

Mira 1

The very reality of Mira 1 surprises me on the daily. I know, I know, there are a ton of reasons that my life here amazes me yet, I still expect to wake up to the smell of real eggs and the banter of my Mom and Pele. “Mom’s frustration, “Go now!”. Pele would come charging into the room, half-dressed, leaving a trail of unorganized notes spilling onto the floor. When I picture Pele, he is this this state of lateness that lingers. I miss the jerk.

Mornings on Mira I are conventional and boring. My Assistant Know7 wakes me with a mug of sludge that passes as coffee in the colony. The view is phenomenal in its blending of historical lunar and astral sights. Today the featured view is Armstrong’s walk on the moon. I remain in awe of Armstrong and the others who worked with such primitive tools in their quests. I allow myself to savor the sight.

Know- places a mealbar in front of me. I miss real food...more than anything, well almost. Know7 is way better than those chat bot, hockey puck assistants on the home planet for sure. I should know. I created his AI and engineered his hardware. Plus, he can move and carry things. Know7 is just one of my many creations. Maybe I could create an assistant to help me create things. I tell Know7 to add that to the to-create list. He laughs. He has my sense of humor, go figure.

Too bad I don’t also excel in the culinary arts. I’d do just about anything to have a Dunkin’ up here. I tell Know-7 to add “contact the CEO of Dunkin’ Donuts to discuss how he could be the first doughnut shop with a patio that overlooks Venus” to my to-do-one-day-list. I

figure my name, and the promise to forgo the gene sampling requirement for his immediate family, might just “make it so”.

I carry the “coffee” into my bedroom. If I could hide in it all day I would. The bed itself is a circular titanium frame with a top of the line venufoam cooling mattress. The walls of the room are painted to resemble a tropical rainforest and the ceiling is a shifting digital replica of the night sky, as seen from Earth, on the day that I was born. Stacks of real books, not digireads, clutter the floor near the bed. A record player and stack of LPs sit on a shelf by the door. I assert that nothing in the universe sounds better than *Purple Rain* on vinyl.

The security bot at the front door, I still have not named him, informs me that Juno is requesting entry to my pod. I give the bot my best Bosun’s Whistle and Juno is in. She stands dressed for the gym with both hands on her hips. She is giving me her sternest look, but the glint of humor in her eyes gives her away.

“Dammit Arch, couldn’t you have make it easier to get across the colony? Three Miratrams is insane.” The Miratrams operated at the top altitude of the colony and were superfast. The downside was that the temperature at top altitude is somewhat unpredictable but within “an acceptable rate of failure”. This means that trips must be short, and multistage.

“Juno, we have been over this before. I’m all about the abstractions.” In truth, Juno has a point, but so does science.

That is not entirely true. It is true that I do not sit on the city planners board, and I don’t want to. I find that shit boring as hell. I am about creating things where they should not be and keeping them running against the odds. I am about putting humans in a cloud colony fifty miles

above the surface of Venus, inside a floating dome and keeping them alive. Sound crazy? Sound impossible? It's not. I mastered those tricks five years ago when I was sixteen. That is when I won the (what used to be annual) NASA Young Science Talent Search on Earth. I hate that role, but I love the perks.

Everyone makes a big deal concerning my creation of the colony and successful implementation of Mira 1. It all really just comes down to science. Venus is a dry, dead and hellish rock with a CO₂ atmosphere that creates a Greenhouse effect that is even more deadly than the one humans are continuously creating on Earth. The surface temperature of Venus exceeds 842°F. That pressure could melt lead and crush things like nuclear submarines. The Russian probes in the early 1960s sent us that information. Everyone just wrote Venus off.

Here is the twist. Thirty miles up Venus is like a resort. The air pressure matches the Earth's atmosphere and provides radiation shielding from the Sun. The pull of gravity is almost identical to Earth's. The temperature is manageable for human life. Here comes my science-so hang with me. CO₂ has a higher density than "Earth Air". A balloon filled with Earth-like gases including nitrogen and oxygen will float in the heavier CO₂ atmosphere. So, at sixteen, I decided that humans living in a balloon of "Earth Air" floating above Venus was the obvious solution. Turns out (here comes my mad math skills), A two-kilometer diameter balloon can hold six million tons of various forms of matter in the Venusian atmosphere. That is the equivalent of a large Earth city. Our "cloud colony" is eventually going to be the size of the state of California. Ah the miracle of lightweight building supplies such as aluminum, plastic and titanium.

As Juno and I say our "good mornings", Know-7 retracts the western window covering to reveal a reddish light source only partly obscured by clouds. It is a beautiful and rare sight. Here

on Mira 1, a solar day is 116.75 Earth days long. That translates into three sunrises per Earth Year. Sunrises are a big deal. The sun appears to rise in the west as well because of Venus's retrograde rotation, I am not really awake enough to explain all of the science behind that, however.

“I am thinking that I want to kick your ass all over the tennis court today”, Juno says as she flops into the couch.

In truth I just really want to catch a Miratram out to platform 16. This time of year, that is where I am most likely to be able to see the planet itself through the atmospheric clouds, and better enjoy the sunrise. But lately I have been thinking that it'd be the bomb if Juno just moved in here with me. I'm sure I can reprogram Know-7 to take care of two of us. I want to do the things she likes before I take that risk. You know - look flexible and fun.

So, I grin and say, “I've been practicing”. A lie.

“Santiago Arch, you are going down”!

Know-7 either interrupts, or comes to my rescue, depending on which side of this story you are on. “Excuse me Ms. Juno, but Arch has two prior engagements today. First Arch is set to meet with the Governmental Council at 10 am, followed by a luncheon with the Genetic council. She should be free around 3:30 pm.”

“Fuck”, I need to leave like now”.

“The express-pod and roboedriver are ready to transport you”, says Know-7. “I have arranged for a light breakfast to be served en route”.

“So, I will just hang out here and play poker with Know-7 till you get back. Then I’ll kick your ass!”, Juno instructed Know-7 to go get the cards.

A quick wardrobe change and a fist bump later I was speeding to the Council building trying desperately to remember what I was supposed to be doing there today. Traveling by express-pod is not really as fast as it sounds. The top speed that the express pod reaches is around thirty miles per hour. I would have been happy to be moving even slower at this point.

Sweat beaded on my forehead as I remember that the Council meetings had been called by that terra-hater Jason Bore. He is the suit that wined and dined enough millionaires and billionaires on Earth to get Mira 1 funded. The entire colony was built with private funds by Earth’s “one percent” who hoped to secure a haven when Earth started to fail. It infuriated me at the time that the very business people whose capitalism, free market societies, and industrial abuse of Earth’s resources were the ones buying the backup plan for humanity. Now, I understand the need for funding a little better. I also appreciate that most funding comes through various governments now. I still think that the onepercenters, lately I have been creating names, find ways into Mira 1 through illegal means.

The roboedriver gets me to the ball just in time. The giant clock projection in the sky has not chimed 10 o’clock when I get out of the express-pod. I created the “sky”, which is an illusion, and the clock, also an illusion. I thought it would make Mira 1 seem just a little more Earthlike. I am almost late because I am admiring my own work. The struggle between the god complex I experience living on Mira 1 and the feelings of worthlessness that I still harbor from my family’s socioeconomic struggles is a constant thing for me. I believe I will carry that burden forever.

Jason Bore is sitting at one end of the council table, sipping a glass of water with a lemon wedge floating in it. His tailored suit and perfectly styled hair just serves to magnify the pretentiousness of the meeting room and the council itself. Jason nods slightly in my direction, and turns back to Fyodora Bok, the council member from Russia. The two resume a rather animated discussion. Fyodora touches Jason's arm playfully a few times. He does nothing to discourage her casual contact.

As always, I feel somewhat overwhelmed in this large meeting room, with its inlaid stone floor, wooden beams, and solar system replica ceiling. The pretentious of Earth is on full display here, in both the extravagant setting and among the attire and movements of the council members,

"Ms. Arch", Jason stands and extends a hand to greet me as I practically run into the building.

"Jason", I say as I take my seat.

Jason is thirty-five and I love to disrespect him in public. Nothing obvious but just little impoliteness's. It humors me. He never notices. Jason's family was among the first unit to arrive. The Governmental council members and the Genetic Council members had all been here for about a year at that point. The brains "read" the scientists, and I had been here for two. The scientists are really the only people I trust except for Juno. I have never been able to shake the feeling that Jason Bore's family is here illegally. I have failed to connect with the "right" person on Earth. I can buy most things easily. Bore is not the patsy. I wish he were.

There are twenty Governmental council members. Each country that contributed financially or materially to the original Mira 1 project has one representative. There is also a board of directors that includes myself, Jason, and a collection of scientists, businesspeople and medical professionals – you know, to do the “real” work.

I skim the agenda on the viewer at my seat while ordering more “coffee”. I do not remember any of the topics that are listed as being up for discussion, so I just focus on the topics receiving votes today so that I can try to figure out which way to go. Juno, or even my brother Pele, would be so much better at this part. I have just accepted that there is not going to be any way that I can get Pele here. He would have to travel alone, without my parents. That is a long story that I cannot change. That does not keep me from constantly imagining Pele in particular, wearing an oxygen tank and mask as he goes about his days at school and at home on Earth. Every newspod from Earth presents the rapidly deterioration of the planet and its inhabitants.

Jason calls the meeting to order and begins to go over financial numbers, and graphs. I order a mug of sludge and try to look alert. I am aware that I am being watched by just about everyone in the room. I also know that a month from now, this will be broadcast in every house left on Earth. I am supposed to be humanity’s hero. I try hard to look the part.

Towards the end of the regular meeting, there is a motion from Hiko Chang, a Chinese billionaire that donated the aluminum and titanium required to build the Miratram rails in the colony. The pull of gravity from the planet Venus is far less powerful than what the sun asserts on Earth. This makes construction within the cloud colony very difficult and costly. It also really limits the types of materials that will work here. Hiko’s motion is the same that he always makes. I silently mouth the words along with him, “I would like to make a motion that we review the

recommendations for acceptance onto the Governmental council based on merit and societal contributions.

“I second the motion”, I say figuring that it never hurts to shake things up a bit here on Mira 1. I was wrong and every head in the room turned towards me. Jason coughed and then called the first nominee into the room. The woman was identified as Emily Brooke. I immediately pegged her as being a “country club” mom on Earth. Hiko explained that Emily had apparently started a charitable foundation on Mira 1 that received donations and “other support” from both residents of Mira 1 and Earth. The purpose of the foundation was to provide “home environments” for children without parents on Mira 1. On Earth this would mean the children had been orphaned. On Mira 1 it meant the children’s genetic profiles had been acceptable but that the parents had not been. I fought to stay in my seat as I thought about Pele and my parents being left on Earth. Their genetic profiles had shown the presence of traits deemed “incompatible with life on Mira 1 and for contributing to the continuation of a healthy human species.” That excluded them from coming to the colony, but they kept trying. Just last week I had received a message from my father that they, and Pele had been denied transfer for the fourth straight year. As I shifted in my chair, feeling extremely guilty about the luck that had befallen them, Emily got her place on the council. I thought that I needed to ask Jason how to get in on the payoffs. I could at least transfer money home via solsyscare that way.

The Governmental Council adjourned and those few of us who also served on the Genetic Council moved into that meeting room. This meeting room was equally pretentious with DNA Helix inspired pillars and walls covered in replica sketches of Darwin’s notes. The council was smaller however, given the highly classified nature of the council’s work and the complex nature

of the science involved in the council's considerations. Jason served on this council as well, but he is just a delegate for the Earth region of Utahrodo. Lunch was served by Romomeal units as I found my seat. The Romomeal units quietly took drink orders and delivered plates in an efficient and nearly invisible manner. The food was always excellent in these sessions at least. It was as if stuffing us with exotic and delicious foods would somehow coat our palettes enough for us to live with the disgusting decisions we were forced to make each month in this room. Today's meal was buffalo steak with new potatoes and spring greens. The desert selection was pecan or key lime pie. I went with pecan. Nuts seem to fit my mood.

Ty Way, the genetic genius from Australia who designed the sampling method that drove the genetic profiling system, which in turn, determined admittance to Mira 1, took the podium as the Romomeals served desert. "There has been bad news from the genetic collection council on Earth", he stated as a means of interrupting the chatter accompanying desert. I ordered more sludge and accessed my portatab to take notes. "The security and systems analyst known as the android G23 has filed a briefing that outlines her findings concerning the discovery of the genetic manipulation of a surprising large number of applicant application samples", Way paused to let the reaction roll through the room and echo off of the stone interior. Over the next two hours, Way and G23, via a transsolarsystem media chat, outlined the specific nature of the genetic manipulation in terms of scope, projected impacts and possible solutions. A security bot followed this with a set of proposed solutions to analyze the data and track any unauthorized manipulation. The security bots always creeped me out. They hovered above the ground and had only a "body" that was roughly cannon-shaped with a large mouth-like data port used for information transfer / bot disablement. The council passed the resolution for the security bot to investigate what was now being called "the security breach". After a two-hour discussion

about the most recent iteration of genetic sampling and exclusionary genetic markers, which ended in the passage of a motion to hold off of this inclusion until after the results of the security bots' work was available, I was free and nearly ran from the Genetic Council hall. I called Juno from the express-pod.

“Get ready to lose, I have a lot of pent up frustration to burn off”.

Juno laughed on the screen, “Too bad that doesn't magically create athletic ability”.

I needed to release the built-up tension and emotion that was the result of the genetic council meeting. I felt cold and detached inside. I was afraid for the implications of the security bot review and the genetic manipulation for my family. I needed to see if they knew any of this. I sent myself a reminder to place a colony to planet call to Pele tomorrow when he would be the only one home. It was easier that way. The express-pod ride would usually calm me as I marveled in the beauty and functionality of our / my, creation. Today I closed all the viewing ports and clamped my eyes tight. I could not look at anything.

I beat Juno. Well I am 99.9% sure that she let me win. When I got home, she felt my forehead and asked if I was sick. I gave her the twenty-word summary of my day and begged her to come hit tennis balls at me. She did, but she hit them right into my swing. I must admit that hitting that many moving objects improved my mood. Juno stayed for dinner and agreed to sleep over. As we lay on my bed looking at the “night sky”, I decided that I had nothing to lose.

“So, I've been thinking,”

“Yeah, that is all you ever do”, Juno joked.

“Ok, not about science” (awkward silence), “Um, about us”, cold sweat covered my body.

“Yeah?”, said Juno.

“um, ah, well...”...I am brilliant, I know.

“I mean yeah”, Juno rolled over and kissed my forehead. “Whatever you have been thinking the answer is “yeah, I’m game”.

Ok, so one thing was going right now. That would have to be enough.

The next morning, good old Know-7 announced rather loudly that he had not been notified that a second human would be in my room. He went on to insist that we provide all relevant information for security clearance before we could leave the room. This included retinal and DNA scans of both myself and Juna. I promptly reprogrammed him to take care of us both. After the protocol was met, Juna taunted me about my romantic morning after gestures.

Looking back, this morning was when everything went to hell.

It was great being with Juno. The relationship was just as easy as it had been when we were just friends but with the expected benefits. It helped me to have someone whose battery did not need to be charged around most of the time. I felt relaxed in ways I had never really been able to before. Even still, the pending Security bot investigation and its implications hung over me. I worried about my family. I had been unable to contact Pele. This scared me. He always answered.

About a week after the genetic council meeting, the colony's news source leaked information concerning the problems in the genetic profiling system. A second leak revealed the magnitude of the genetic manipulation of Mira 1 applicant submission. The lower houses on Mira 1 and on Earth rebelled and marched. G23 was hacked and it became known that the samples of the family of Jason Bore were among the manipulated gene files. This called their inclusion in the Mira 1 colony into account. Jason received bomb threats and worse. Arrangements were made to send he and his family back to earth. Mira 1 did not even have a real police force. There was never a need for one. Peaceful marches and meetings turned into violent protests. Three deaths were associated with protests. Juno and I watched news reports from my house; images of humans fighting humans; of open destruction of public buildings and spaces; droids and robots subduing humans. Mira 1 was becoming the planet I left. I feared for Mira 1's survival.

It was Juno that convinced me to attempt to address the colony's concerns. I called a council meeting and demanded council access to the manipulated files from the security bots. I was granted access after swearing under oath that I was using the access to help in furthering the investigation in identifying the identity of the criminal or criminals.

Juno interrupted my work in the home office on my third day with the files. A planet to colony call was coming through from Pele. I transferred it to the office connection and took it in private. I stared at Pele's compic on my screen as I waited. There had to be a way to save him.

"Arch, are you ok?". Pele's compic transformed into his real face. He was practically yelling. There was a crowd of people visible behind him.

“Yeah, where are you?”

Pele yelled, “I’m at the comcenter. It is the only place with service out. I have three minutes.”

Shit. It was worse on Earth than I had feared. “Go to Kyle’s. Leave now. Use that extra account.”

Kyle was a cousin who lived in a small “no technology” camp about 10 miles from my parent’s house. Pele would be safe there.

“Ok, people are saying things about you”. Pele looked scared.

“I know. Go now. I’ll get in touch”.

I disconnected and began to pace around the office. Juno bought me some sludge and sat on the desk.

“Is Pele safe?”

“He will be.”

“How about your parents”, Juno asked.

“I have no idea. I did not ask”, I responded as my brain raced through ways to solve all of this.

A few hours later I told Juno everything I had been thinking and the rationale behind it. There was only one course of action that would save Mira 1 and protect Pele. Juno listened and agreed. We lay awake together going over the plan and possible outcomes. At some point I

actually slept. My dreams were filled with images of the protests on Mira1 and earth, of Pele and my parents, and of the view of Venus from Mira1.

I called an emergency joint genetic / governmental council meeting for the next morning. I broke every bit of protocol in doing so. I broke more protocol by opening and broadcasting the council meeting to the press on Earth and on Mira1. I had information that everyone needed to hear and understand. Juno attended the council meeting and stood in the entry way with other citizens of Mira 1.

Jason cornered me as I entered the meeting. “Just what the hell is going on? What have you found?”

“I’m only doing this once. You get the same announcement everyone else gets”, I tried to step around him.

“My family is scheduled for transfer tomorrow. I think I deserve a bit more information than “wait and see!”. I felt bad for Jason, but this was a one-time reveal. He would have to wait with everyone else.

“Just go in and try to get the council under control, I will be right there”. I took a deep breath and closed my eyes. I thought of Pele and Juno and took another breath. I stood tall and cleared my throat as I took the podium.

Facing the council, I called the meeting to order. I began by explaining that the investigation had been completed and that the identity of the individual who had manipulated gene samples had been discovered.

A roar of whispers filled the room. I waited for the silence to return, then I spoke.

“Before we discuss the identity of the individual guilty of the crime of capital gene manipulation

(I used the technical legal term in order to avoid confusion and the possibility of future legal actions), I would like to discuss the evidence of the gene manipulation of the samples from Jason Bore’s family, as they are tied directly to this individual.

Noise broke out across the room again. Jason looked pale even as his face reddened.

“A reexamination of the genetic samples performed yesterday revealed that the samples had been manipulated in the last year”.

I continued, “this manipulation postdates the original sample analysis in which it was determined that the Bore family was not carriers of traits incompatible with life on Mira 1 and for contributing to the continuation of a healthy human species”. A few people nodded.

“I would argue that the original samples be accepted as valid and that the members of the Bore family be allowed to remain on Mira 1”.

Way called for a vote and this measure was passed immediately.

“My research uncovered evidence pertaining to my own family’s genetic samples, which indicated evidence of manipulation as well. I waited for the council to quiet again. “In the case of my family the manipulation appears as a deliberate action to prevent them from being allowed to come to Mira1. The timeline of this manipulation correlates to the founding of Mira 1. It has prevented my family from relocating to the colony for years”.

I continued as I tried not to tear up. I still had too much to cover to fall apart.

“I would request that new untampered samples be drawn on my family and if found appropriate that they be allowed to relocate to Mira 1”.

The vote was again unanimous.

Two down, one to go.

“I have one last issue to address in regard to this investigation, which is my confession.”

Not one person reacted. It was as if I had not spoken the words. Later I would realize that the silence was a delay in the processing of the information by these people who held me as a god of sorts. Frankly, I was tired at playing at that.

“I confess that every incident of genetic tampering that is associated with this investigation has been committed by me and me alone”. I was shaking at this point.

“I surrender myself to the genetic council for sentencing”. I walked off the podium and registered with the chief security bot.

Later that month I found myself in the council hall again for my trial. The trial was much harder than the confession. I had to explain my reasoning for the crimes at the trial, which would be considered in my sentencing. I was forced to admit that my actions towards the Bores was driven by class envy and hate. I had set out to hurt Jason Bore because of his privilege. There was no other motivating factor.

I also had to address the crimes I had committed against my own family. As it is with all things in families, the reasoning and explanation was much more complicated and personal.

I spoke as clearly and calmly as I could. "I was a child; a brilliant child, but a child, and my parents recognized my brilliance when I was very young". A deep breath, "I did not have a childhood after that. Everything became focused on my intelligence and the ways in which those gifts would "pay out" for the family".

I tried not to cry as I spoke about my desire for a normal childhood of friends and birthday parties instead of extra coursework on the weekends and textbooks for birthday gifts.

I was openly sobbing as I explained that I had purposely kept my family away for me. "I wanted Mira 1 for myself. I felt as if I deserved my own life. I was tired of being treated as a slave or someone's property".

When asked by the council if I felt guilty, I answered, "Only in how I hurt Pele" and "how I almost hurt Mira 1".

Before sentencing I also stated that "I had felt manipulated for my entire life". That might have been the most important truth of all.

I think about all of these things now, but the pain and anger is fading. I was charged under the laws of the Mira1/Earth accord. I was sentenced to confinement within a designed area that includes a lab and small apartment. I am allowed to have approved visitors, with guard escorts, twice a month. Juno lives with me fulltime. I still work and complete assigned science

tasks as determined by the Governmental council. Pele comes every visitation day. My parents are living on Miral as well. They have not visited. I am not sure they ever will.

