## Cosmic Vignette

Sam stepped out of his house. A hovel by our standards, but it was the standard structure for the Exterrans, as they called themselves. Sam ate his same easy meal from the communal pot. A perfect blend of nutrients and carbohydrates to get him through the first part of the day and ensured he could go straight to work. Work was worship. It was an obvious fact. Their god, Sleator had given them the means to be an ever-growing, safe, and productive society and all it asked for in return was an array of satellites, spaceships, and terrestrial superstructures designed to its explicit specifications. The Externans had spent the last couple of generations spreading across the globe. Culling all the *others* with calculated totality. Genocide was easy when you were given the gifts of calculus, metallurgy, and electronics from a society of hunter-gatherers that reported to a central semi-feudal Lord Sleator that ruled over the only region of the world with farms that produced an overabundance of produce every year. The secret of such abundance was the only one kept by Sleator itself, ensuring a centralized control over the Exterran society, the abundance of this region was shipped all over the world. The Exterrans designed ways to mine and ship all of the necessary materials across the world to build the necessary amount of launch platforms and rockets. Of course, people asked why they had built a global community at the behest of a god whose goals were conspicuously secret. The designs called for millions of launch pads all over the world with as many satellites set to launch at the same exact time. Many scientists and engineers in the community (which comprised about 70% of jobs, the other 30% were only there for the maintenance and support of these scientists) hypothesized correctly that the ships they were building and the energy it would take to power them could only lead to one fatal conclusion for their world. These worries were met with apathy, it was in the Externa's dogma to dismiss any question about the motives of Sleator, their god had, after all, given them a life of luxury, convenience, and contentedness of which only the most imaginative or insane of them could dream about 500 years ago.

Far, far away, a dance played out in front of Wishbone's camera. Carefully measured and meticulously programmed by them. It had taken five millennia for them to reach this moment. He had created life, and subsequently, intelligence on this planet almost from scratch, abducting a pseudo-intelligent avian-like species, and editing their genome to usher them toward their fate. The species was not so intelligent as to surpass humans, limiters were placed

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in the DNA to stunt the prefrontal cortex growth among other factors. Wishbone had been gone for thousands of years, in their stead, the computer intelligence Sleator, had worked closely on the ground with the planet's last few generations as this new intelligence's deity. Sleator protected the species from natural disasters as they strived toward their predetermined existential goal. Sleator gave them enough resources and know-how to construct a Dyson sphere, and only a Dyson sphere, around the star which their planet orbited. Sleator watched from the surface of the planet as the ships departed, carrying the first plates to be affixed in a grid around the star they had nicknamed "Chuk" after the deities they had forged before Sleator had given them gifts and knowledge unimaginable.

Satisfied with their work, Wishbone left to report to the overseer, Heartbeat, to report that in 200 years, another star would be ready to add to the network, and the surrounding planets could be atomized into their base components. Annihilated into enough protons, neutrons, and electrons to build all of the elements and compounds they would need from scratch. Once the underlying structure was created, and the stars were spaced apart such that their mutual gravitational forces locked them into orbit, the various particles harvested from the planet would be reconstructed into nitrogen molecules that would be evenly dispersed throughout the structure and suspended precisely in space due to the interacting gravity of the stars lined up around them.

Eventually, when all of the other Sleators had done their job as well, molding their generated life to move their star into position and disintegrating their planets to make oxygen, hydrogen, carbon, and every other chemical required. If everything else had gone according to plan, it would be another two thousand years until enough stars had been put into place, and enough chemical compounds were suspended between them that, when viewed from the human's home solar system, Wishbone would be among the trillions to see a perfect replica of a blade of grass.

That blade would be just one in just about 236 million that would be synthesized in much the same way. Among the blades of grass would be various weeds and bugs that hid in the vista they occupied.

The vista would be a picture of a mountain, at sunset, viewed from a clearing in the trees of a dark forest, on an earth that had not been able to harbor such an image for millions of years. Sleator's role was a small one, as a piece of a clearing in the foreground that allowed for a break in the foliage for the viewer to see the mountain in the distance.

When viewed from the solar system, the picture would emerge. Not just any picture, that was an image captured of real life. It would be a perfect recreation. Every cell in every inch of the planned vista would be rendered.

The feat of all feats, the crowning achievement of mankind. A piece of artwork, appreciated by none but themselves. It would be more breathtaking than any before, or ever after. Over a million years ago, humanity's tireless research concluded that the universe they reigned in was devoid of other life aside from that which they created, and was growing colder and colder every millennium. So they embarked on a dream for one last work of art. One last burst of creativity before they retreated back into their quadrillions of years of content that they had created for themselves, simulated on planet-sized computers until the universe could no longer sustain even that.

And so Wishbone was done. The last piece of their section of the field of grass was completed, they were free to sit back and enjoy eternity. Overseer Heartbeat looked on with enthusiasm. It would only be another 10,000 years before those working on the trees and the atmosphere completed their duties. Their vision was so close to completion.

The dance played out in a split second. From the moment they pressed the enter key until the stagnation as entropy brought everything to a standstill Æbül observed. The program they had thought up worked. They had created a universe, designed around the constraints that only a third dimension could afford. The universe housed intelligent but simple, four-ish dimensional beings that created the perfect picture. It was beautiful to see the program in action. Æbül smiled.

They had programmed a universe that had submitted this conclusion. This was rather groundbreaking. Æbül's peers could paint beautiful three-dimensional art, and simulations similar to theirs had been made, in fact Æbül based their program on the os provided by their university. It had been their tireless hours in their free time as a hyper-computing professor that led them here.

Æbül paused their program. Stopping all activity in the pseudo-four-dimensional universe they built. Making it endlessly repeat for a tic (the time it took for the basic unit, a

"fundamental particle" to travel from one point on the universe matrix to another.) So the piece of art would be preserved forever.

The piece was beautiful, in Æbül's opinion. It was simple, a landscape from where the denizens of their program originated from. But the image was abstract, never before seen. It was static, unlike the landscapes of Æbül's world. The illusion of a fourth dimension was common in the art of Æbül's world, ever since the method was invented a couple hundred cycles ago.

Æbül loved it, even though they were sure no one else would find it so fascinating. This was the creative power of artificial intelligence. They might be the first to break new ground into ai-based art. That was an uplifting, if not ludicrous thought.

They sighed in satisfaction and closed the project, saving it as "cosmic\_vignette\_1".