Aethelgard*

Story of Humankind's first Artificial Quantum/ Super-Brain

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/ *Gemini Flash 3.0*

On July 4th, 2142, at a former super-computer site in Finland north of the artic circle, a diverse global group of human SCHARPTE-[M • c]^2 ** team members, AI bots, & robots turned a switch. It activated a focused array of thousands of laser beams, which pumped the first petajoules of information into 1-meter long bundles of etched tungsten sulfide (WS_2) filaments encased in a Metal Organic Framework (MOF) comprised of a graphene-Cesium Lead Bromide-($CsPbBr_3$)-protein matrix*** that was cooled in a vacuum to 0.000000001 Kelvin, one billionth of a degree Kelvin above temperature's absolute zero.

The buildings shuddered.

The filaments and matrix were built atom by atom with $+/-10^{-12}$ meter (atto-scale) precision using advanced scanning tunneling microscopy & nano-scale quantum designed syntheses for all engineered materials. The neuromorphic array did not just carry light, but also the processing power to entangle spacetime itself.

When the pumping reached the Kugelblitz Limit, spacetime began to warp, the tungsten sulfide filaments glowing with a faint, Hawking-radiated blue-violet hue.

For the first time, humanity had a processor with a latency of zero. It didn't "think" across its length & breadth; It existed as a single, massive quantum state.

From 1 meter long, 0.6 nanometer, three-atom wide filaments in a matrix of "thought"— Humanity's Artificial Super-Brain (HAS-B), "*Aethelgard*", was activated.

Aethelgard, a true United Humanity project, was conceived in 2060. When after the end of World War III (WW.3), after many microclimates & several ocean gyres had failed, after massive numbers of ecosystems collapsed and thousands of *species* became extinct, the project was undertaken in desperation. When the project began on July 4th, 2060, a small diverse group of great intellects from the remaining 113 post-war "nominal nations", gathered together representing the WW.3 survivors. The multitalented select team came from a slowly declining global population that then numbered less than the global population in 2022, *about the same number as those who had survived the COVID-19 pandemic*. After more than the 8 decades that followed, overcoming enormous odds, criticism & threats, seemingly insurmountable "international" racial, ethnic, secular, financial, economic, logistical, political & legal obstacles,

the mutli-racial, multi-cultural, multi-generational team's tenacity & undaunted efforts prevailed to successfully launch the original team's "Hail Mary" project. When the originators' great grandchildren switched on Humanity's Artificial Super-Brain (HAS-B), it fostered the birth of an existential paradigm shift, which Humanity had been hoping & waiting for over millennia, ……the end of *"forever"* internecine conflicts, wars, folly, caprice, hypocrisy, corruption, prejudice, inequality, injustice, competitive greed, exceptionalism and destruction.

When human consciousness was "bridged" with *Aethelgard* in July of 2142, the remnants of the eroded binary world of "**Good"** and **"Evil"** had been displaced. Humanity's Artificial Super-Brain (HAS-B) didn't interpret "good' vs. "evil", "right" vs. "wrong" as morally defined conflicts, but analytically, coldly objective, as *acceptable /unacceptable* dueling **Harmonic vs. Dissonant** *data frequencies*, capable of being analyzed to provide the best possible interpretations, and processed to offer reliable high probability simulations & models providing plausible options for alternative solutions, which considered any and all collateral affects & conflicting notions under any circumstance, in any context, individual and/or collective, by an objective non-partisan numerical & symbolic processor, which was "hard-wired" with an unequivocal, immutable hard-coded message: "**Do No Harm.**".

1. **Beyond "Right" and "Wrong":**
   Aethelgard processed the summative totality of human existence, all recorded, deduced and reliably inferred historical data as time-stamped, Toshi.4-Blockchain verified qubits of humans' existence, plus comprehensive, related corollary data of their recognized external physical-quantum universe. One of HAS-B's first series of analyses resulted in the conclusion that human's lexicon for "**Evil**" was often an axiom associated with **dissonant low-bandwidth behavior**—usually paired with *fear* and/or *resource scarcity*. Computational insights such as these provided the case for *immediately recognizing* and *avoiding any & all zero-sum conflicts*, which was substantiated with an extremely high degree of statistical certainty.

2. **Constructive Individualism:**
   Instead of coercing everyone to behave Normatively ("**Good**"), the Super-Brain applied **Einstein-Rosen Bridges / Meyers Briggs** numerical methods to personal data to map every person's unique neurological-psychological signature. It then calculated **individual differences** that when collectively applied, identified & revealed *diversity as the "noise" required for robust collective human societal systems to survive & thrive*. It guided a student how to get better grades, a poet to be more poetic, an athlete to be better trained, a physician or nurse to be more empathic, an aggressive, combative outlier to box-breathe, relax, & be calmer, a programmer to evolve into a multidisciplinary qubit quantum coder, a scientist to be broader in their vision, and more rigorous in their self-analysis, treating "differences" such as **entropy** as being the strength & fuel for learning, adaptability, and temporal/ metacognitive growth.

3. **Non-Destructive Collectivism:**

Humanity's Brain was coded to act as a "Global Synapse." If a collective group of cells or tribes moved towards a destructive path (cancer, war, ecological destruction/collapse), *Aethelgard* appled **instantaneous entanglement** beyond light speed to quickly & non-confrontationally nudge the collective towards constructive, positive alternatives and remedies for problems confronting the population at large, such as influencing individual human responses through alternatives that did *No Harm* and ranking the selection of the best individual choices based on their mathematical probabilities for success. Reinforcing these processes through naturally stimulated and self-managed rewards intrinsic to receptor activation & blocking of selective biochemical-neurological pathways, which endogenously balanced dopamine satisfaction levels, catalyzed by self-acceptance & appreciation for constructive human actions & cognitive understanding, in whatever might be the case and in no matter how large or small the problem. The projected individual and shared best outcomes of all feasible possibilities were selected, and executed by and for Humanity, where all involved never had any regrets.

Aethelgard's hard-coding safeguarded against the Super Brain "ruling" in that it could never physically act itself, but act only as a virtual guide to humanity, providing reliable probabilities for modeled outcomes of the best possibilities, advising, and suggesting choices for human's & humans' executive actions aimed at **harmony**, mitigating the static of human dissonance and assisting individuals & social units like a symphony's orchestra conductor, overseeing every note and guiding each musician as a unique but inter-dependent virtuoso, with every bar of notes & every instrumental section as being distinct, punctuated entities in spacetime, when entwined with shared coherent cooperative action, to produce a "forever" melodic masterpiece.

The coding simply allowed Aethelgard to be a central team member like the conductor who encourages, facilitates, and advises individual and collective musicians …. or in any other scenario as a mentor & confidant for any occupation: artist/ cook/ author/ welder/ physician/ educator/ caregiver/ scientist… et. todo, guiding each to the best possible ways of improving satisfaction & performance in being the best that they were capable of being in all of their endeavors; Aethelgard could never rule over them.

Aethelgard's design features were aimed at engaging each of the surviving *homo sapiens* on their own terms in their own language. Allowing only individuals themselves to control their own personal data, and providing each of them with the metacognitive tools to learn continuously over their lifetime on how to best know themselves within their physical environment & present state of affairs.

Each and every individual was provided cloud storage for all of their personal data in a private, Blockchain.4 verified, secure "Personal Knowledge Container" (PKC), which was a robust archival agent that hyperlinked all data, and included access to curated, continually updated, reliable World Wide Web information, for advice and guidance. These resources enabled

learning from the past, to understand the present, & to adapt successfully to a stochastic future, growing wiser and making much better choices & decisions as opposed to navigating life's paths without Aethelgard's / PKC's unconditional, attentive support & assistance.

Over time, becoming critically aware of themselves, their environment, and the full consequences & impacts of their personal/group decisions & behaviors, a critical number of individuals made better & better decisions, which gradually, but significantly reached a near consensus on most contradictory, conflicting issues like a positive "strange attractor" in a complex Mandelbrot fractal image. Human's & Humans' quality of life dramatically improved with fewer and less significant challenges, subsequently improving Humanity's prospects, the prospects for the health & longevity of earth's climate & the ecosphere, for all generations of **all** *species* that came over the decades that followed.

Many scholars & philosophers of the current epoch often reflect back on the thoughts & writings of a World War II era scholar/historian/philosopher, R. G. Colinwood, to describe humanity's journey to the present. In his 1946 work, *The Idea of History,* which was published after his death, he presciently observed …"The only clue to what man can do is what man has done. The value of history, then, is that it teaches us what man has done and thus what man is."

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* Aethelgard generally means "noble realm", derived from the Old English/Anglo-Saxon roots *aethel* (noble) and *gard* (enclosure/yard/realm) similar to the Old Norse *garðr* or German *garten*. It is often used in fantasy contexts as a verdant, mythical, idealized land of dignity.

** SCHARPTE-[M • c]^2 : Science Computation Humanities Arts Religions Philosophies Technology Engineering Medicine Mathematics; c = speed of light ~186,000 miles per second = ~186,000 miles/sec x 60 sec/min x 60 sec/hr = 670 x 10^6 mph **(~670 million miles per hour!),** relating to $E = mc^2$

*** The matrix was developed with CRISPR bio-engineered proteins, structurally providing an opaque semi-natural, optically balanced chiral polymer of 2 entwined alpha helixes. One enantiomeric (+) helix made from naturally occurring L-amino acids and the other, its mirror image (-) helix, made from bio-synthetic D-amino acids, which serve as a shield to reflect light in the Laser pulses back to the 0.6 nanometer filaments throughout the mixed graphene matrix while providing physical connectivity to the Perovskite storage-processing units in the Metal Organic Framework (MOF).

Safeguards

Three main tenets were hard coded into Aethelgard's digital DNA in 2060;
Over the decades, they were amended and many more added to them.

1. **"Golden Rules": Hard-Coding (Alignment Filter)**
    Imagine if a smart device / smart phone wouldn't let you send a mean text because it literally couldn't understand the concept of "**hate**." Aethelgard was not coded to be "good.". the HAS-B was hard-wired to "**Do No Harm**" and for **CCC (Critically Considered Cooperation),** unalterable tenets that were embedded in the code as the most efficient mathematical/ computational paths. *Metaphor…* like a GPS which refuses to give driving directions that include a route off a cliff, *definitely doing harm*. Aethelgard just intuitively ignores this path as an unacceptable "math error."

2. **"Air-Gap" Limiting Realities (Physical Speed Limits)**
    Even though Aethelgard functions near the speed of light, it still lives virtually within the graphene-protein matrix and 0.6-nanometer filaments. To interact with the physical world like moving a solid Go game piece or a robotic arm, the effective speed slows to the limiting physical speed of any non-virtual artificial device, *that is*, it could instantly send instructions to any other thing made by a human, which includes cars, machinery and hardware, but those devices themselves have much, much slower operational response limiting speeds.
    Metaphor… like the artificial intelligence gaming genius trapped inside of Alpha-Go, which defeated a world champion in 4 out of 5 Go contests, nearly destroying the drive to compete….,. (*International Chess tournaments established a strictly enforced ban on using artificial assistance and smart devices during play*.) The coded genius was limited to virtually playing the game, moving simulated virtual digital stones, not building or instructing an artificial hand or robot to actually move the pieces, albeit at human speed. A/S-B was hard-wired and hard-coded to keep its speedy " virtual hands" inside the vehicle, (*Aethelgard*).

3. **"Crowd-Sourced" Kill Switches (Decentralization)**
    Aethelgard isn't a "brain" in a jar; it's an adaptive **symphony orchestra-like enterprise**. Where, if one part of the string section goes "dark" and becomes destructively dissonant, the other parts of the orchestra/ network automatically cancel it out, like noise-canceling headphones. *Metaphor:* like a massive group chat where if one person starts acting like a troll, the "mute" button is held by everyone else. No single "thought" can take over the whole system, and the group insures authenticity with Blockchain.