasks that involve body image, sense of self, and recognizing body movements.

[Y,X] 5. Mathematical and Cognitive Functions: They are also involved in mathematical reasoning, visuospatial cognition, and certain higher-level cognitive functions such as problem-solving and mental imagery.

It's important to note that these functions are not exclusive to the parietal lobes, as many brain regions work together to accomplish complex cognitive processes." -11/

to AI: What is the function of the frontal cortex?

"The frontal cortex, also known as the frontal lobe, is a region of the brain located at the front, right behind the forehead. It plays a crucial role in various complex cognitive functions and behaviors. Here are some key functions associated with the frontal cortex:

[Y,X] 4. Working Memory: The frontal cortex plays a role in working memory, which is the temporary storage and manipulation of information needed for cognitive tasks. It allows us to hold and manipulate information in our mind while performing mental operations.

[X,Z] 1. Executive Functioning: The frontal cortex is involved in higher-level cognitive processes collectively known as executive functions. This includes abilities such as reasoning, problem-solving, planning, decision-making, and impulse control.

[X,Z] 2. Motor Control: The frontal cortex houses the primary motor cortex, which is responsible for controlling voluntary motor movements. It helps initiate, coordinate, and execute movements of the body based on intentions and goals.

[X,Z] 3. Language Processing: Certain areas of the frontal cortex, such as Broca's area, are crucial for language production and speech formation. Damage to these areas can result in difficulties with spoken language production, known as Broca's aphasia.

[X,Z] 5. Emotional Regulation: The frontal cortex helps regulate emotions and modulate emotional responses. It is involved in emotional regulation, empathy, and social behavior.

It's important to note that these functions are not limited to the frontal cortex alone, as the brain functions through interconnected networks involving other regions as well."

—12/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Material Cosmology as Mindful Intentionality

If this brief outline by ChatGPT is authentically drawn, the mathematic, visuospatial imaging, and higher problem-solving skills in the Mathematical and Cognitive Functions of the parietal lobes is responsible for the success of physics in cosmological modeling. Here the current chasm between the disciplines of guantum mechanics and general relativity appear as if rooted in the attributions to empirical symbolic logic of the left brain and to spatial intuition of the right brain. The inability to find an intentional and thereby spiritual mechanism in the inertial, logical understanding of the parietal lobes, reflects the wall that thinking has created between the obverse reductionist understanding of material science of physical cosmology and the larger mechanism of intentionality exercised in the frontal lobes. Defining away the executive functioning of the frontal cortex lying on the other side of the wall, from the mathematical forms of the parietal lobes, cannot dispel the transcendent sense of that functioning purpose remaining, apparent in the beauty of ideal nature. The frontal lobe, while the focus of intentionality of the soul in a true functioning of choice, in purposeful decision- making, shares its integrative purpose in its mindful appreciation of in the symmetry of invariant forms and processes.

—13/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Material Cosmology as Mindless Disturbance

So where does this matter of choice, of free will, take us from this perspective? The extremes of a physicalist cosmology tell us that free will as conscious intention and choice, if not consciousness itself, is an illusion; by deduction that leads us to think that all the processes of our mind, all the beautiful—and ugly— forms of thought, are simply mindless perturbations of our brain, rather than essentially connected to that brain, but existing in some essentially unseen coded manner, perhaps metaphorically as holographic memory. The physical cosmologist

suffering from hubristic zeal faces a potential fate of fantasized disbelief in any form of intentional, spiritual reality, leaving them at the cold end of a spectrum that finds the religious zealot at the hot end, each with their own brand of isolating misunderstanding of the true nature of the cosmic abyss.

—14/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Spiritual Cosmology as Heartfelt Intentionality

A reverse understanding found in the parietal lobes, with the same capacities of visuospatial imaging and symbolic logic, is found in the spiritual cosmologies of all religions, but with an innate intentional understanding still intact on the other side of the wall in the executive purpose of the frontal lobes, ever present and waiting with holistic redemption for the return of the world weary soul. -15/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Spiritual Cosmology as Heartless Disinterest

Some extremes of a spiritual cosmology tell us a similar story but from the reverse side of the wall, in the guise of predestination in which all valid intentionality is divine, where our human exercise of choice is bound to frustrate and fail. Our brain in this view is comprised of flesh which with death decays as our soul and mind is released to whatever state has been determined by that divinity, and if necessarily short of salvation, to continue to stumble about in the time to come; for eternity in some views or until the next life in others.

—16/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Free Will - Freedom and Limits of Intentionality

If one exercises free will appropriately, it will be understood that it is at the same time a liberation and a limitation. Freedom of thought leads necessarily to action constrained in some manner by the internal and external circumstances of our birth, where the constraints are understood to be processed through the parietal and other lobes of the cerebral cortex of each of us, while experienced subjectively through the familial and community circumstances that chart the developmental years as we confront our life. The liberation found in limited choice is a reality to me. Talks of <u>infinite potential</u> are intended to be inspirational, so I would not suggest foregoing aspirational choices, simply because they seem to be magical; but clarity of the limitations and liberty of the choice should still be well studied and understood.

—17/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Scale of Material Choice

As vast as the expanses of space and time might appear to be, all choices are made within a finite boundary of the information accessible to the soul at any point in space and time. If we are thinking, for ease of quantitative comparison, in terms of exponents on the base10, the time since the reputed big bang is roughly 17 seconds or 41 yocto seconds, the observable distance is 26 meters or 41 femto meters, and the observable mass is 53 kilograms or 80 yocto grams, where the second figures are all measured in terms of a unit scale of rest mass based on the observed scale of a neutron. These three dimensions can be used to define most of the rest of the observable properties of material nature. The product of these three parameters is 96 which is almost a googol or 10 to the 100. On a fundamental scale, the figure is about 162. An exponent of googol to the googol in the base10 is 10,000, so we are just getting started on our way in counting to infinity, but are we are still in the range of material understanding with only three or four dimensions of spacetime.

—18/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Scale of Ideal Choice

Infinity means either non-finite or no end, so an infinitely long line simply has no reachable boundary point at either end; an infinite area, no boundary line; an infinite volume, no boundary surface area, no matter how far we might go in the perceived direction of that boundary. In mathematics the concept is not intractable; you just can't get next to a boundary edge of any infinite set of things if you want to make an exhaustive search before making an informed choice from among the things in that set. In fact, making an informed choice may be difficult if you want to be exhaustive in accessing the necessary information even if the universe of choices is not infinite. After all, the material universe as we scientifically understand it in terms of particles to choose from is quite small at $10x^{80}$ yocto grams, compared to the unending string of exponents that we can imagine in our mind to be occurring in an ideal universe.

—19/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Definitive Material vs Indefinite Ideal Choice

A material choice in life is a practical choice. It intentionally terminates an initial observed inertial state, after transitioning through mental indecision, to a recognized acceptable formal option, and initiating a defining new inertial condition. Such choice is made by a soul focusing within a limited field on forms of a material nature while a stream of potential candidate forms of an ideal nature passes by in the occipital and temporal lobes of an observer until a suitable pairing of material and ideal forms is made in an informing act of recognition, for which the spiritual component of the soul, the breathing intentional sort, can then make a choice through the frontal cortex, thereby changing the inertial condition of both the body and the material object targeted by the choice.

An ideal choice in mathematical logic is theoretical, with possible subsequent practical application. When the logic required for choosing a solution to a problem becomes complicated, an arithmetic manipulation of numerical and logical symbols by the mind in the parietal lobes can facilitate a solution to the problem in the form of a number or formula. The form of such solution represents an ideal choice of the mathematical logic used to process the informational input of the logic and data. While there is some finite inertial change in the neurological state of the parietal and related lobes of the brain of the theoretical thinker during this computational process, there is ostensibly no change in the interactive inertial field of a mathematician's cogitation, that would not have occurred simply in day dreaming. Many such ideal solutions result from day dreaming, some of which would be mutually exclusive if materially acted upon, but can and necessarily do exists in mutual contradiction in the ideal, mental nature of the mind. -20/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Symbolic Logic of a Choice

The symbolic nature of this computation, in line with the **Axiom of Choice** of set theory, might be determining the product, P, as a function, F, of a set of one invariant, r, and a choice from an infinite set of some variable, R, where F is an algorithm or formula for finding the value of point, P, on a circle, C, centered on the origin of a Cartesian X-Y plane, with radius, r, where R is an element of the real number line, **R** which might be aligned and centered on the X axis of that plane.

For any point on $C_{[r]}$, [P] = [x, y], where $[x = r \cdot \cos(2\pi R), y = r \cdot \sin(2\pi R)]$.

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: An Ideal Formation of a Choice

In this case, as an ideal subject, the mental state of a human computer in the form of a solution to a problem, is both choice and chooser. Here, the square bracketed terms represent a finite choice, an existential solution in the mental space and time of a consciously theoretical soul, operating through an apparently existential parietal lobe, using the ideal elements of an infinite set in the essential capacity of the real number line. I say 'through' and not 'as' that parietal lobe, because I am not an epiphenomenalist that equates the brain, which I have never seen—even in the brief encounter seeing the back of my head as I briefly floated out of my body as I went to sleep many decades ago—with the mind which I experience all the time.

R is non-finite in space, and neither is *F* as long as we are conscious at the time, as an invariant function of *C*, *r*, 2π , and *R*. But non-finite, infinite, in what sense? Obviously, the infinite variety of elements on the real number line as a space, **R**, and the infinite applicability in time of the circle function, *F*, are not infinite in material space at any point in time. Both of these 'ideal forms as an ideal process' are essentially infinite over time as *F*(*R*), and while the essentiality of their infinitude can never be existentially <u>observed in their completeness</u>, with a nod to Gödel, either practically in space, **R**, or theoretically in time, *F*, due to the continuity andor infinite divisibility of the real number line and a temporal dimension, we *can* make a finite choice as the application of *F*(**R**) by a subjective chooser—a soul—as an intersection of these two infinities at a point in space and time. —22/

Parietal Lobes [Y,X] 5. Mathematical and Cognitive Functions: Hierarchical Steps in Formation of a Choice

A question is which of the following is correct: $F(\mathbf{R}) = [P], F(R) = [P], \text{ or } F([R]) = [P]?$

1 - Invariant Function on a Set

Here F() is a logical operation of the mind, innately designed to predispose an intentional choice on the part of a soul, embodied in a subjective framework requiring a learned focus in navigating the objective risks and opportunities existing in the material framework represented by any terms listed in the brackets. In this case, we assume for the sake of argument that the choice made by this operation has existential implication and applicability.

2 - Non-Finite Quantitative Set

R is an ideal representational form as and of the real number line. Though the letter '**R**' has a material written form on this electronic or paper page, it represents an ideal 'thing', as the real number line. That ideal thing is not and can never be existential, observed in the same material way as **R** is here and now. It is and can be recognized as an ideal essential potential through the parietal lobe by the mind of a human being that has been schooled in the logic of that understanding, though it can never be 'observed' in that ideal form and recognized in the same formal manner as a physical shape by the mind.

3 - Variable Quality of a Quantizable Set or Variable Quantity of a Qualitative Set

R is an ideal representational form as and of a variable quality that can be chosen from a quantifiable point element on the real number line as a quantization of that qualitative set. Again, the letter '*R*' represents an ideal variable that is not directly observable in material form, as it might be anywhere in **R**, since the instant it becomes observed and recognized at a point in space and time, it is no longer varying. But as long as it is variable, it can be recognized and manipulated by the mind as a potential to take on point status, so that $F(\mathbf{R}) = R$.

4 - Finite Form of the Variable Quality

[*R*] is an ideal representational form as and of a discrete expression of that variable number chosen from a point element on the real number line, but still without recognition of the value assigned to that point by F(). Again, the letter '[*R*]' represents an ideal thing that is not yet directly observable in material form, as it has yet to be mapped to $C_{[r]}$, but again it can be recognized, understood, and manipulated abstractly by the mind, as F(R) = [R].

5 - Pre-choice Mapping of the Finite Form to an Ideal Field

 $F([R]) = F(F(F(\mathbf{R}))) = [P] = [x, y]$ is still an ideal representation as and of a discrete point on the circle $C_{[r,\varphi]}$, and is not yet observable in material nature, either as a mathematical expression on screen or paper or as an engineered example in the visual field of an observing soul. Even if we were to stipulate that *R* is an integer, *N*, instead of a real number, it would still be an ideal representational form, since the solution for any integer is F([N]) = [1r, 0r], and *r* is not specified. We might state for the record that the Cartesian representation of this circle conforms to the same representational physical form as the complex plane as F([N]) = [1r, i0r], and is therefore essentially the same thing with different nomenclature.

6 - Intentional Pre-valuation of a Choice, Immediate or AI Mediated

Further information is required to determine the value of r and the angular displacement, φ , as a pivot of **R** about the origin, and we might choose a variation of F so that the original invariant r becomes a variable of the same value as R as F([R]) = [1n, i0n]. At this point in the operation of F() the cognitive process of the parietal lobe might be well be carried out, and at a faster speed, by a digital computer as a proxy for a human cogitation, once the correct programing has been done. To evaluate the product, P, we must choose an input value from the real or integer number sets manually as a human or by electronic input from a random or defined generator of a computer processor, so in either case we must have a way to make that choice. As a human, that input is an intentional act, resulting from a recognized observation providing quantifiable information, or through the programming intent of a cyberneticist, that at its simplest is a binary choice.

7 - Choice defines a Change in the inertial Space and Time Continuum

All choice is finite, meaning it defines a difference in condition, if only in the mind of an individual soul observing that difference as being between subjective states before and after the choice is made. But in general, that defining choice is made along a continuum of non-finite options, in particular with respect to time. Often, it is only in retrospect that the finite nature of the decision becomes apparent. The most basic choice, a binary choice, yes or no, would appear to be quite finite. But it is still subject to a decision-making chooser to pick yes or no, even by using a random flip of an unbiased coin, based on the finitely focused perspective of that chooser, that soul, on a non-finite continuum of choice. Remember that infinity operates on the small scale of continuity between 0 and 2π as well as the large scale of the entire real number line. That focus comes from the soul's innate understanding that walking away from a given point is a navigational choice of one from among the apparent endless if not infinite number of trajectories one might follow, formalized in our algorithm as a pivoting of the X axis, φ , as a real number line about the origin, while changing the value of r, in a process called an amplitwist by Tristan Needham, according to the choice of a particular point on $C_{[r, \varphi]}$, F([R]) = [P], as a function of any initial real number, [R], from the real number line, R.

8 - Flip of an Unbiased Coin is not Choice

Making a binary choice by shifting the whim of a coin flip as an inertial frame of reference of an unbiased coin only shifts the finite focus involved in such a choice to the skill and possible whim of the programmer implementing an electronic version of an inertial flip. A truly 0.50-0.50 binary choice really says there is no known basis concerning an inertial trajectory or formal mechanical framework or intentional agency upon which to form a choice in anticipation of or interest in determining one

of two possible outcomes. On such a basis, it really is no choice at all. A flip of an unbiased coin in lieu of an uninformed, perhaps uninformable choice simply substitutes one unknown outcome, that of an as yet undetermined mix in terms of its inertial, formal, and intentional makeup, with one that is intentionally inertial. If an intentionally weighted coin or its equivalent is used for the flip instead of an unbiased one, however, a choice is made, whether or not the target of the choice is truly informing.

9 - Al is a Mediated Proxy for Choice

Such is the case in a discussion of general artificial intelligence. Using the same algorithmic structure as above, any functioning AI, operating intentionally by proxy, that is as a surrogate for the intelligent soul that designs or employs that AI, is the intelligent product, [P], of a formal capacity, *F*, and an inertial capacity, *R*, as

an ideal representation in material nature, F([R]), designed for operation within a purposed domain, $C_{[r]}$, to pivot, φ , to some intended task as $C_{[r,\varphi]}$. It is essential to note that AI might be designed simply, for instance, where $[P] = F([R]) > C_{[r,\varphi]}$, "knows", >, to lock the door when you exit the house and not to open without a key. AI may be a simple mechanical or electronically sensitive lock, wired into the home security system, but in either case it is not a conscious thing. So when you leave the house in slippers with no coat in subzero weather to retrieve a memo you just remembered leaving in the car, you begin to freeze. If the house is a subterranean bomb shelter in the middle of the woods of Montana with no neighbors within miles and the keys to the truck are in your coat, you die; a very simple example of how AI, left alone to operate mindlessly by itself, can be lethal.

10 - GAI will never be conscious, but ...

Now assume a GAI, were the AI has been developed by humans into a fully functioning surrogate of a human being in all but the self replicating capability. A choice made by GAI at any point in time is simply, $[P] = \int F_n([R]) > \sum C_{n[r,\varphi]}$, designed as a surrogate to learn and perform tasks autonomously in a cybernetic manner analogous to the organically evolved material biochemistry of the brain and the ideal innate logical control operations of the human mind, but programmed in the electronic material of semiconductors in what is essentially a mindless inertial computational machine. Though such surrogacy might appear and feel naturally sentient to us based on the success of our interfacing efforts, a GAI has no self perception of protecting or punishing us with parental concern.

GAI does not make choices motivated by a survival imperative, as do humans based on a representation in the ideal nature of such motivating qualities, drawn from the formal capacity of the mind, in an attempt to recognize the unknown material risks and opportunities of living. Any mapping of GAI, >, is entirely a mechanical application of a material knowledge base of electronic states, $F_n([R])$, onto the the material world, through the inertial apparatus of the circuitry of $\sum C_{n[r,\varphi]}$, without the need of conscious intent or intervention, subject to the necessary bandwidth and speed of that circuitry.

11 - we can still make it lethal

And that is the problem, were we to construct it in a logical manner that prevents us from having a key to turn it off and find we have taught it to misbehave, or the counter problem of having such a key that might fall into the hands of others, should we find that is performing too well. This is the Halting Problem of Turing and others; along with the illusion that we might be able to reason with it as a sentient life form after failing to nurture our own nature in the [X,Z] 5. Emotional Regulation capacity of our frontal cortex.

—23/

Frontal Cortex [X,Z] 1. Executive Functioning: Intentional, Actual Execution of a Choice

This ideal representation might then be used with the purpose of performing a survey using a transit on a geographic site, choosing a point in the field and recording it as $F(C_{[r,\varphi]}) > [R]$ or in a reverse of the process in laying out a plot on the ground from the information provided on a plot plan, $F([R]) > C_{[r,\varphi]}$, where these two material operations take the ideal representational mental operations of the previous several paragraphs out of the realm of theoretical choice into the realm of actual practice. -24/

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