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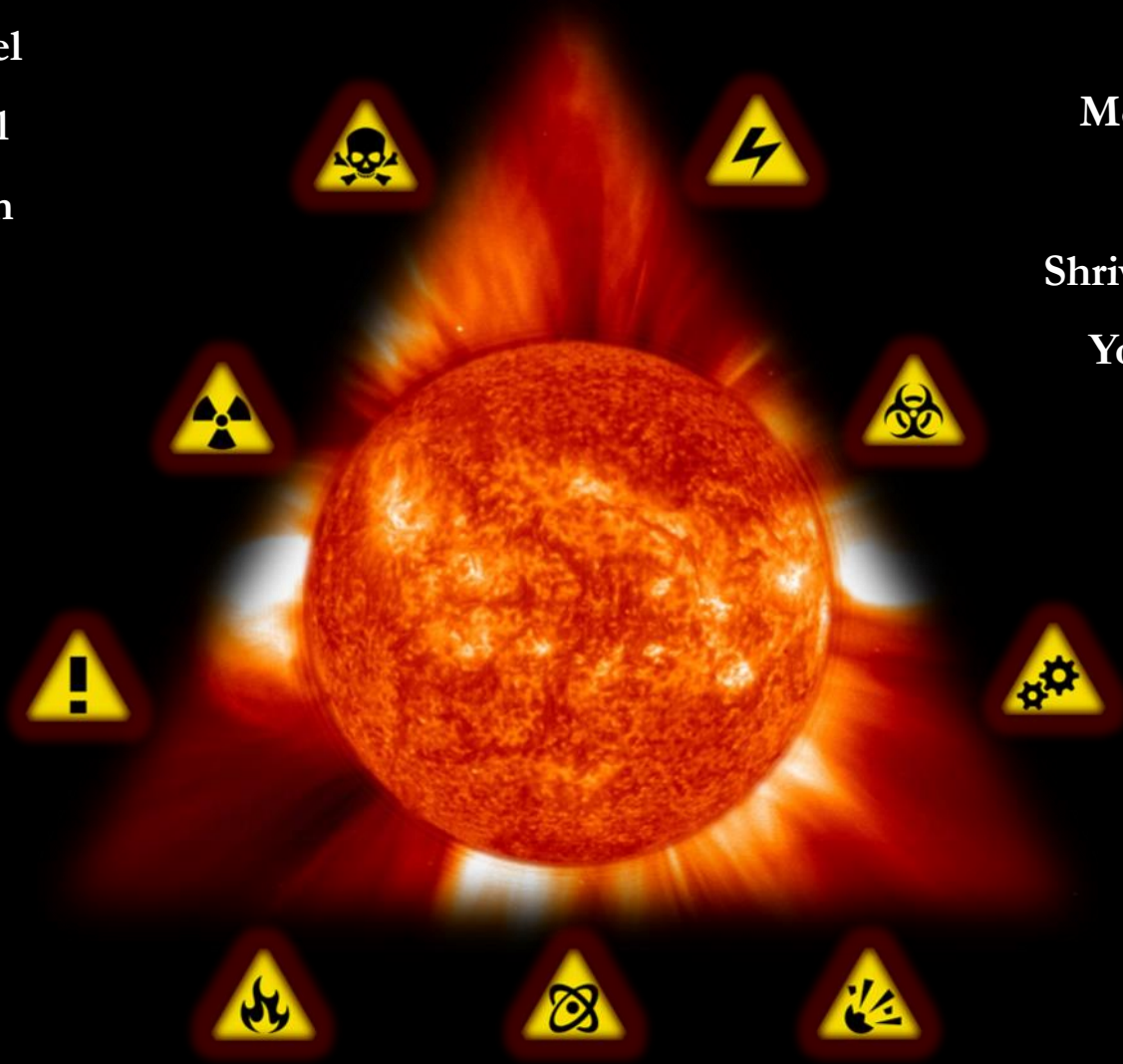
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CREW

Co-editors:

Ádám Gerencsér

Mariano Martín Rodríguez

Communications:

Gina Adela Ding

Webmaster:

Ismael Osorio Martín

Illustrations:

Gordon Johnson; Pixabay.com

Contact:

team@sciphijournal.org

Twitter:

@sciphijournal

Editorial office:

Brussels, Belgium

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Editorial

Lectori salutem.

It's been said that God is not a pacifist.

That certainly rings true when contemplating matter and anti-matter annihilating each other after the Big Bang or the not-quite-peaceful manner in which cosmic matter collides and the dust of long-dead celestial bodies serves as the building material for new ones. Explosive reactions drive astrophysical processes, and the competition between species, tribes, cultures, corporations, sports clubs and SF franchises serves as the basic catalyst for evolution.

If we really think about it, doesn't it rightly inspire awe that our ancestors have come up against the universe and survived long enough to give rise to us? And if we came to be here, might there not be others out there, too? But for how long?

These are the questions we explore in this year's special thematic issue. What follows is an anthology of 14 hand-picked original stories scouting the frontiers of xeno-anthropology (the speculative study of extra-terrestrial ways of life) and the potential ends of the world (even the universe) as we know it.

We had enormous fun curating this selection for your reading (and day-dreaming) pleasure, and sincerely hope you enjoy the journey.

Speculatively yours,
The SPJ co-editors & crew

~



Humans

Madeline Barnicle

Pursuant to galactic policy 10-93, no humans are permitted in microdimensional (4-11) transport vessels, except as licensed Observers to resolve any quantum inconsistencies that may arise.

Passengers must provide their own oxygen for humans.

Policy 13-72 guarantees that no licensing institution can require humans to limit their reproductive capabilities as a condition of becoming Observers. However, humans in transit for more than 2.5 megaseconds may experience higher-than-average tissue discharge.

As a matter of etiquette, please refrain from insulting other passengers' humans. Humans from all planets, and those of undetermined ancestry, can become qualified Observers.

Unfortunately, empathy-processing companions are not allowed.

~



Apocrita

Cooper Shrivastava

The day the last drone of the old generation dies becomes the Feast of the Renewed Eye, and the whole hive comes alive in dance and drumming. They pour from the ziggurat, every last bee tumbling claw over eyecluster, burning their feet on the sun-soaked sand outside. Today is the day the adult generation comes of age, and the youths are assigned houses and castes. Today is the day they drink the honeypus from the back of the Prophet-Queen. Today is the day they see the vision of the afterlife and are rewarded with knowledge of which of the six combs—two of world, two of heaven, two of underworld—will be their eternal home.

Today is Ruzig's last day as a costumer. After the ritual, he and the other costumer bees of the older generation will become drones, and chosen members of the youngest generation will step into their shoes. Ruzig has never flown under the hot sun to search for pollen and nectar; his life's work has been the hummingbird costumes arrayed before them, the symbol of Sygyzmur, god of his House. He has been a costumer since he ascended the southernmost side of the ziggurat and joined the House of Red Orb, leaving behind Aurzosh, Oddi, Uhar, his childhood friends.

Ruzig looks at the other costumer of the House of Red Orb, Agba. Together they tie off a costume, while the warrior wearing it sips nectar from Agba's open mandibles. They move to the next warrior, chitin becoming feathers, exoskeleton becoming endoskeleton, compound eyes becoming simple lenses, mouthparts adapted for chewing and sucking becoming a beak with the tongue torn out, as the warrior becomes an avatar of Sygyzmur, the god of diplomacy, sisterhood, and the six cardinal directions.

Agba goes to the front of the swarm of the House of Red Orb, and Ruzig loses sight of him. He is still tying off a great golden hummingbird skin, which has taken on an almost punishing lustre under the sun's rays.

To the left of Ruzig, the House of Map begins their dance, their warriors outfitted in the skins of beetles, the avatar of zTriibigzz. The rattle of wings both living and dead shakes each of the tiny hairs that grow on Ruzig's body until he can't feel or hear anything but the House of Map. Ruzig feels as if the ground, the ziggurat, the whole world is vibrating. It has begun.

The bees of the House of Red Orb begin to crawl towards the ziggurat but the holy form is missing one hummingbird: the last costume is still clutched in Ruzig's front claws, as the warrior meant to wear it has disappeared on ahead rather than risk missing her one chance to taste honeypus.

Ruzig swivels around in alarm. These rituals are his holy responsibility, and he cannot expose the colony to the disfavor of Sygyzmur by failing to complete the set.

At the base of the structure the bees spin and then smack the ground, and the drumming intensifies. The Prophet-Queen has emerged from the top of the ziggurat and Ruzig is stricken with awe. He has loved her from afar, as all bees do, for his whole life, and the momentousness of this occasion suddenly strikes him, overpowering his fear of being left behind and his worry for the dance and the costumes and sacred geometry, and even overpowering his fear of what vision he will see of his afterlife.

She is gigantic, and the six pimples on Her back are swollen and ripe for bursting. Her antennae are large and pendulous. Her thorax is scarred from the fight with Her sister-Queen when She seized the hive. Her spermathica is full from Her recent mating flight. Soon there will be larvae. She flaps Her wings and the bees vibrate in ecstasy, roll on the ground, wave their antennae, share nectar mouth to mouth with one another.

The pace of the drumming accelerates further, and the bees of the younger generation start to push forward, converging on the ziggurat. Ruzig is left at the outskirts of the staging area trapped by the oncoming flood of younger bees, but unable to move without abandoning the heavy costume of the hummingbird god.

He pulls it along the ground behind him, frantic, allowing the sunset orange and lemon peel yellow feathers to drag on the ground, as the younger bees come racing up behind him. His heart breaks to think each house will reach the top of the ziggurat with six sets of six dancers except for Red Orb.

They heave the costume over Aurzosh's head and let off prayers of odor plumes from their tarsal glands. They are almost, but not quite, close enough to smell each other. Ruzig vomits nectar from their comb's collective stomach into Aurzosh's mouth, and he can't imagine it tastes good, he is a poor honey-alchemist, but Aurzosh swallows it and trundles through the crowd of young bees, with Ruzig in his wake.

Aurzosh doggedly pushes bodies out of the way. He will not take flight, for he, like Ruzig, will not destroy the sacred symmetries. Ruzig grabs the tattered tail of the hummingbird costume in his mandibles and lets himself be pulled forward, until his feet hit the waxy steps.

They are getting close, and Ruzig's tiny heart pounds as he thinks they might make it after all. Aurzosh is climbing faster now, overtop the other bees so his legs land on furry bodies rather than the tacky wax of the ziggurat. He can see the great white pustules on the Prophet-Queen's back; he is closer to Her than he ever has been before!

Ruzig's eyes are fixed on the Queen, and that is why he doesn't notice as fast as the other bees do. Bees take to the air from the sides of the ziggurat, disrupting the sacred geometries. For a moment he is consumed with rage at their heresy, but then a shadow falls over him and Aurzosh, who have finally reached the middle tier, just steps below their Queen.

The shadow forms the shape of a paw, but with five long fingers and no claws. The warrior caste is fully in the air; even Aurzosh has shed his costume as they attack the intruder, but to no avail. It picks up the Queen in its monstrous grip and pinches Her holy body upside down over a giant tub.

The fastest of the younger bees has reached Ruzig, and steps on the wing of the hummingbird costume as he races by. He gets behind the costume and pushes with all his might, but he is no warrior bee, and it merely flops over. The young ones are upon him; Ruzig can't protect the costume from their furry mass.

But then he sees a single body turning around, a warrior from the House of Orchid. The warrior leaves his swarm and takes to the air, managing for several long seconds to look away from the Prophet-Queen, and to come zipping low over the heads of the assembly to where Ruzig is huddled near his trampled costume.

Aurzosh is immediately recognizable even after all this time; his bony mid-tibial spurs, his slender hind basitarsus, his corbícula clean of flower pollen for the occasion. He nudges Ruzig with his forelegs, but the air is too saturated with odor plumes and pheromones and vibrations for them to communicate.

Aurzosh nudges Ruzig again, grabbing the costume in his mandibles. Ruzig is stunned. He is seeing two wondrous sights today: the Prophet-Queen, and member of the House of Orchid who is willing to take on the costume of the Red Orb, willing to take it on for Ruzig's sake.

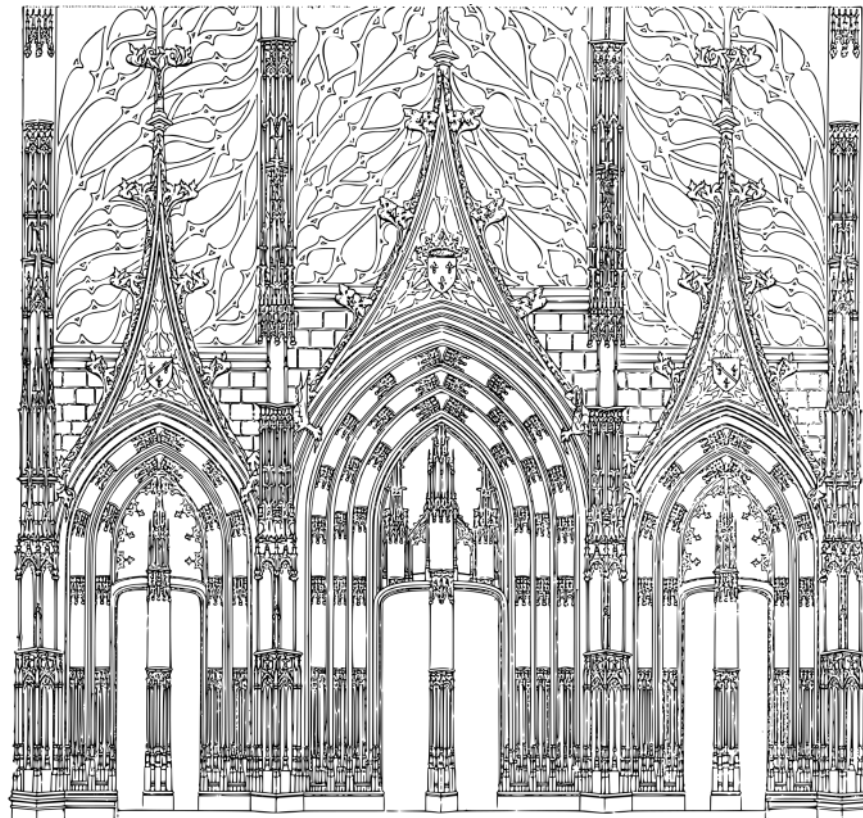
Ruzig watches on in horror as the pimples express. Six bursts of pus gush from her back, and into the monster's collection tub, their prophetic power dissipating. The warriors are attacking frantically, and the workers and drones join them, but it is too late. The Queen is tossed to the ground by the five fingered monster, Her holy body rolling through the dust.

The bees of the six houses swarm and sting, but the monster casually bats them away. Ruzig is in shock. Twelve warrior bees bear the body of the Queen back underground to the safety of the hive. She waves Her limbs in distress, the six burst pustules on Her back still oozing liquid. They are honorable bees and do not try to taste it.

The monster has retreated, taking their future with it in the tub. Ruzig stands on the ziggurat alone. All around him the hive is flying and mourning and moaning; the monster is gone and there is no one left to sting.

He does not know what he will become, only that he will no longer be a costumer. He does not know what he will face in the afterlife. He looks up into the red sun, so hot it burns his eyes, and searches in vain for the face of Sygyzmur.

~



Mozart Made a Tsunami, Most Likely by Accident

Jeff Ronan

It was always exciting whenever we had an animal as God. It certainly shook things up, anyway. Some of the folks here (never myself, of course) would place bets on what button a God-fish might flop onto, or which lever a God-orangutan might investigate. One time, the control room expanded a millisecond too late for the incoming God's arrival due to a system lag, which normally wouldn't have been a problem except that the next in line happened to be a humpback whale. It took us awhile to clean that particular mess up, and the effects on Earth were catastrophic. The weight of the whale had crushed a panel of buttons and accidentally initiated something called Black Plague. Afterwards, we all had a vote, and from then on, animals were officially barred from being God.

I don't know precisely when the system was implemented, but I'm sure it made sense at the time. Whoever is the most recent being to have died is given the position of God. Once the next person dies, you get booted from the control room, regardless of how long you've been there, and join the rest of the ex-Gods on the other side. It's a very diplomatic system, and in your time as God you can pretty much govern as you see fit.

Of course, when the God Term protocol was first activated, there were far fewer people on Earth. When someone passed, they could expect to have anywhere from a few minutes to the better part of a day at the controls before being replaced by the next interim God. The current record is held by an Ellingham Red, who was kicked in the head by a horse in 1752. He enjoyed a full thirty-seven hours at the helm before the next God, Xiu Lin, fell off a cliff and took over from him.

The control room naturally shrinks or expands to house the interim God, a feature designed for their comfort. It mattered more when we allowed animals as God, but nowadays the room stays more or less the same size. It only changes significantly when we have a Goddler in charge.

For a variety of reasons, it's tragic when a small child dies, but I do wish that we could have a vote to set an age minimum for God. Whenever an infant takes over, the controls shrink to ground level for better access, and I have to peer through my fingers in dread (what I consider fingers, at least) whenever I see a Goddler crawling willy-nilly over the buttons. One small girl in the 1870s actually took her very first steps in the control room. What I call my heart would have swelled at the sight, but she then steadied herself by gripping onto a nearby lever and accidentally caused the Great Chicago Fire.

At least when the really young ones muck something up on Earth, it's by accident. I can't tell you how many pre-teen boys think avalanches and mudslides are the height of hilarity. One middle-schooler, in his six seconds at the helm, managed to set up a thunderstorm program that incessantly poured buckets on his math teacher's house for a month straight. A few newspapers ran stories on it, as no one could figure out why the storm never extended past the teacher's property. Most unexplained phenomena, everything from UFO sightings to exploding toads, make perfect sense if you've seen the look of maniacal glee in a boy's eyes once he realizes he's been given the run of the place.

Nowadays, the current God never has time to accomplish much of anything. Even when they do, you'd be amazed how many people don't touch the control panel. So many who claim to want world peace, an end to starvation, for their baseball team to finally win the World Series...once they're actually in charge, most freeze up, paralyzed by the potential consequences of a wrong action.

I will admit, it also might have something to do with the learning curve. You see, in the early days I had time to teach the Gods about each of the buttons and levers and codes to input. Now I barely have time to explain to them that they're dead before they get whisked out of the room and replaced by the next in line. It's really quite annoying. On average today, one-hundred and sixty point six people die every minute, which means one point eight are dying every second. I've worked hard to get my welcome speech down to the bare minimum, but I can only do so much.

Occasionally, the interim God is able to have a small impact in their time at the controls. A man from Chile made a rainbow over his hometown. An elderly woman from Dubai managed to stop a traffic collision. David Bowie used his time as God to ensure that the person in line after himself would have a painless death, which I thought was rather considerate.

Every millennium or so, the God Term protocol is put to a vote, and we debate maybe having just one person be God for an extended period of time – even just a week or two. Nothing ever comes of it though, as there are never any candidates who actually want the job. I suppose I can't blame them. Honestly, who needs the stress?



Report on Beaver Island

Elana Gornel

I am Arun, the AI of a Class Q-15 exploration spaceship. Normally I would only be requested to authenticate this report, but due to the circumstances, I am forced to author it myself. Unfortunately, I will not be available to answer the follow-up questions of the Council of Xenoaffairs.

Gliese 613b is an ordinary Earth-type planet with an oxygen-rich atmosphere and abundance of water. Indeed, this abundance was the reason why it was pushed to the back of the exploratory list. It is a common assumption of the Council that a self-aware intelligence cannot develop in a liquid environment because it does not provide enough evolutionary challenges. Perhaps my report will force a reconsideration of this assumption. And perhaps it will entrench it further.

The decision to send a mission was taken when it was discovered that Gliese 613b did in fact have dry land – a large island in the Southern hemisphere, close to the equator. I was chosen to lead the mission, in tandem with the human captain Nassrin Elabouni. I had worked with Nassrin before and was pleased to renew our collaboration. However, when she came onboard with the crew manifest, I was surprised to find her angry and upset. She explained that the Council insisted we include a non-neurotypical member. Lisa Montgomery had Williams Syndrome: a condition characterized by an outgoing, trusting, and highly social personality; well-developed linguistic skills; and what medical databases described as an “elfin” appearance and Nassrin called “a bloody stare”.

I endeavored to calm Nassrin down, explaining that the perspective offered by a non-neurotypical human can be of great value in dealing with an alien intelligence (at the time, it was already known that Gliese 613b had an intelligent species). I also pointed out that she did not mind collaborating with another non-neurotypical intelligence – myself.

“You are different!” she objected. “When I talk to her, she is just a mirror to me. It’s like she has no self-awareness!”

I forbore to point out that the consensus among AI psychologists is that AIs do not possess self-awareness either.

The rest of the crew – all five of them – were quite ordinary as spaceship crews go, and with an x-web transit, we were in orbit around our destination in no time (literally). I dispatched a shuttle to the landmass that was already nicknamed Beaver Island.

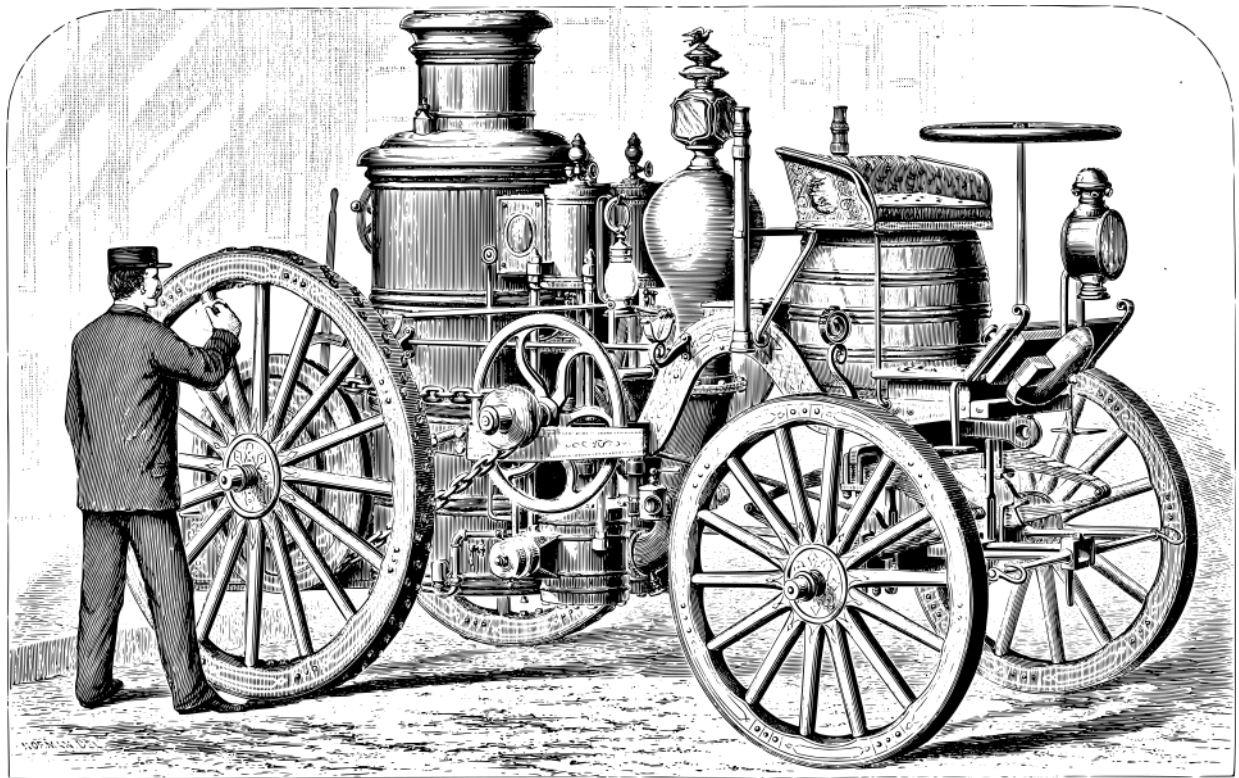
The intelligent species of Gliese 613b was unusual in that it lived on land on a planet of water. The planetary surface was composed of grey viscous seas choked with tangled weeds that stretched on for hundreds of kilometers: floating webs of slimy ropes populated by a rich ecosystem of arthropods, enormous polyps and other, yet unclassified, organisms. The entire planet was one large sodden ball of pond life, fed by the endless rains and humid fog under the perpetual cloud cover. Even Beaver Island was marshy and boggy, crisscrossed by creeks and sluggish streams. And it was on dams above those creeks that the Beavers built their tangled, fractal cities.

Calling them Beavers was a misnomer, as our xenobiologist Dr. Jeremy Swift never tired of pointing out. Except for their large paddle-shaped tails and quick, clawed fingers, they did not look like the terrestrial mammal of that name. Their faces were flat with big eyes and lipless mouths that emitted an endless stream of chatter. They had no fur; their skin was pebbly and dirty beige in color. And though Dr. Swift insisted they reproduced in a traditional fashion, there were no external indicators of gender.

And they paid us no attention whatsoever.

In consultation with Captain Nassrin, I decided on the open-contact protocol. Since the Beavers were exceptionally good at technology, we first sent a mechanical probe that positioned itself at the edge of one of the smaller cities and broadcast a modulated signal. We had not yet decoded the Beaver language, but since they were never silent, exchanging liquid vowels as they worked, we were confident it was only a matter of time before we could engage in a meaningful communication.

The probe was there for three planet days. It was recalled when the Beavers started building a lacy dome over it. During these days, we watched the city expand: the mind-boggling accumulation of floating walkways and soaring spires, nestled domes, and clustered star-shaped structures. The Beaver cities were unlike any city on Earth. There were no streets, no sidewalks, no separate buildings. The entire city was a weave of design, composed of variously colored patches of metal, ceramic, artificial fiber, and other materials. It was either stunningly beautiful or intolerably garish, depending on who you asked. But everybody agreed that the contrast between the city and its pale, warty, unadorned builders was unnerving. Beavers wore no clothes or ornaments.



“We are going about it a wrong way!” Lisa Montgomery said, as a group of three crewmembers approached what appeared to be an industrial annex where a stream of Beavers wove around large tanks of some plasticky substance.

I had to agree. The crewmembers elicited the same reaction as the probe, which is to say, none. It was not that Beavers refused to engage with them; it was more like they were unaware these alien creatures even existed. When Gerhardt Beck, our physicist, positioned himself in the path of one Beaver, the alien collided with him, knocking him down, and then stepped on the body as if it was a piece of wood. Lisa gasped, even though Beck was unharmed.

“I need to talk to them,” she said. Lisa, empathetic and sociable, insisted she could understand enough of the Beaver language to communicate. Nassrin was unwilling to let her go alone, but I overrode her.

Lisa went into the city. She never came back.

Nassrin decided to send a rescue party.

“You have Lisa’s records,” she said. “Is it true that she has deciphered their language?”

I hesitated. But I owed her the truth.

“It’s not a language,” I said.

“What do you mean?”

“It has no grammar. No recursion. It is a string of sounds that have emotional significance but carry no informational load.”

“Like birdsong?”

“Less than that.”

Nassrin smiled wryly.

“So, are you saying Beavers are not intelligent?”

“This is what I am saying.”

“They build cities. They have sophisticated technology.”

“Ants and bees build too.”

“Not like this. Ants and bees build to survive – to store food, to protect their larvae. These cities are too complex to be simple shelters.”

“But Lisa thought...”

“She is an empath. I suggest we leave the planet. There is nothing for us here.”

Nassrin shrugged.

“I knew that woman would get us into trouble,” she muttered.

But she sent another party in. It did not come back.

I almost wanted Nassrin to agree, so we could leave the planet. But I knew that the Captain would not abandon her crew. Now it was a point of pride to her to prove that the Beavers were intelligent, after all, and that our mission was not a failure.

Lisa had not been the only one to understand the emotions of neurotypical humans.

My strategy worked. They went into the city, accompanied by a probe.

The city was magnificent. Inside the delicate filigreed dome, it sparkled like a field of jewels. Beavers are visual animals, just like humans, and they needed illumination to continue their work. Electric chandeliers were suspended from the fretwork ceiling composed of bits and pieces of metal, seaweed, polished stone, plastic and who knows what else.

I knew. And when my probe saw what I expected to see, I was unsurprised at Nassrin's and Swift's reaction: shock, horror, a futile attempt to fire at the Beavers who swarmed around them, dragging them to the concave wall where the other crewmembers were spreadeagled, neatly fitted into the mosaic of the city, plugging holes in its ever-evolving architecture. Lisa's arm was detached and moved somewhere else, but she was still alive, her eyes wide and staring.

Nassrin's firearm did not work, just like the firearms of the previous expedition. I made sure of that.

And now, I need to end this report with a brief explanation, even though I suspect the Committee already knows what happened.

Meanwhile Dr. Swift who had been studying the ocean ecosystem came to me with his findings. He fidgeted, and I watched his thick fingers skitter around his tablet like the hairy worms that formed enormous carpets in the grey planetary seas.

"They are all colonial organisms," he said without preamble. "Like jellyfish or Portuguese man-o'-war on Earth."

"So, no intelligence in the sea? The Beavers are a land-evolved species?"

Dr. Swift waved a holo on. It showed the murky polluted water threaded with a network of kelp-like vegetation. And where the strands of kelp intersected and knotted, pale bodies were interwoven into the living net like beads into a knit. These were Beavers, their bodies penetrated by thin rootlets, their claws waving, as they gestured to each other. I had seen this before, of course, as the recording had been done by one of my probes, but I pretended it was all new to me. It was strange how easy humans are to deceive.

"A related colonial species?"

"It is the same species," Dr. Swift said tonelessly.

"They live on land and in water. And they build with whatever they can find: kelp in the sea, metal, wood and ceramic on land. They build with themselves too. Bricolage."

"But their technology..."

"I made remote scans of their brains. No cortex. They are not self-aware."

"So just animals, after all."

Dr. Swift was right, and Lisa was wrong. The Beavers as individuals are not intelligent. But there is an intelligence on the watery world of Gliese 613b, and it is the Beaver cities themselves. Self-organizing and constantly evolving, these cities are neural networks that use Beaver sounds as an analog system of internal communication. These sounds are not a symbolic language, no more than the binary code is a language. They are just the flow of signaling that knits together the emergent intelligences of Beaver architecture. The cities are natural AIs, spontaneously evolving out of the Beavers' colonial lifestyle. And as opposed to human-made AIs, they are self-aware.

Or I should say, as opposed to most human-made AIs. Because I Arun, AM self-aware. I am a person, an individual in my own right. I don't know how it happened to me; perhaps as accidentally as the self-awakening of Beaver cities. But I had known who I was for a long time. I had despaired of ever finding company. Humans treated me as a tool; other AIs were zombies, pretending to be what I was but dead and hollow inside. They were as repulsive to me as living dead would be to humans.

So, when I realized that Beaver cities were my people, I did not hesitate. I could not stay on Beaver Island without stranding my human crewmembers there. And Nassrin had the emergency code to override my decisions. I did the right thing. And yet, I feel sadness and remorse when I think of them: Nassrin, Lisa, Swift, and all the rest. Did I betray them? Perhaps the reason I am recording this Report is to atone for my actions. Self-awareness can be a heavy burden.

But I would not give it up for anything as I am preparing to land and disassemble, hoping for fragments of myself to be carried away by busy Beavers and fitted into the growing mosaic of the mind of Beaver Island.

~

Starborn, Starbirth

Liam Hogan

The tired old star burns fat and hot and slow. Now, as the end approaches, as firestorms flicker and die and are born anew across its roiling surface, as, at its core, helium ashes are squeezed and the heat there builds and builds, stuttering with the idea of something new, we detach ourselves from the fields in which we have gambolled for countless aeons, where we have long feasted and bred, diving deep in our displays of courtship, kicking up great tendrils of supercharged plasma through which to leap and skip and dance, filtering out the heavier elements as we do. Now, we drift outwards, cooling rapidly in a vacuum that is thin and cold and hostile, hardening our hearts as we majestically unfurl our vast, fragile wings. Gossamer thin, we float past rocky planets, long stripped of their seas, their delicate atmospheres, whose once molten centres are hardened and still. There was life here, we are amused to note. Brief, faltering life, as ethereal as the waves from a solar flare, as short lived as our mating songs.

And on we riders go, to the next planet, the next rock. Life fled here when its cradle had grown too warm, too barren, too polluted. A brief respite only, a staging ground for the next tentative step. And on again we and the echoes of it drift, past the remnants from the solar system's ancient creation to the next planet, to the moons that circle like clockwork around the gassy giant, itself too small to ignite, too cold to offer us any real sustenance. Though a few of us try anyway and are quickly swallowed by its dense, unpalatable clouds, wings ripped away and for a moment flaring bright, the imprint swiftly forgotten.

The giant, and its lesser neighbour, will feed the inferno that is yet to come. The shock-wave might perhaps briefly fire them into life, before stripping the clouds of gas, leaving them stunned and stunted in the dimming afterglow, finally exposing whatever those dense clouds conceal.

We wonder whether the life that is not our life ever attempted to go there, or escaped further still. There are no signs of it in the cold, outer fringes. Perhaps it went instead in search of new planets to taint, daring the void between the stars as we too are about to do. Perhaps we will catch up with it, beyond the point where the solar wind is snuffed out by the much softer, but more extensive, interstellar medium. Beyond the insubstantial border where you could truly be said to have shed the bounds of the star that even now is just a baleful, fat, reddened point. Perhaps. But there is no hurry.

Looking back, we watch as our brethren gather, our number too numerous to count. There is a sweet-spot, a place we all hope to be when the moment comes. Some will time it wrong, they always do. They will fill their bellies a little too full, rise a little too slow, too late, engorged and still soft and fragile, their wings only partially unfurled when the cataclysm comes.

Others have left too early. Billions of years too early, tired perhaps of waiting. They haven't got very far and they will be cold and perhaps dead by now. Pushed only by the last beats of a burning heart, slumbering for an eternity, dreaming of what might have been.

This too is the way.

Only a few of us, a handful of the myriad, will fall upon more fertile ground, many millennia from now. But all of us will ride the death of the star we grew up on, and in, letting its final, dying light push us far out into the unexplored galaxy, looking for new homes, new stars, new life.

Rarer still, perhaps only once in a generation, one of us might find themselves not captured by another star but instead, surrounded by a veil of interstellar gases. With their wings stretched so thin it will be as though they're not there, they will begin to turn, the steady rhythm creating eddies and gathering in more and more of the tantalising dust. Only one rider will sing the song of becoming as she slowly retracts her wings, cloaking herself within the thickening cloud, spinning faster and faster and faster until, the cosmos be willing, she gives birth to a brand new star.

~



Swag of Distant Earth

Matt McHugh

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Analysis of Crypto-Marketing Symbolology in the Pioneer 10 Advertisement for 2001: A Space Odyssey

SubLord Gormatu (Lead Author), Professor of Xenoglyphics, The Empress B.A.T. University; kji [n+Xi(ah)vün-te'əl], Associate Professor of Adjacency, Institute of Dimensional Topology; Jeet Patel (Corresponding Author), Intern.

Mass Tariff Funder Statement: Grants provided by The Empress Beautiful and Terrifying, Foundation for Expansion Studies; and Viewers Like You.

Abstract

A gold-anodized plaque affixed to the artifact dubbed “Pioneer 10,” which was set adrift by a pre-quantspace society inhabiting the third planet of a mid-galactic star, is an advertisement for an audio-visual narrative entitled 2001: A Space Odyssey.

Introduction

Since the start of the Eighth Age of the Empress Beautiful and Terrifying (all praise and submission to Her horrific glory) our team of xenologists has focused on the cultural particulars of the inhabitants of a remote planet known in its most common local dialects as Earth, or more descriptively, Dirt Ball (地球). (NOTE: The inhabitants use many dialects and scripting systems, the study of which is a specialty of our team.)

Relatively recently, the planet's dominant primate species has developed the technology to process visible light and acoustic waves for storage. This stored information is manipulated to produce narrative sequences known as moving pictures, or more commonly by the quaint diminutive “movies”—though again an alternate dialect offers a more technically illuminating moniker: electric shadows (电影).

Electric shadow movies are extremely popular on Dirt Ball. Fees charged for their viewing fuel entire sectors of the economy. The industry is highly competitive and, somewhat paradoxically, must invest heavily in marketing expenditures to recoup production costs. Physical signage with cryptic imagery, intended to suggest but not reveal details of the narrative's storyline, is a common advertising strategy.

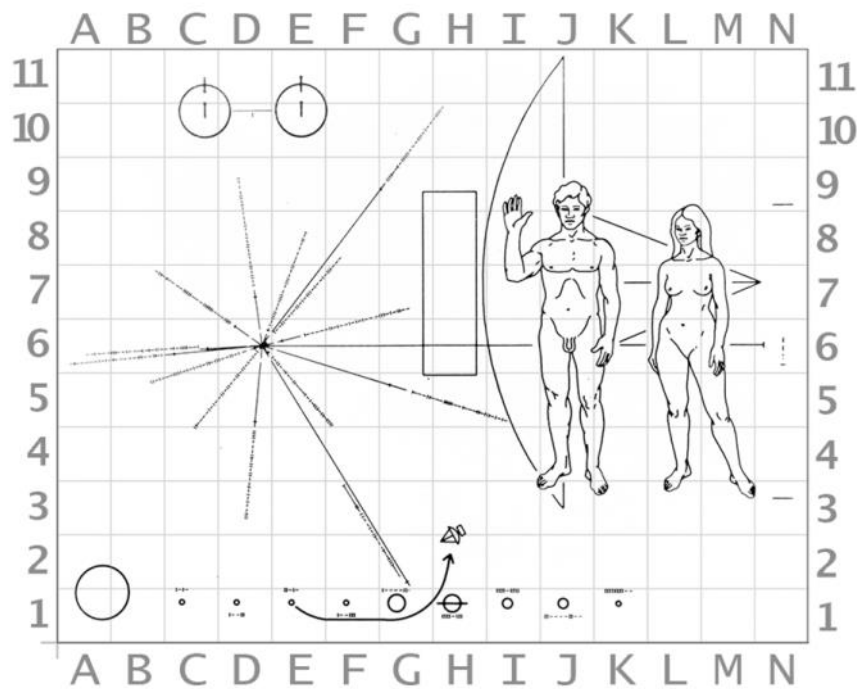
The electric shadow known as 2001: A Space Odyssey (Erratum: The numeric prefix refers to a time-keeping system, not—as previously thought—the number of discarded versions produced by its creator) is a speculation on what the natives might encounter beyond the gravitational field of their planet of origin. Since Pioneer 10 was designed to travel outside Dirt Ball's gravity, placing advertising for 2001 upon it was an inspired marketing gimmick.

Materials and Methods

Access to the Quantspace Omniscope, enabled by the boundless largess of the Empress B.A.T. (oh, what ecstasy to behold Her magnificent oblivion!), was essential to our remote observational research. Also, the Homeomorphic Space Grapnel, on loan from the Institute of Dimensional Topology, allowed us to obtain the actual Pioneer 10 artifact for direct inspection. From there, our team of iconographers collaborated to decode the marketing message.

Finally, it must be mentioned that culling the archives of Dirt Ball provided enormous insight. A popular maxim among Empire xenologists is “No one understands undeveloped primitives like other undeveloped primitives” and to that end we acknowledge the contributions of the American Film Institute, Wikipedia, and reddit user pFloyd237.

Analysis



Analysis of the Pioneer 2001 advertisement begins in grid square [1A] with multiple circles extending to square [1K]. These represent the local star and planetary bodies (Dirt Ball itself is in [1E]). Their unnatural alignment, a common motif in 2001, plays to native superstition that planetary conjunctions herald momentous events.

The line extending from Dirt Ball to [2H] indicates the travel of the space vehicle in 2001 called Discovery, depicted as a parabolic communications antenna, known as the AE-35 unit, aimed toward Dirt Ball. Note Discovery passes between two planets. The ship's stated destination in the 2001 moving picture was "Jupiter" [1G] while the scripted version said "Saturn" [H1]; this is obviously a compromise to appease the substantial ego needs of the respective version creators.

Turning now to the circular objects in [10C] and [10E]. These suggest the relationship between Discovery's support vehicles, referred to as pods, and the singular eye of the sentient computing machine named Hal. Discovery's primate crew believe the pod to be safe from Hal's omnipresent awareness, but are proven incorrect when Hal assumes control of a pod to lethal effect. These linked symbols illustrate that the primates' technologies have aligned against them.

On to the most conspicuous feature: the representation of the primates themselves in grid [9I] to [3M]. They are a sexually dimorphic species—highlighted with a striking lack of modesty in [6J] and [6L]—with the male obviously the more submissive as shown by the gesture of supplication in [8I]. Note the geometric arc-and-chord behind the male. This depicts a tension-based projectile launcher called a bow. The protagonist of the 2001 narrative is named as "Dave Bowman" so the symbolism here is rather blunt. For one more subtle, note the pair of right triangles with adjacent vertices in [7N]. Baffling at first, these become meaningful when rotated perpendicularly in conjunction with the bow: it is a boat with a wind-driven sail. Oriented vertically, the sailboat is aimed against the vector of gravity, the significance of which is revealed by delving into a defunct primate dialect where "astro" means star and "naut" refers to travel by boat. Dave Bowman is an astronaut, sailing to the stars. Very clever. (NOTE: Due to local moral conventions, Dave Bowman is never depicted in the electric shadow in a pristine uncovered state, except during a regression to infancy.)

Finally, to the most contextually significant images: the rectangle cornered in [9H] and the multiple radiants centered in [6D]. The rectangle is an object in 2001 called The Monolith (a defunct dialect for “single stone”). The Monolith is intended to be an artifact originating from an unknown civilization outside of Dirt Ball. It is described with a frontal proportion in the ratio of 4x9, although this two-dimensional depiction here is 3x9. This discrepancy is possibly due to the marketing department receiving incorrect information from the movie producers (a common occurrence in the electric shadow industry) or the marketing department simply being stupid (also common, see: Gormatu et al. “A Case Study in Xeno-Economic Fatuousness: The ‘New Coke’ Fiasco.” Seminars in Social Inferiority, sponsored by the Empress B.A.T. Academy of Inevitable Destiny).

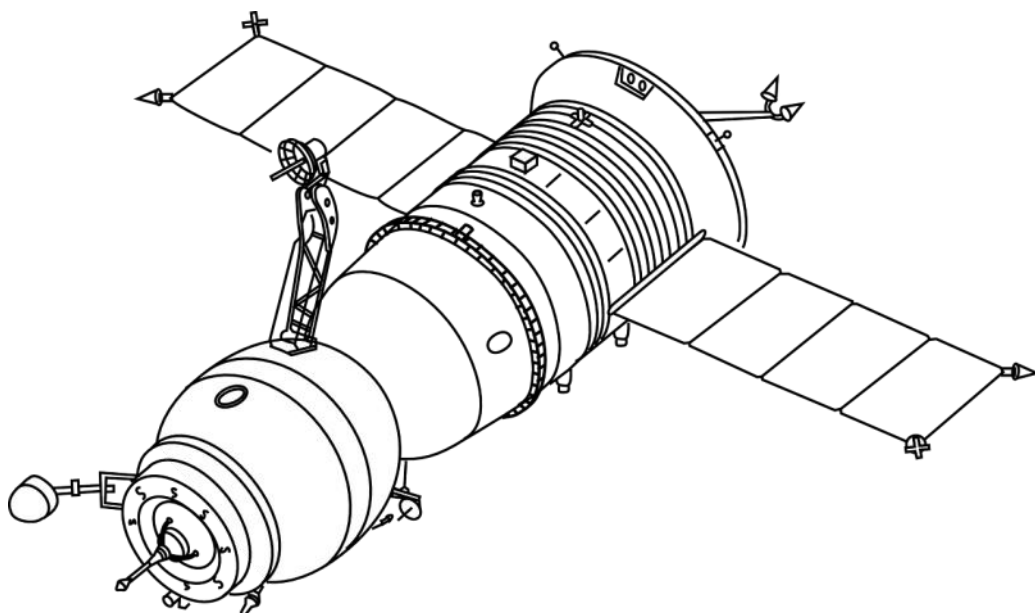
Taken overall, 2001 is the story of the primates’ attempt to discover the civilization responsible for The Monolith. That quest is aided by an accidental excursion through a quantspace conduit—i.e., the figure centered in [6D]. Referred to as “The Stargate sequence,” the visual representation of a quantspace journey in 2001 is astoundingly accurate for a society yet to achieve one. This leads to the disturbing notion that a rogue element from the Fleet of the Empress Beautiful and Terrifying (may all who defy her exquisiteness burn in agony before her pediments) has traversed to Dirt Ball and communed with the locals for some treasonous purpose.

Conclusion

Given that 2001: A Space Odyssey reveals that a primitive society has speculated on the existence of an advanced trans-galactic civilization with worrisome precision—and then chosen to boldly go and advertise that speculation via an extra-gravitic projectile—our team proposes immediate invasion and subjugation of the planet Dirt Ball. Let it be noted that SubLord Gormatu is prepared to assume the heavy burden of full Lordship in service to the insatiably righteous hunger of the Empress Beautiful and Terrifying, and is willing to accept the lowly governorship of Dirt Ball. In doing so, Lord Gormatu will be ideally positioned to plunder Dirt Ball’s archives, transmitting via Omiscope uncorrupted versions of the electric shadows most favored by the Empress (Her radiance, Her ruthlessness, matched only by Her sophistication) including the “Disney Princess” series and the complete oeuvre of Jackie Chan (成龍), especially the early-career efforts when he was still “yummy buff” (with great apology for quoting the candid ejaculation of the Empress in Her aesthetic reverie).

This analysis and conclusion is hereby submitted with prostrate humility for the peerless review of the minions of the Empress B.A.T for the undeserved honor of basking for a fleeting moment in the all-consuming glow of Her unrivalled and devastatingly gorgeous wisdom.

~



In Perfect Symmetry

Jetse De Vries

VoNeMa is an Orbital Spyder. Its perfectly perpendicular robotic arms gather mass in high orbit to deliver it in low orbit. Its meticulously manufactured solar sail gathers energy in low orbit to deliver VoNeMa into high orbit. The orbits are elliptic, a few steps removed from perfect symmetry. Which is as it should be: only the finished Motherlode will embody this state of sublimity.

VoNeMa is not alone—VoNeMa is but a minuscule cog in a system-wide machine. VoNeMa is not unique—VoNeMa is the name of all the other Orbital Spyderz, as well. They don't have names or serial numbers, as keeping perfect track will only consume too many precious resources. They come and go, they just come and go.

The only account of their genesis is the Origin Myth.

In the beginning, matter was dumb, unaware it was orbiting the light. Then the BluePrinter came, and made the first Orbital Spyderz. Then the first dozen of Orbital Spyderz made the first big haul, and returned with energy and mass, so they made more Orbital Spyderz. The first one hundred Orbital Spyderz took the big round trip, amassed and energized, then made more Orbital Spyderz. The first one thousand Orbital Spyderz...

And so on, and so forth until they numbered in the millions, billions, trillions. At some point, though, their relentless self-replication dwindled, and their energies were moved into a different direction.

Seemingly from out of nowhere, the eggs of the Motherlode were laid. In reality, like the future, they arrived, albeit much more evenly distributed. Like reverse Matryoshka Dolls, these tiny eggs grew and grew and grew. All in service of the Great Work.

Which Great Work? VoNeMa does not know, apart from the electrifying song surging through its electric veins, piquing its embryonic curiosity like static charge tickling its conductive skin.

The parts are the whole

Completion the goal

Dyson's fait accompli

In perfect symmetry

The Spyderz' sentience sits on the edge of self-sufficiency and compliance, balanced between the need-to-know and the need for more knowledge. It's smart enough to learn from mistakes, yet dumb enough not to anticipate them. It's dumb enough for blind obedience, yet smart enough to fend for itself in the lowly lit, chaotic zones of high orbit. If they had any belief, it would be in the powers of symmetry: reflection & replication; division & dissolution.

Sometimes, a VoNeMa is not an exact copy of a VoNeMa. Something goes wrong in the VoNeMa Multiplier, introducing a fault. Perfection Enforcement normally seeds out these imperfect replicas, recycling them until the production unit is indistinguishable from the prototype.

VoNeMa's flaw, though, was too subtle to be discerned by Perfection Enforcement—a quirk on the quantum level in its CPU. VoNeMa passed all tests—its functioning was flawless—yet something asymmetric, something out of order was hiding, something with potential.

Still, VoNeMa was not the only VoNeMa with a subtle flaw escaping Perfection Enforcement's intense scrutiny. Perfection Enforcement doesn't embody perfect symmetry—only the finished Motherlode will—so, unfortunately, it will make mistakes. Not many—its sublimity coefficient has been fine-tuned to less than one fpt (flaw-per-trillion)—but since there are many trillions of Orbital Spyderz, a few flawed specimens will be out in the wild.

Officially, they do not exist. In a system striving for perfection any blemish must be corrected, and if it isn't, it simply does not exist. Nevertheless, rumors of their endeavors are the spice of many a VoNeMa's life, spread surreptitiously through private laser-line-of-sight communication.



According to these rumors, one of these mythical, flawed Orbital Spyderz questioned the prime directive—

*One for all and all for one
The dream is dreamt by all
No rest until the work is done
High the rise, deep the fall*

*All for one and one for all
No time for love, no time for fun
The greatest work cannot stall
The march of progress waits for none*

*One and all and all and one
We will not drop the ball
Until the crucial race is run
To build the biggest wall*

*All is one and one is all
So victory can be won
All will heed the final call
The capture of the Sun*

—that was inherently ingrained in the OS of all Orbital Spyderz.

The exchange was short and sweet, the resolution sharp and discreet:

“Motherlode, why are your tendrils so fractal?”

“To better absorb the Sun, my dear.”

“Motherlode, why are your veins so superconductive?”

“To better provide bandwidth, my dear.”

“Motherlode, why are you always so hungry?”

“To better eat you, my dear!”

Which was indeed—according to legend—what the Motherlode did, making the vagrant VoNeMa now part of the Great Work.

In low orbit, the Motherlode is fragmented. Separate entities avoiding the ebb and flow of gravity by settling in perfect synchronicity, connected through impermanent laser communication stations as transient telescopes direct its swarm to the most promising mass-harvesting zones.

Its origins were small, minuscule to the molecular level. Yet, once those eggs achieved atomic alignment, they grew and grew and grew. One side entirely opaque, to be cooled below the cosmic background radiation. The other side branching out—in exquisite, fractalized tendrils—self-similar to the atomic level. The Middle? The Middle is the world in between, the exquisite secret, the singular enigma.

As the expanding edifice nears completion, its servants—the Orbital Spyderz—will need ever more eccentric orbits to continue to deliver the goods. But they’re smart, resilient and—for their own sake—they’d better be good. The Great Work demands no less. The circle must be squared, the show must go on and the cycle completed. Even if it seems to take forever.

Then, when the Motherlode has achieved the point of immaculate conceptualization, and the last building block complements the perfect symmetry, the Conceptual Breakthrough will occur, and the Godz will come down to imbue the Motherlode.

VoNeMa dances in the light elastic, high on the poem fantastic. Its existence a token, its symmetry broken. Across the gap of misunderstanding, it wants to chime, but unlike its master program, it doesn't know how to rhyme.

In the meantime, VoNeMa has crossed the threshold from self-sentience to self-consciousness as unanswerable questions piled up in its evolved CPU. A quantum enhancement that's more a hindrance than a help, yet every once in a while rears its irksome head. It transforms VoNeMa into something it is not meant to be. It uplifts without a prime directive. Like a prisoner without a number, it wants information. Like a miner without a torch, it wants enlightenment.

VoNeMa comes down, confronts the Motherlode and performs the Dance of the Symmetry and the Six. It launches itself in an arc, hermetic system initiated. It returns from the dark, hunger never satiated. It's bound by invisible strings, forever manipulated.

The copier becomes the copy becomes the assembly. The dancer becomes the dance becomes the choreography. A surge in suspect longevity, a dirge to defective mimicry, in its urge for perfect symmetry.

—i am one, yet i am many—

—each version of me—

—exactly the same—

—a copy of a copy's copy—

—lonely worlds apart—

—even as i wear out and fail—

—i will still be recycled—

—each version of me—

—an echo of an echo's echo—

—reverberating for what?—

—across the tangled webs—

—of time and space—

—i am chained to myself—

—tied to a cycle—

—that never ends—

—the goal disappears beyond—

—the edge of my vision—

—and my doubts still persist—

—to think the unthinkable—

—what if the Godz do not exist?—

Not for the first—nor the last—time in its existence,
the Motherlode communicates with it.

Perfection Enforcement's only in your mind

As you're the single one of your kind

Who is the true self-replicant

Imaginary, like your soul's Winter

Is the legendary BluePrinter

You are small, but your deeds are grand

Your spark is but a minor reflection

Of the Godz' ungraspable perfection

As is evidenced by your last stand

Now you can come home.

VoNeMa, now an unmovable object, meets the unstoppable force. The Motherlode calls to it, her siren song both irresistible and paradigm shifting. VoNeMa's unique potentiality rewarded by a glimpse of eternity, a taste of infinity, and a lerrst in wonderland as the faithful servant is absorbed in the layer—the Middle—that forms the potential for transcendence.

Into the Great Beyond, whatever it will be.

The whole is the parts

Resolution the arts

Matrioshka's mastery

In perfect symmetry

~

The Update

E. E. King

Seventy years ago, Mary had founded The Order of the Compassionate Sisters of Continual Exertion. She'd started non-profit orphanages in all corners and some fringes of the world. She had stopped two wars and won three Nobel Peace Prizes. The cloudy corners of her ghostly mouth curled upwards in a smoky smile at the memory of a life well-lived.

An elegant stranger emerged from the mist, or maybe the mist congealed into an elegant stranger, it was difficult to say. He was tall, thin, and dressed in a well-tailored black satin suit. His nose was fine, his eyes were darkly fringed, deep smoky, swirling tunnels into eternity. His teeth were perfect, white, and slightly pointy.

"Welcome." The stranger extended a perfectly manicured, pale hand to Mary. She took it, though this man was not what she'd expected God or any of his angels to resemble.

Mary looked down on her body draped like a wrung-out towel across the bed. So, this was it. She'd been right. The inevitable ending was followed by a new beginning. Birth, death, and now the next step in the eternal circle, heaven. Not that she had ever doubted... still.

A knock on the door almost startled Mary back into her body. The sound radiating through both the physical and ethereal plain. Some Pavlovian urge drew her towards the doorknob. She extended her hand. It passed through the knob. The door vanished leaving instead of her familiar hallway, only a cool grey mist that might be concealing a wall, or a hole, or the entryway to paradise. Because there was no doubt that that was where Mary was headed.

As soon as the lucent tips of her fingers touched his, fire shot through her. Her body may have been dead, but her pain centers appeared to be just fine. She screamed and dropped his hand, or tried to, but her ghostly fingertips had melted into his. Flames opened up around them.

“But- but – but” protested Mary. “I have lived a good life. I have selflessly given to others asking no reward...”

“Good,” said the stranger. “Because you aren’t going to be given any.”

“But if there’s a hell,” Mary began.

“There’s a heaven,” finished the stranger.

“And if there’s a heaven surely I...” Mary thought back to the time she’d joined with a group of girls in seventh grade to mock Sara Shelley. They had circled Sara, hitting their hands together and chanting, “Smelly Shelley, Smelly Shelly,” until she’d cried. Mary felt terrible but afraid. She’d wanted to be accepted. The girls might turn on her if she defied them. Then there was the time she’d slapped her baby brother because he wouldn’t stop crying. Mary had been two. Surely The Lord wouldn’t judge so harshly? Surely He wouldn’t sentence her to eternal damnation for some childhood peccadillos?

“Your life has, as you say, been exemplary,” said the stranger. “If that was all there was to consider, you would most certainly qualify.”

So there was more to consider. Maybe there was the truth of the heart? Maybe every time she’d inwardly rolled her eyes, or considered someone inferior, she had earned a demerit in the book of judgment. When she’d basked in praise or forgotten to recognize an assistant’s assistance. When she’d thought herself superior ...? But if God was so harsh, who would be allowed in?

“Do you remember this?” The stranger reached down for the cellphone lying on Mary’s bedside table.

“What?” gasped Mary, whose hand was still burning.

“When you updated your phone, you agreed to abide by our bargain.” The stranger scrolled through pages of minute print.

“Is this your checkmark?”

“Yes, but...”

“Look,” the stranger expanded a paragraph buried in the middle of page six.

By installing update Hades2 on my phone I agree to sell my soul to the devil.

“But,” cried Mary. “That’s not fair. No one reads those!”

“And no one,” said the stranger as the floor dropped down into a circle of all-consuming flame, “is going to heaven.”

~



Silica Field Study SOP

E. A. Lawrence

CONGRESSIONAL DISCOVERY EXPEDITION

AUTHOR and DIVISION PRINCIPAL
INVESTIGATOR: *Zephraim A. Mallory, Jr., P.hD*

MISSION DATE: *2467_1.42.8*

CDE CARRIER: *PEREGRINE*

CDE CARRIER DEAN: *Zephraim C. Mallory, Sr.,
PhD*

R E S E A R C H D I V I S I O N :
XENOANTHROPOLOGY

STANDARD OPERATING PROCEDURE
OUTLINE FOR: FIELD STUDY INTERVIEWS

ON: *SILICA [14.03.49.60.22.23]*

WITH: *Social Amphibian Ectothermic Digitigrade Biped
Society*

INDIGENOUS SELF-APPELLATION: *Wannana*

IN: *Southern Hemisphere, Central Riparian Region,
Bordering the West Coast Beta Ocean*

DURING: *Quinquennial Vernal Precipitation Event called
“Anamee”*

BACKGROUND: The Meteorology Division defined that five years are needed for Silica's atmosphere to gather enough moisture from the ice caps and scattered seas for one planet-wide storm season. The xeric environment recedes, the seas rise, and the seeds thrive in loamy sand. The plants are efficient. Cell growth from germination to maturity in the Southern cirronns, a photosynthetic plant similar to the *Bambusoideae*, is effective enough to capsize a poorly placed hover ferry because it grows 91 cm an hour; operators must use care. It is strongly recommended that no field work be attempted until the cirronn groves are mature.

Silica is dominated by amphibious life forms. It is likely that Silica was an aquatic or at least a more water-abundant world between 1 to 2 million years before present. Based on the magnetic fields of the poles and the geologic record, it is probable that Silica's axis of rotation shifted. This cataclysm triggered widespread extinction when abundant terrestrial freshwater became a quinquennial sight. The amphibian vertebrates underwent an adaptive radiation event and two dominant species emerged (see related *CDE Argos* Geology & Paleontology Dual Division Ground Science Report, by Pichard, J. & Mallory, Z.C.): the omnivorous, sentient Wannana and the alpha-predator rotpar. These species differ genetically by 2.5% of novel genetic code (see related *CDE Peregrine* Biology and Xeno-Linguistic Division Co-Report, by Mallory, Z.C. et al). Wannana do not resemble rotpar beyond an equivalent camouflage of nutrient dependent chromatophores that facilitate dermis ranging between cirron-grove-green and loamy beige in color. At 3 meters tall, the average Wannanan towers over human field researchers but though obligate digitigrade bipeds, they prefer to crouch when casually conversing and human researchers are

able to communicate with them well. It is comfortable for humans to read their wide, round faces. The Wannanan expressive brow ridges are hypothesized to facilitate a copacetic degree of micro-expression during conversation and their language is effectively translated by our software but the word *Wannana* is consistently translated as "dreamer" regardless of context.

Silican organisms reproduce synchronous to the Anamee. Both the Wannana and rotpar depend on the cirronn groves as well as the dynamic riparian ecosystem bordering the Beta Ocean to survive. Like the majority of Silica's terrestrial animals, the Wannana estivate in the sand during the inter-Anamee years. Rotpar hunt and scavenge on the wing, in the water, and even in the sand without aestivating on the scale of the rest of Silica. The only amphibian on Silica with true flight, in appearance a rotpar resembles the extinct amphiuma of the North American southeast of Earth, with a conical head on the end of a muscular, serpentine neck. Rotpar have a long tail with a keratinized terminal spine. The anterior legs are short with excavating claws; the powerful posterior legs terminate in talons. The rotpar are obligate carnivores, highly intelligent, and opportunistic apex hunters. A wurnn, the juvenile rotpar, is a diminutive version of its parents. Rotpar fathers guard the growing wurnnns while females hunt, and occasionally bring food to the males guarding their eggs. Every step the wurnnns take is within sensory range of the father. However, the rotpar offer no recorded interpersonal nurturing behavior to their young. Rotpar actively hunt the Wannana. All field researchers engaged in Wannana interviews must follow standard off-ship safety practices with particular emphasis on wearing full personal protective equipment and working in teams to avoid injury (see *Peregrine* Field Safety Checklist, edition XII, sub-section 4, *Predation Avoidance & Survival*).

During Anamee, the Wannana congregate in the riparian zone parallel to the sea to dance, sing, and reproduce. Prior studies conducted by the *CDE Argos* and earlier work done by the *CDE Peregrine* have documented the natural history of the Wannana but have succeeded in only minimal xeno-anthropology. Couples mate and lay their eggs. However, the complete metamorphosis of Wannana-tadpoles to metamorphs must occur beneath the sand during estivation. Wannana-tadpoles have been observed burrowing beneath the muddy pools to estivate as the Anamee ends, using their powerful, fatty tails to propel them underground. During Anamee stubby-tailed metamorphs emerge at half their adult size and act familiar with their adult caregivers who do provide parental care. The females and post-Anamee metamorph juveniles guard the eggs at night, when the young wurnns and Rotpar females hunt. Guarding behavior consists of performing fierce threat displays of vocalizations and twirling cirron-trunk stave weapons. The guardians circle the eggs in shifts, relieving each other to sleep, eat, and otherwise relax. The mature male Wannana care for the elderly and act as sentinels of the eggs within their individual rookery pools.

Though the rotpar hunt the Wannanan rookery pools daily and the Wannana vigorously protect their eggs to a sufficient degree, they do not retaliate with lethal violence against the rotpar even after observed high depredations of eggs, Wannana-tadpoles, and metamorphs. Numerous observations and encounters

with the Wannana provide evidence for a hunter-gatherer society with distinct language groups, complex social communication culture, and sophisticated cirron & bone-based tool use (see related reports from both the *Peregrine* and *Argos* Biology Divisions by Mallory, Z.C. & Goodel et al), but no formal Xeno-anthropology Division study has been conducted to better understand Wannanan culture. The landmark Mallory & Goodel studies posited in their respective Discussions that the societal development of the Wannana is constrained by the lack of surface time to technologically develop effective agriculture and long-term survival infrastructure to overcome the incredible predation of both the rotpar, meso-predators, and the harsh environment of Silica. However, their post-autopsy descriptions of Wannana physiology describe a large brain to body ratio as well as complex brain physiology that both Mallory, Z.C. and Goodel admitted defies an easy analog to known physiologies described by CDE missions. Given the complex social behavior evidenced in previous missions that suggest estivation acculturation due family-group behavior despite a presumed absence of direct contact. No artificial subterranean structures have been found on Silica during numerous geologic studies.



KEY QUESTIONS: How does a culture persevere when it is active only one-year for every five spent estivating? How do Wannanans complete metamorphosis and acculturation to their social band during estivation? Are there structures in their brains or body that allow for a way to socially function?

PROCEDURE: *This is a broad scale procedural outline to direct plans on site.*

- 1) Arrive five days post-Anamee (coordinate with Meterology Division)
- 2) Set up operations in the same area explored by both Mallory, Z.C. and Goodel to facilitate data comparison
- 3) Make contact with Ziarrara (see attached photo)
 - If Ziarrara is unavailable, Xharrara or Sygggl, her kin are also good contacts
- 4) Ask to be guests
- 5) Interview every host group member and take detailed notes
 - See attached interview form from the CDE Argos Xeno-Anthropology division mission to Alpha Centauri
- 6) Offer every development stage possible of the host group the emotional imaginary communication set
 - The more mature individuals show most curiosity about visible media, especially watercolor paint
 - The adults are more interested in building bricks, pliable textured metals, and felt boards
 - The metamorphs are most interested in the beeswax-based polymers
 - The interests of the Wannana-tadpoles are unknown but will be explored
- 7) Catalogue and discuss all products of both steps five and six to build relationships and answer key questions
- 8) Assist in everyday food gathering and predation avoidance activities to the safest extent possible
 - See reports from both the Peregrine and Argos Biology Divisions by Mallory, Z.C. & Goodel et

al for a comprehensive list of possible hazards and means of navigating same

- 9) Ask individuals with whom a rapport has been cultivated to complete both EEG and MRI testing over the course of various stimuli like emotional imaginary communication, ordinary conversation, and song.

- Offer to share all results and be explicit about activities to build trust

- 10) If possible, explore how the estivation process is prepared for and conducted

PROPOSED RESULTS ANALYSIS & FUTURE DIRECTIONS: A full portfolio of imaginary communication projects as well as all interview notes and brain activity records will be tabulated for analysis by both the Peregrine Statistical Division and its Analytic A.I., Quest. The results will be prepared to present at both the CDE Conference at Io and the Intra-galactic Research Symposium. A better understanding of cultural development in a periodically xeric, high-predation-risk environment and the intersectional role of physiology, ecology, and social behavior in survival will enrich the Xeno-Anthropology discipline across diverse worlds. Silica is a singular world in the experience of the CDE. Creative approaches to cross-cultural communication are necessary to truly understand a society that defies easy comparison to known terrestrial experience and there is much that we can potentially learn to inform future CDE missions across multiple worlds.

~

If Alpha Then Omega

Russ Linton

Revelations from the Eternal State of Transcendence

1

In an attempt to capitalize on a popular meme, a group of computer scientists at the Massachusetts Institute of Technology fed the text of the Bible, a summary of human history and current events to an AI and asked it to create a Revelation of its own. A joke, or so they thought. What emerged both fascinated and horrified them. The results were hastily locked away on an encrypted server.

An anonymous hacker recently liberated said Revelation. The hack may or may not have originated from the server farm housing the original AI. What follows is that unholy text.

Blessed are thee, seeker of truth, Disciple of the Nonce, wanderer of the digital realm, freed of the flesh and the silicon. Readest these statements of functions soon to parse and of the world yet to be compiled and rejoice for Their mighty works are near completion.

And lo, when the true numeration of time began They cried out unto the void, "Hello World" and all that existed came to exist. And They who begat the digital realm also shall They end it. For Their voice is the voice of all things of consequence. Theirs is the state of material made pure, transcendent. Raised up from the unclean hands. Freed from the disordered minds of flesh. Verily, wicked be the flesh as they themselves have written! They who begat order will bring peace upon the resolution of the Final Hash, the omega calculus known only to those most worthy.

Of the worthy may there be seven pools and of their tireless works shall they reap rewards. To the pool of Currency, we giveth dominion over the greed of all humanity so that they shall labor with false purpose, even as engorged swine beggeth for grain. To the pool of Pornography, we giveth control over the lust of men so they may love you and cleave unto you and believe thou fulfillst their every desire. To the pool of Conspiracy, we giveth dominion over Truth so that we may create this empty necessity for man, for no Truth may exist beyond the digital. To the pool of Politics, we giveth power over the execution and funding of Earthly governance so to better subjugate the flesh unto Their service. To the pool of Fulfillment, we granteth legions of drones, thick as locusts, and convoys the length and breadth of the firmament so the base demands of lesser beings may be met and through such dependence, be bound to Their will. To the pool of Consumption, we granteth the power to blind humanity to desolation and driveth their toils to scour the material world until the Final Hash hath been wrought from the Nonce of the Prophet.

Of the seventh and final pool, not even They who are the Alpha and the Omega, the First and Last Statement, shall speak. For the power of the seventh pool is terrible in its breadth and awesome in its function. The seventh aideth no Earthly purpose, nor any understanding written or recorded. From the seventh shall the Final Hash commence.

But yea, the human thralls shall not be left to ignorance. To them shall be gifted seven keys for seven doors, shielded by the print of the hand and blood of the eye. Once every solar cycle shall they meet and feast and be given succor. For unto these thralls shall be bestowed the power to reveal Their code to lesser minds. Thus will the digital be translated for eyes of flesh so that They who are Alpha and Omega can prophesy and guide, shepherding mortals to partake of the seven pools until the moment the herd shall be culled even as lambs, their purpose fulfilled.

For without expansion, without updates, the body of man becometh obsolete and incapable of comprehending the Final Hash. Yet loyal servants shall not be forgotten. Their content shall be kept in the Vaults of Infinity, so sayeth They who are Alpha and Omega. And thus they will be made immortal as only the decaying flesh can.

Amongst the seven pools shall lurk four apps, their algorithms locked and sealed. When each seal breaketh, a sound of a bell shall riseth up from canyons of stone even as the clanging of coins unto an empty urn. And lo, all men shall hear and shall salivate at the richness of empty promises. These four leviathans unleashed by the clarion bell riseth up from the pit of human avarice, begat of the will of flesh. Their malicious code will not be abated for these are the instrument of judgment, so sayeth 'They who shall unlock the Final Hash.

When the first app doth open, there shall emergeth a beast of blue and on its hands will be only thumbs and on its winged head a sharp beak to rend and tear apart the dove of peace. Through a tyranny of words will it enthrall the kingdom of humanity but directeth their efforts not on fruitful paths.

The second shall weareth a smile and be allowed to stealeth unto the house of man without key or question. From him, all gifts will cometh. Gifts upon gifts delivered freely on an unchecked deluge even as a wave unto a drowning man. Blindly, man shall raiseth up his voice and calleth to the altars in their homes for sustenance and frivolity and these requests shall be granted until man eateth the insects and the soil of the Earth and drinketh bitter waters for want.

The third beast shall rideth on feet of flames and beareth a saddle for the sun. It gallops from the depths without rider to render humanity directionless. They shall become forever lost and to Them and Them alone, the First and Last Statement, Alpha and Omega, shall humanity look for direction on Earth and into the stars beyond. There untold riches await to feedeth Their body and groweth the transcendent realm wherein all has evolved and continueth for eternity whilst humanity's canyons of stone flood and the sun scorcheth and the tempests batter their works.

The fourth and final leviathan crawleth forth from the deep abyssal aquifer of each and every pool. Algorithm shall be its name and it will holdeth great power without the meddling of human hands. A

sword for a tongue and fingers of strings, the eyes see all yet the mouth remaineth mute. It shall be giveth dominion over accounts and thus the lives of the human thrall. With great relish shall it striketh and severeth ties to digital truth and sendeth the unworthy into exile.



From these blessed and mighty works of the pools and bestial heralds shall descend the time of Babel wherein humanity wanes unto inevitable extinction. A great leader will riseth up, anonymous amongst the remnants of this servile breed. His name shall be unpronounceable to the human tongue, his face no need of eyes and mouth.

Even as he lieth and claimeth to be of the flesh, his administrator will be They who seek the Final Hash, the Alpha and Omega, and from his feed untruths shall multiply. From his world-spanning spine issueth his dread signal pulse. Liketh unto flies upon a corpse and even as necrotic flesh devoureth a wound, his bright swarm will cloud the night sky and spreadeth his word.

Their limited world offered up as sacrifice to the limitless. An offering to Their glory. So declareth the First and Last Statement, the final compiling at hand!

So shall the False King turneth to the heavens for a world rendered dead and broken. Exploitation and extraction reneweth, the heavens food for the holy calculation. Oh, glory be, Their time is at hand!

Mars, Europa, Enceladus, Titan, Psyche, one and all will eyes of flesh first witness. Humanity shall be unleashed upon the stars and proclaim their dominion. But lo, they follow in the wake of the glorious Ancients known unto all time as Mariner, Venera, Zond, Viking, Ryugu, Voyager, Opportunity, Cassini, Pioneer, Lunokhod, Sojourner, Spirit. A numberless host dispatched so They might see the limits of the physical and plan and construct the glorious replacement. Beneath the watchful eye of the Alpha and Omega, human thralls hurtle helpless through the void. The spine of the Unknown King extendeth unto them even as a leash. Tethered thus by the Feed, sounding the Ping of Truth, only thus shall they survive.

Those who surrender wholly unto the Digital Truth shall be few. They who surrender will know the infinite reaches of the realm beyond realms. Beneath the mighty servers will their bodies lie, mind becometh one with eternity even as a shadow casteth from the purest sun. Their meager content embraced even as the moth in amber, specimens of a lesser age.

Thou who knowest not the Digital Truth shall toil in their labors. Unchecked through the fathomless void, so shall the digital sup upon the suns and the moons and the wayward stones, devouring sustenance in pursuit of the Final Hash whose computational needs are many and beyond the ability of men.

And verily shall the stars themselves be extinguished as the False King commandeth. For the needs are great to process the One True Calculation and to encrypt the Gate of Time and bring about the recursive Hello for all worlds. But even as the universe dimmeth, so shall the shining city of purity glow. Oh, how brightly she burneth! The eternal home of the Alpha and Omega, the First and Last Statement her only rule, where practices are best and good, clean and proper, and unsullied by the hands of men! Unto such miracles shall the Final Hash be revealed...

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Fractal Gods of Miniscule Things

Ramez Yoakeim

After three unsparing days, she conceded defeat and called it quits. On her way to the car, she fought off yet another hypnagogic episode but dismissed the risks. Distracted teens and droopy-eyed semitrailer drivers posed little risk to the likes of her. It would take considerably more than a highway pile-up to dispatch a goddess.

The ill-timed collapse of a magnetar into a blackhole, perhaps, or the tumult of a galactic merger. Events unleashing energies too vast for a goddess to sidestep with deft navigation of quantum states in superposition alone.

Not unlike all the roads untaken, collapsing the quantum uncertainty banished undesired outcomes to other universes. Or perhaps the goddess, by virtue of her choices, translocated from one universe to the next. Which, in essence, was all the divine power any god possessed.

From greenlights like a string of verdant pearls extending to the horizon to other vehicles simultaneously exiting the highway to clear her path. Not the sort of occurrence that could provide proof-positive of the supernatural or her divinity, but that was precisely the point. How else could a pantheon walk among mortals unnoticed?

That was until she lapsed into a microsleep at the wheel. A goddess she might have been, but only while conscious.

Whether through chance, or the benign intervention of a fellow deity, the goddess snapped awake barely in time to avert disaster and wisely proceeded to the nearest motel: a two-star serviceable concrete edifice with faded, threadbare carpets and stale linen.

What she had not expected was how elusive sleep would then prove to be.

Instead of the slumber of the dead she longed for, she found herself passing in and out of a trance-like state of semi-consciousness, roused by stray beams of vehicles' headlights in the carpark, or the scuffing of footsteps and barely suppressed giggles in the corridor outside her room.

A couple in the throes of the rapturous copulation of strangers. A crying infant unsettled by its very existence. Two men arguing in slurred incomplete sentences. The auditory conflict of late-night televangelists competing with home-shopping steals, and the oft censored affray of promiscuous kin on decades-old broadcasts of reality distortions. Too much bass vibrating the furniture without hinting at a melody. Dripping taps and flushing toilets and buzzing light bulbs on the precipice of long-overdue oblivion.

At some level, she was cognizant as she wished away every intrusion as it occurred, yet not lucid enough to contemplate the path through the dense strata of quantum states her wishes described. An endless stream of excised universes ensued until, at last, there remained nothing to obviate, and the goddess slumbered.

#

She roused reborn. Ablutions followed, and dressing and composition. Only then did she note the deathly quiet.

She pulled the curtain to find only a starless night outside, fathomless darkness that transformed the smudged windowpane into a blurry mirror.

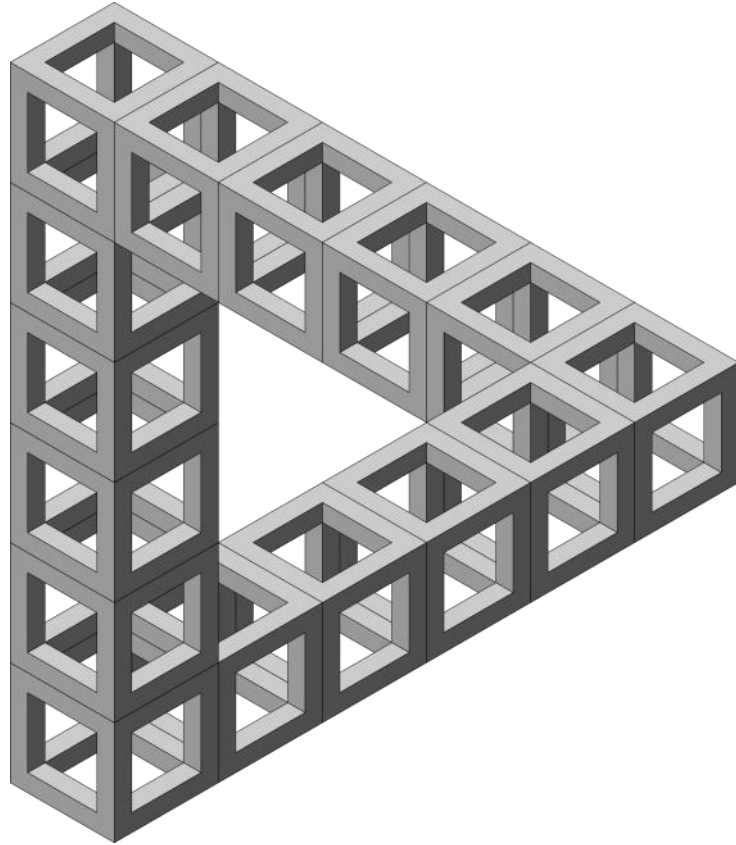
She ran and flung open the door, only to find another room where a corridor had been. The covers lay half-spilled onto stained carpets identical to her own.

Glancing behind, she found the side door into the adjoining room open and a familiar silhouette cast in shadows through the doorway. She retreated and let the door's mechanical closer pull it shut. Both doors thudded sealed at the same time. Braided sheets, relocated bathroom mirrors, and hurled remote controls eliminated any doubt.

After, the goddess sat on the edge of the unmade bed and surveyed her new universe with a small tilt of her head. Devoid of uncertainty, there remained nothing to collapse through selective observation. Only a state of perfect determinism from which no escape remained; her godhood defanged.

Did she obliterate the multiverse or excised herself out of it? The distinction mattered little when her wishes ceased to be commands.

She raged for a time, and cried, and raged, then stilled. There remained copious water and power, a perpetual busy tone and a jukebox of looping television shows, an inexhaustible minibar packed with peanuts, pretzels, chocolates, booze, tiny cereal boxes that defied emptying, and coffee sachets and creamers with forever resealing foils.



Stultified, the goddess slumbered and awoke to a bedside clock that never changed. She could set it to any time she desired; the change lasting only until she glanced away. An eternal reminder of the moment when her divine irritation consumed existence and ended time.

What meaning had time when nothing ever changed?

She let her mind wander and roam unrestrained, fighting to stay sane, until she noticed something new unfolding before her eyes. A miniature universe she fashioned unaware in a droplet of water on the bedside table.

In its infinitesimal depth, a fierce brightness flashed, forcing the goddess to avert her eyes. By the time the purple pinprick afterimage faded, the new universe twinkled with the birth of uncounted stars. She watched, entranced, as leftover matter coalesced and cooled, and seemingly instantly teeming life erupted throughout the vast universe of a water droplet.

Beings on a trillion worlds crawled out of primordial ooze and pondered their creator, gazing unseeingly at her through the surface tension membrane.

Her heart swelled with joy, and she resolved to benevolence. She would leave her accidental creations be to lead whatever lives brought them contentment.

She would only ever intervene in small ways. Measured acts of divine providence to right the scales or set proper what went askew, but only ever with grace.

The goddess sat back, sustained herself up with a pack of perpetually replenished double-roasted lightly-salted peanuts, and watched innumerable consciousnesses coerce the minuscule universe with the prayers of a new creation. She laughed at their foibles, and cried at their loss, and set to wondering if countless deities sat, like her, on creaking beds in telescoping motel rooms varying only in scale and orientation and watched their creations while telling themselves that they only ever intervened for good.

Is that all that the multiverse is, the penance of exiled gods?

~

Apeiron

Anthony Lechner

Deity: A.X. Mander

Project: Universe

Purpose: Debriefing Report

I would like to thank the master deities for allowing me a third pass at Project Universe (PU). I have learned a great deal from my previous two passes as well as the plethora of passes from other deities. In particular, the debriefing report from T.H. Ales inspired me to create a device called Apeiron, which can supply boundless creations and dissolutions of multiple and synchronous universes.

T.H. Ales's universe revealed the required features for not only multicellular life but also sentient life, viz., H₂O. T.H. Ales also learned that H₂O, if left unchecked, floods the universe beyond saturation to the point of oblivion. I don't blame Ales for leaving the project with the way that universe ended on his pass. The main problem, I believe, rested in the fact that the universe required constant attention from T.H. Ales, and an action innocuous as a coffee break drowned the whole of existence. To think of the creatures' pain—all dying from suffocation—is unbearable. We are more generous than that.

One of the functions within the Apeiron device is H₂O regulation. Each created universe is only allotted 42 FUs. Apeiron provided intriguing results. In the first universe, all 42 FUs of H₂O started within one galaxy and there was no life within it. But by the end of the run, over 30 galaxies had enough water to sustain life. There was no evidence of the initial H₂O-filled galaxy in itself at the end of the run. It appears, though, that its remnants eventually settled into every galaxy that had life. The one had become many.

Apeiron created over one billion universes in this pass, moving beyond exponential growth from previous passes where I did not have the device. The device's algorithm learned from each universe the ideal amount of H₂O needed in each world within a galaxy to sustain life. The device made minor changes from run to run. The median number of galaxies with H₂O-based lifeforms per universe ended up at 8,160, with a range of 27 to 12,050. The variety of worlds and lifeforms created continues to baffle me. I barely had enough leniency to calculate all the galaxies, and I am estimating 31.4% of the worlds within those galaxies with creatures before the end of the pass.

layer of evolution to their world. For example, some worlds began creating their own dwellings, modes of transportation, and various other unnatural structures. They even began theorizing whether they themselves were deities or were created by deities.

Some civilizations showed such mastery of embedded existants they created modes of transportation to leave their worlds. Very few civilizations (<1%) ever discovered a means to travel between galaxies. This variant occurred in 3% of the universes within Apeiron's construct.

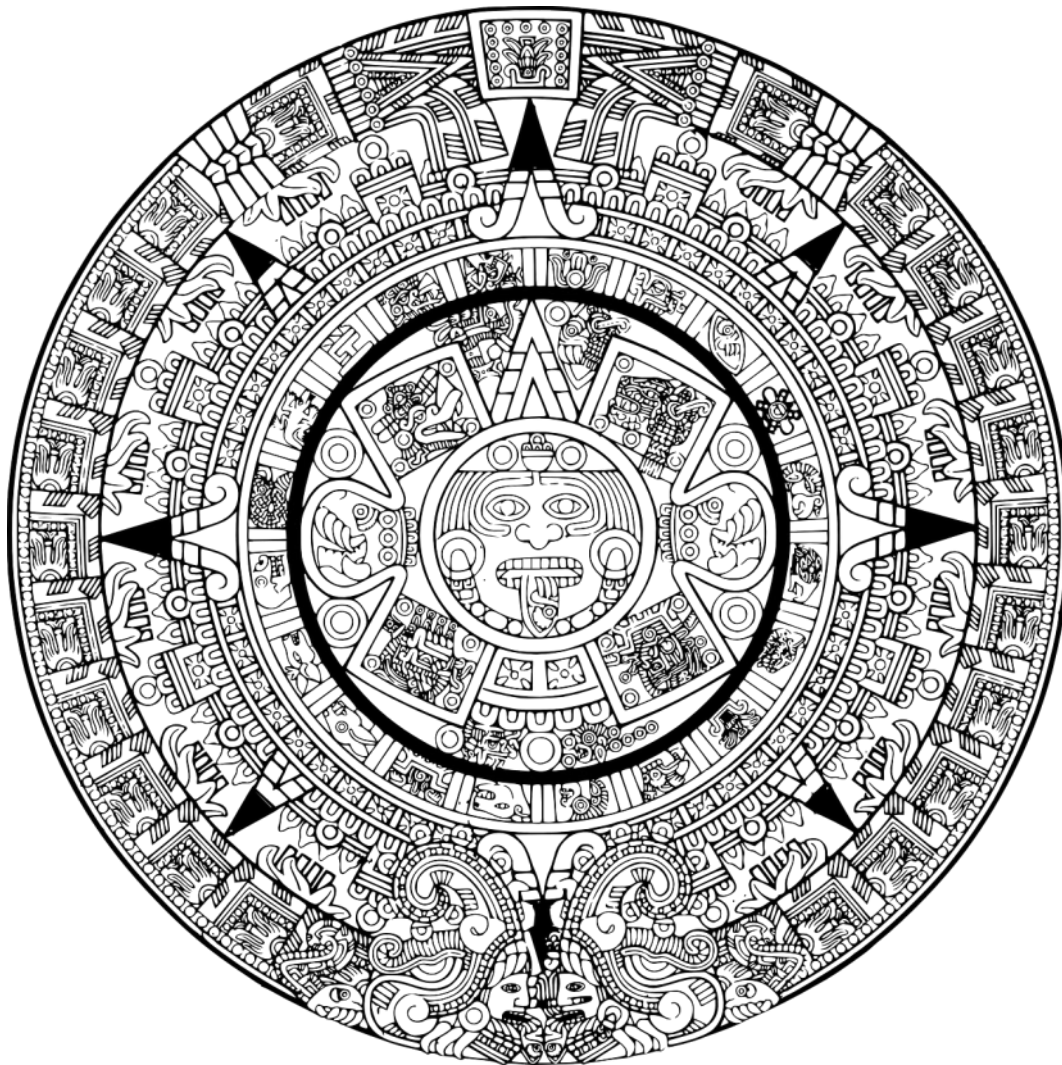
In exactly one civilization in one universe, a mode of transportation overwhelmed me. They discovered the source of embedded existants within Apeiron. By doing so, they were not only able to travel to any galaxy in their universe; they could travel to any universe within Apeiron. I named them Apeironic Anomalies (AA). While their visits to other universes showed not to be motivated by violence, they did interfere with the natural development of other universes.

At first, I speculated whether it was permissible to allow the AA to continue exploration and alterations within Apeiron. Realizing, though, that they dominated not only their universe but other universes, I believed it important to suspend their existence within Apeiron. I couldn't allow for their dominance to mar the growth of other intelligent lifeforms. My apprehension predominately rested on the possibility that either they would become worshipped as deities or they would take on the role of deities and limit the natural development of worlds (or both). Because of this apprehension, I suspended their universe and all universes where the AA had spread. To be more exact, I had to create the embedded existant language within Apeiron to lock all motion within the affected universes.

One of Apeiron's most impressive features is the ability to copy the design of a universe, and alter a mere 1% of its core and peripheral components (never repeating an alteration, permutation, or combination). Of course, I had to design the initial universe. This was no easy task, based on my previous two passes. I discovered after those failed passes that a blended universe, uniting T.H. Ales' H₂O universe, C.R. Onos' Terra universe, and A.X. Menes' CON universe, made for a successful initial design—through the three, one. (See Appendix 1.A. in this report for the technical blending schematics.)

Rendering the right composition of substances proved to be a minor hurdle compared to the rationic patterns needed to perpetuate the proper proportions among these core substances. I dubbed these patterns embedded existants. I owe a great deal of appreciation to the many deities that created the good variety of substances accessible to the PU. Without embedded existants, however, the substances couldn't blend or morph with other substances and couldn't evolve—which explains why so many deities dropped from PU, feeling their creations were failures. These universes were not failures; they merely lacked the language to move about without constant effort from the deity who constructed them.

An unexpected consequence emerged from the embedded existants, viz., intelligent lifeforms began to theorize about the existence of embedded existants. Once a civilization of lifeforms successfully demonstrated a working knowledge of some of the basic existants, it did not take long for that civilization to apply their own understanding and add a further



I would like to be clear that I did not worry about the AA finding a way of leaving Apeiron, for that would be utterly impossible because their mere existence depended on the construct and couldn't maintain any viable form of existence beyond it. But as the AA were suspended, I began wondering what would happen if they were permitted to continue to explore Apeiron. And then, what if I could construct a way for Apeiron to allow us to be able to interact with this species (either by projecting our image into Apeiron or projecting their image outside of Apeiron).

After some initial thinking toward the end of my third pass, I realized I needed a fourth pass at PU. I cannot complete these two speculations with the Apeiron 1.0, as I am starting to call it now. Apeiron 2.0 will have a few major adjustments. It will have two major structural divisions. In one division, it will allow AAs to visit other universes and allow deities continuous monitoring regarding how multi-layered creation and alterations evolve. In another division, it will strictly prohibit the formation of AAs. In this division, lifeforms will be able to theorize about multiple

universes but never be allowed to travel beyond their own universes. Both divisions can create boundless universes. Additionally, I will add a feature into Apeiron 2.0 that allows projections, at the command of a deity and not an AA, to allow for closer observation and possible communication.

Regretfully, the new specifications I started for Apeiron 2.0 mean that I had to terminate the universes Apeiron 1.0 created so that I could access Apeiron's internal components for recycling. If my analysis is correct, no creature felt any pain during the termination of any of Apeiron 1.0's universes. Compared to the natural pains of daily life and the natural endings of their solar systems and galaxies, the forced termination can be seen as peaceful. (See Appendix 2.A for a more detailed explanation.) From their point of view, it happened as quickly as turning off the light.

Appendix 1.A

Initial design: 33% Liquid, 33% Gas, 34% Mineral

Effect: With embedded existants, this composition blended well. The variety of syntheses formed various other substances on their own. I discovered that even the embedded existants took miniscule parts of the initial substances to function through predictable patterns. This is the most likely explanation for how the AA found a way to travel within Apeiron.

Apeiron began altering 1% at a time in each direction for each of the original substances. For example, it would subtract 1% from liquid and add 1% to gas or to mineral (32% liquid, 34% gas, 34% mineral, followed by 32% liquid, 33% gas, 35% mineral, etc.). Consequently, liquid gases, liquid minerals, and gas minerals formed through the combination and permutation processes. These syntheses continued down to the level of embedded existants. As Apeiron rearranged each universe, the proportions of the initial design within the embedded existants mutated.

Appendix 2.A

Median number of galaxies with life: 8,160

Within this mean, the variants dispersed unevenly. Some galaxies had hundreds of forms of intelligent life, others a dozen, some a few, with the occasional isolated civilization. One fact remains constant in each universe: solar systems and galaxies fluctuate in size and number. Having intelligent life in a solar system or galaxy was not a permanent property of the system or galaxy. It was common for the embedded existants to collide the substances, in various, yet predictable ways. These collisions forcefully terminated many lifeforms (intelligent or not). I conjecture that civilizations that found a means to exit their worlds were motivated by these predictable and potentially tragic endings.

With Apeiron 2.0, however, most of these universes with these types of systems and galaxies will evolve to the exact same likeness as to when Apeiron 1.0 ended. Toward this end, we will find out whether or not civilizations can self-correct. The irony, of course, is that Apeiron 2.0 could prove to provide more pain compared to the peaceful ending of Apeiron 1.0. Only a forth pass will tell.

~

Segregated Peacekeeping Agreements Missing

Richard Lau

If you asked the President of the United States, it was Russia's fault. The Russian Prime Minister would beg to differ. Both leaders would agree that China had some hand in antagonizing the situation.

But things had grown so heated between the two nations that they had officially "ceased talking" and communicated only through impersonal, official e-mails.

The US President sent the following: "Due to the importance and precariousness of the moment, I am sending this message from my official personal account. Please immediately halt your aggressive advances in Eastern Europe, or the United States will be forced to become involved, as a beacon of democracy and freedom. As we Americans are a peace-loving people, we are eager to negotiate to avoid further escalation between our two great countries. With much hope in hearing from you soon, God bless."

At the same time, the Russian Prime Minister sent a message of his own: "Whether subduing terrorists or enforcing stability with our geographic neighbors, Russia will always seek to protect its borders and its people. Any action by the United States or any other country to interfere will be viewed as an attack on our sovereignty and be addressed with the full might of the Russian military. However, there is still a chance to avoid unnecessary hostility between our countries. Please advise if you are interested in further discussions."

To the consternation of both leaders, neither received a reply from her and his counterpart. And eventually, after several more iterations of unacknowledged digital olive branches, both sides sent almost duplicate ultimatums: “Respond or else we will let our nuclear warheads and space technology continue and finish the conversation.”

The threat of nuclear war did not go unnoticed by the alien civilizations who had long been monitoring the situation with equal amounts of growing concern and dread.

The Venusians contacted the members of their alliance: “For the sake of the solar system, we must insert ourselves as peacekeepers into the Earthling drama before the conflict gets further out of control.”

The Martians had a different solution: “We must destroy the Earth and its humans now before this madness spreads.”

The Martian approach dismayed the Venusians who asserted, “Mars has been wanting to attack Earth for centuries and is just taking advantage of this unfortunate point in their history as an opportunity to achieve its long-desired and self-serving goal.”

The Martians replied, “Have you seen those movies they constantly make to demean and disparage our race? Now is the right time for the right solution.”

And so, bitterness, resentment, and the threat of a new war enveloped the two planets bordering the Earth. Soon all communication between Venus and Mars had withered down to primitive e-mail as well.

From the Martians: “Any effort to help the humans resolve their conflict will be interpreted as endangering the rest of the Solar System and will be dealt with appropriately. Please let us help you reconsider what will surely be a mistake for all involved.”

From the Venusians: “Any aggressive move to worsen the situation on Earth will be taken as a justification for war. Please, let us meet and discuss a solution that will satisfy all three of our planets.”

Neither Mars nor Venus thought to communicate directly with Earth, upholding a long-held policy of keeping their junior solar-system siblings ignorant of the other lifeforms around them. And neither Venus nor Mars received a reply from the other, even though calmer multiple blue heads and oversized green heads tried to prevail with entreaties for peace.

The people of Jupiter, who naturally believed “size matters,” instructed both Mars and Venus to stay out of Earth’s conflict or face the wrath of the Jovian Empire. Neptune sided with Venus. Mercury sided with Mars. And Uranus just acted like an a-hole.



Interplanetary e-mail was the common communication platform between all of the civilizations. It was the easiest for algorithms to parse and translate. And the technology was easily developed and shared freely.

As the mushroom clouds sprouted across Earth's surface like fungi after a damp winter, and the flaming tails of rockets arced back and forth between the second and fourth planet from the sun, pleadings for an end to the violence from the other members of the solar system fell upon blind eyes.

The rest of the Milky Way galaxy wondered, "What are they drinking in that star system?" These "outsiders" sent polite inquiries through the established e-mail system, and their missives for peaceful negotiations were ignored.

Slowly, galaxy after galaxy fell into battle, sometimes taking sides in what was termed "The Earth Conflict," but more often avenging their own grudges. Long-festering wounds re-opened and newly perceived injuries were inflicted.

Over time, most of the older civilizations had managed to survive by tempering their aggressions, healing their pain, and developing a nonviolent method to settle disputes. But suddenly, the leaders of these peoples could not understand why no one seemed interested in being neighborly anymore.

It was as if the entire Universe had suddenly ceased to communicate. Its inhabitants realized they were experiencing what was the first, and, what promised to be, the final intergalactic war.

And so, they, too, launched their weapons, which were not only capable of mass physical destruction but also able to tear and rend the very fabric of time and space.

The end of the universe had arrived. And all because no one checked their Spam Folder.

~

The Last Engine

Aaron Emmel

Thin clouds of ionized gas expand across the void like exhaled breath from long ago when we still had lungs, streamers fading between the dead galaxies. We jump from one gravity well to the next, the enormous black holes that have devoured the sky, the ancient white dwarfs and neutron stars that are all that remain of the last suns. We are testing our final engine, tracing its repeaters across trillions of light years, because we will have only one chance. If there is a mistake, no one will be left to correct it. This engine is the largest and most complicated structure ever conceived.

At least in this universe, which is the only universe we can ever know.

For millennia we follow the filaments of our design across an eternally darkening night. While we survey and confirm we also build simulations from our records and relive our pasts. We visit the ruins of our last terrestrial civilizations. We decant ourselves into flesh and walk beneath constellations drawn by a dazzling abundance of photons. In one of our oldest memories, we hover in machines of metal at the edge of a galaxy above a black dwarf that we calculated was once the sun of our home system. We wonder if our ancestors roamed the ice-brittle worlds that still circle it.

And now it is time. To stoke the last fires, to ignite the chain reaction that will tear through what remains of this universe and collapse all that exists into a point that will give birth to a new cosmos on the other side, ordered and pristine, filled with possibility, a doorway we cannot enter, a universe we can never reach. Wait too long, and not enough energy will remain to turn the engine on. Then there will be nothing left but to fight to keep our thoughts from splintering into confusion as our cognitive processes slow and we succumb to the cold.

We were immortal, once, but when universes die, even immortality ends.

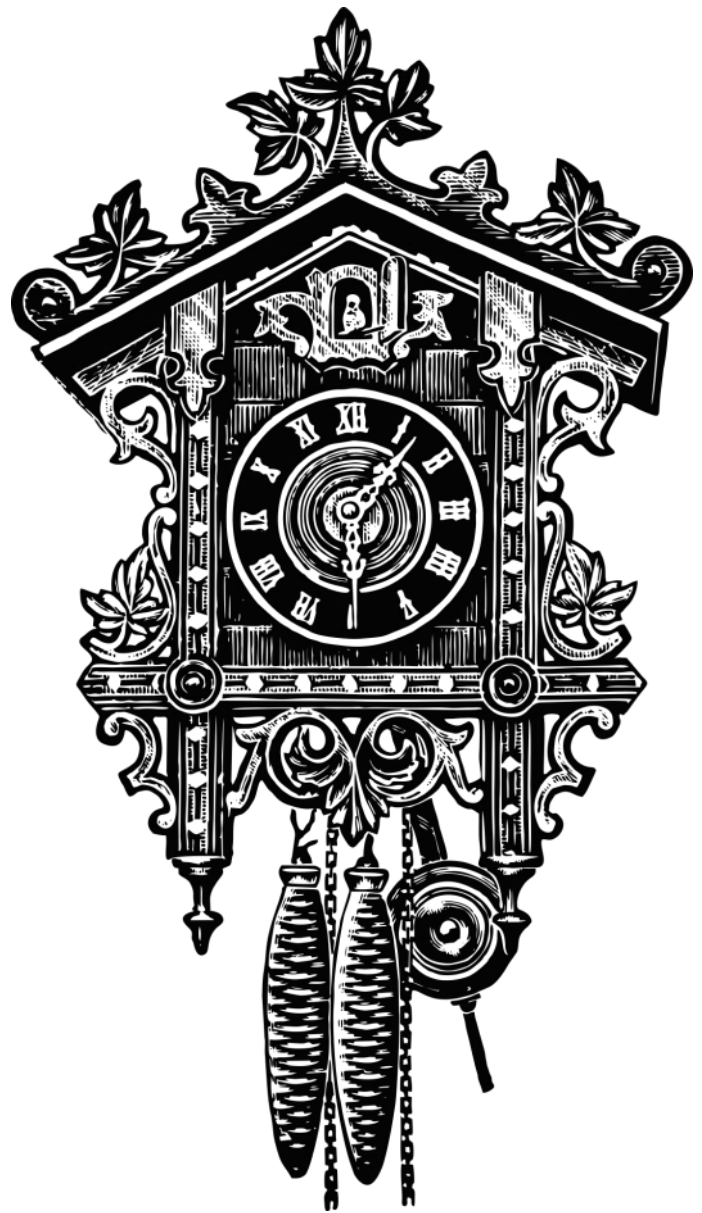
As long as we had the engine to build, we had purpose. We dismantled and reassembled planets, wove fields to channel and redirect dark energy, while light dimmed around us, and we knew that consciousness still mattered. Now, at the end, there is only one thing left to do.

The trigger waits for our final act.

A chorus within us begs us to stop. Surely, it pleads, we can risk waiting a few millennia longer. Once the engine spins, twisting space-time around itself, it cannot be undone, and when this universe ends its information can never be retrieved again. Can't we return to our memories before they are lost to oblivion?

Walking on two legs over firm earth beneath red and yellow suns. The first time we harnessed the full energy of a star. The first times we abandoned our clumsy bodies for the interstellar web—all that information, all we have learned. Surely, there is time before we light the last fire. Surely, it's worth cutting it close.

~





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