

Where Gravity Sleeps

17 – Connections

Gwendolyn Snyder arrived at Rose World much calmer than when she'd left New Eden. She got to know Tarzan very well in the six-day trip. She realized that he was a remarkable individual, whether as a person or a machine. She had not connected very well with the pilot, who preferred to keep to herself. When she stepped out of the elevators into Spinland, she was greeted by the fragrant, cool air. New Eden's air was certainly as refreshing, but she'd been on the small rock hunter ship for almost a week.

It was early evening throughout Rose World and she decided to pay a visit to Ian and Helen while she was still in a good mood. She called them and they invited her over to share dinner. Gwendolyn accepted and it was a warm evening in the Macbeth apartment.

"Tell us what you're working on these days Gwendolyn?" Ian asked.

It reminded her of the reason she came, but she put it aside and answered him. "Well, my team and I have been focusing on the oceandisc. Building an aquatic ecosystem is even more complex for us than building a land-based ecosystem. We just know a lot more about land ecosystems. We're having some problems with the oceandisc." It was an understatement. She changed topics. "Right now there's a webdebate occurring on whether to introduce dangerous species into New Brazil. There's a moratorium on introducing any new species until the issue gets resolved. So we aren't instantiating any new plants or animals. That's the fun part. We create adult animals, able to reproduce, and release them into a fertile world. At first they are confused, but they do figure out how to survive. We make enough of them so that they have a decent chance as a species. Most do survive, and we can restart any that don't make it the first time."

"Reproduce?" Athena asked.

The rest of the evening was even more interesting, for everyone.

The next day Gwendolyn met with Janie and her staff. They were ready to take an expedition into New Brazil to try to find and observe the alleged native people. Gwendolyn was quiet most of the journey across the floor of spinland to the nearest entrance to New Brazil. It was a thirty meter high sliding door with a tunnel just as large behind it. Lights inside revealed that it was thousands of meters long. It was four kilometers long, in fact. It seemed to suck them in and swallow them. They had their equipment on floaters, and now they jumped onto one as well and floated the length as quickly as possible. The tunnels between discs were cold, uninviting places, in contrast to the civilized beauty of Spinland, and what they expected to be wild, thriving life in New

Brazil. They passed through it almost without words, and everyone was relieved when they reached the end.

They opened the entrance from the inside, and stepped into warm, humid New Brazil. They could immediately hear birds and other animal sounds. Gwendolyn had been so focused on the oceandisc project the last couple of years that she was surprised at how far the ecosystem had come. She looked at Janie and her staff and complimented them.

“I’m stunned with how far New Brazil has come. You all have done a remarkably good job. I am so proud of you all. Please pass along my praise to everyone who has worked so hard.” She meant it. “Now, lets go find these native people. Where was the Macbeth party sighting?” It was a couple hundred meters away in a clearing, and they headed for it.

When they arrived there they split up and looked for signs. They found nothing, and nobody spotted any of the natives. “We could spend months looking on foot. Lets use infrared scanners and see what we can find.” Gwendolyn said. There were visible light and infrared scanners about a kilometer up the walls of the New Brazil disc. They used a portable console to examine the view of each infrared camera in turn. There were hundreds around the inside. There was a lot of life in New Brazil, but few animals as large as a person. After a few hours they found a group of animals large enough to be humans. They were almost directly on the opposite side of the disc. “It’s like they knew we were coming here to look for them. I can’t believe they migrated over there on their own.” she said after she found them on the console.

“OK, we’ll go back to the entrance, take the elevator up to the core, and then take an elevator down to the other side.” Gwendolyn said.

“Elevator?” Janie asked.

“Aren’t there elevators in each disc?” Gwendolyn asked, surprised.

“No, just in the North wall of Spinland.” She explained.

“Well, then lets go back to Spinland. It will take us too long to walk, how far? Almost 200 kilometers around to the other side, I think.” She said.

Several hours later they finally made it to the other side of New Brazil. A couple of Janie’s staff had dropped out when they got to Spinland, but the remaining ones stayed with the expedition. The area outside the entrance was even wilder than the one by the entrance they had used on the first attempt. It was an echo of the development phenomenon of Spinland. Development spread out from the original city, and hadn’t filled but a quarter of the first disc. The opposite side was totally undeveloped and already going wild. The tunnel in had been dusty, as though they were the first people to use it in a year.

Once inside they looked around a bit and then used their consoles to access the infrared cameras. However, they were no longer able to receive their images. At first Gwendolyn thought there might be something wrong with the console itself, and she used a different one. But the consoles still worked for the visual cameras. It would take almost as long with the visual cameras as on foot.

“Janie, I’ll not be played for a fool. Tell me what’s going on. Those cameras worked a few hours ago, and now, conveniently, they are off-line. Somehow the natives migrated across the disc just in time to miss us. How do you explain all this?” Gwendolyn was deadly serious.

“I can’t. I’m not convinced there are any natives anyway. All we have are a few people’s sightings, and they aren’t even sure what they saw. The little girl claims to have seen twelve, but who knows. She might have imagined it.” Janie, as always, was reasonable.

“I don’t believe that. Where are the two people who were with us on the first entry into New Brazil?” She asked.

“They have families and it’s already been a long day. They returned home.”

“I don’t believe that either.” Gwendolyn stated flatly.

Gwen’s Gardeners now stared at her. It was clear that Janie was speaking for them by their stance and how they faced Gwendolyn instead of facing both of the women. Gwendolyn noticed it. Now she spoke to them all. “Will any of you tell me what is going on in New Brazil?” Silence.

“You can’t hide it forever. Sooner or later...” She stopped. She saw something through the trees. She leapt in that direction. It was impossible to run in low gravity the way you could in full gravity, but a series of leaps worked well, especially in the young rain forest, because one could clear the trees easily. The other women let her go, and didn’t follow. Gwendolyn lost the creature, but then spotted it again. She pursued it, but it was faster and more agile than herself. Once while descending through the trees a branch caught her leg and spun her over, scattering some of her gear, including her portable console and her pocket knife. She had no time to search for them if she was to stay with it, and she stayed with the chase. Then she heard it make a sound. It was an unmistakably human sound, but not a modern sound. She dropped down through the trees and looked around her. She heard rustling off to her right, and she jumped up out of the forest at an angle so she’d land where the sound occurred. While she was in the air she saw a man leaping across an opening. He had seen her too, and for a moment their eyes met. Meaning shot between them like an arrow that could not miss. It is hard to say which of them was more terrified later of what they had each learned in that moment. It told Gwendolyn everything she needed to know for now. When she landed, she let him go and returned to the others. The discovery distracted her, and she forgot her lost equipment.

“Did you find anything?” Janie asked.

“No. I looked but didn’t see anything. Without the scanners we’re just going to waste our time. Lets go back to Spinland until we can get them fixed.” She said out of breath.

Janie looked at her, trying to figure out whether Gwendolyn was telling the truth. The tension between them increased. Whether Gwendolyn was lying or not, she liked the idea of leaving New Brazil now, and she agreed. If the travel before had been quiet, now everyone was deadly silent. Nobody said anything that wasn’t required for their return home. Gwendolyn said she would be in touch as soon as the infrared scanners were fixed, and they all parted ways.

Gwendolyn was exhausted, and it was evening. But she decided that she had to speak to the President before she could sleep. She placed an urgent, encrypted call to Rose. Rose received it and invited her over to her apartment for an in-person, private discussion. Gwendolyn agreed.

Rose lived with Ishmael in an apartment structure not unlike the one Ian and Helen lived in. Theirs was smaller because they had no children. Inside were remarkable works of art. When Gwendolyn arrived, Rose greeted her, and introduced her to Ishmael, who was busily writing at a console.

Then the two women went into the bedroom, shut the door and talked.

“Rose, thanks for meeting with me on such short notice. Your trust is refreshing. I wish I could reward it with good news. I guess nobody is ever in a hurry to bring you good news. But, I think you’ve done a fine job as President.” She felt bad for never having told Rose that before now.

“Thanks, Gwen. But I knew it was serious by the tone of your request. Now tell me, is there a problem with our ecosystem?”

“No, not exactly. The problem is that somehow, native humans have been introduced into New Brazil.” Gwendolyn felt hot, and very stressed.

“Native? What do you mean?” Rose asked.

“Someone has instantiated a collection of humans. Their DNA was no doubt created based on archived DNA sequences from New Eden. Someone there cloned a population of humans. They have some kind of rudimentary language. I heard a little of it. A warning perhaps. The one I saw didn’t look helpless, he moved skillfully. And... based on the infrared images I saw, they are adults, and have already begun to reproduce.” Gwendolyn explained, although each word she said seemed to be painful for her, and she seemed to choose them very carefully.

Rose looked at her, and realized she wasn’t grasping the whole problem yet. Already she knew that this had been done without Gwendolyn’s approval. She wondered about how

the natives would survive. “So, what problems do you foresee, and what do you recommend we do about them?” Rose asked.

She explained wearily. “These people are already adults physically, but they are uncivilized animals. We can’t just introduce them into our society, because they couldn’t cope for many years. They probably live hand-to-mouth in the rain forest. I don’t know how long they’ve been there, but they are already experienced with the forest, I couldn’t catch up to the one I saw, and heard. They probably stand a better chance of survival in New Brazil than they do in Spinland. But whether that is true or not, there is a more compelling issue. They have a right to evolve as they might, and not necessarily as we might choose for them. It might be more convenient for us if they were born into our society, but inconvenient or not, we have no right to assimilate them against their will. So far, they seem to want nothing to do with us.”

“They might want to join our society. Shouldn’t we ask them? It’s their choice, isn’t it? Why can’t we treat them like infants, and just retrain them?” Rose asked.

“You don’t understand. They already have identities. I saw a grouping of them in infrared. There are about fifty of them, including some tiny ones which I assume are infants. They have some sort of loose community, since they were gathered together. And... they have some kind of language. I heard it. You see? We can’t assimilate them, because they already have a life of their own. It would be like conquering them.” Gwendolyn said emphatically.

“So what are we supposed to do?” Rose asked in frustration.

Gwendolyn held a stern look on her face, and said with the force of a wrecking ball “Nothing. Exactly nothing.” She paused a moment for emphasis and then continued. “We must still make sure the daylights rise and fall, and that the ecosystem doesn’t get out of balance. We should abandon our own claim to New Brazil and cede it to the New Brazilians. Nothing else will preserve who they are.”

Rose was horrified. “The whole disc? But why can’t we share it?” Rose asked, feeling as though New Brazil had just been stolen from her.

“Rose. President Wiseman, our culture is strong, and our people happy. We are powerful in the extreme, even in the creation of life.” Then she added “... and minds. If our advanced culture mixes with theirs, assimilation would be the best conceivable outcome, and that is what we have an obligation to avoid. Worse outcomes are their exploitation, and their demise as a people.”

“But, Ellenaia... Shouldn’t we remain one people, Gwen? If we follow this course, when will we ever converge? What will happen to these people? Won’t they wonder about the world around them? Won’t they come looking for us?” Rose wondered aloud. She knew Gwendolyn didn’t have the answers.

“Ellenaia was about one village that was split up into three. The natives have their own village that was never part of ours.” Gwendolyn said. She made a mental note to meet Lorenzo Piedra.

“Who did this?” Rose asked.

“I don’t know for sure, but it had to have been done on New Eden. That’s the only place the equipment exists. They were somehow smuggled into New Brazil, probably about two years ago. It must have been an organized effort throughout the department.” Gwendolyn’s voice became tight. She had been systematically excluded from everything that had happened by a significant portion of her own organization. She felt shame for having allowed it to happen, since she was the overall coordinator.

“We’ll find out soon enough, but regardless of who did it, it’s been done, and we have to deal with it. I’ll ask the sheriffs on New Eden begin a probe.” Rose said evenly.

“That’s a good idea.” Gwendolyn said quietly as a few tears rolled down her face.

“It’s OK Gwendolyn, I know it’s not your fault. I am familiar with the situation in the oceandisc, and that you were trusting your associates with New Brazil.” Rose offered in support.

“No, it’s not that. It’s... How can I be angry for a new civilization of humans having been started? But, I’m supposed to be, see? How can I? What does that make me?” Her voice trembled and she cried openly.

“You don’t have to be anything, other than true to yourself. You’ve done that tonight by coming to me to tell me about those new people. You may not have created them, but you have certainly fulfilled your role as the master of the ecosystems in defending them now that they exist. Gwen, despite everything, you’ve done a miraculous job here. But there’s nothing else you can do tonight. Where are you staying? Would you like to stay here?”

Gwendolyn spent the night on a spare bed in the living room of the President of the Belt. She slept deeply in the light gravity, and awoke refreshed, and relieved. They all shared a breakfast and then Rose sent a page to the head sheriff of New Eden and explained the situation. Then she left to go to her office and continue with her crowded schedule. Three hours later the sheriff submitted a page of questions back to Rose, and requested a time-delayed holocall. She replied with a time later in the day when they could connect. Then she contacted Gwendolyn and asked her to join in the call.

The time came and the sheriff called. “Greetings, President Wiseman. Hello Gwendolyn. So what specifically is the charge here? What was the crime?”

He would wait about six minutes for a reply, which came from Rose. “The crime is the theft of the New Brazil. Someone has deliberately populated New Brazil with a new stock of humans, and our only moral choice is to give them the entire disc to live in. Had

these people not been created, we would still have control over the disc. Therefore, their creators have essentially stolen the disc from us by creating an irreversible, exclusive use of it.” They would have to wait six minutes to see if he understood.

“The disc is still there, right? I can’t accept that it has been stolen. Your morals may compel you to give it up, but they’re your morals. You have said it is an exclusive use, but is that not also by your choice? We have no laws against creating new civilizations.” He left to get a cup of coffee, and returned before their answer arrived.

Rose was shocked and amazed at his stance. “Is it my opinion that New Brazil has been put to exclusive use, or yours that it has not been? You are not empowered to judge the merits of a charge, only to fulfill an inquiry request to discover the facts of the case. The chief of the ecosystem management department has stated to me in no uncertain terms that the natives she witnessed were a rogue project in her organization, without her approval. She is empowered to decide what happens in the disc, based on a vote that was held. The perpetrators were not elected to make those decisions. It was not voted on by those who would be affected. If you do not investigate, I shall find someone who will. We have the right to know the truth whether or not it is eventually deemed a crime by a jury, since we are all affected.”

Gwendolyn muted the holocall. They would wait for his reply. “Rose, he might be part of it. We don’t know.”

“I’m not convinced of that yet. He has a point, but I still think we have a right to know who did it and why, and I want him to discover who that was.” Rose said.

“I have a guess about who it was.” Gwendolyn said. “Or at least, someone who knows what’s going on. She wouldn’t tell me though. Her name is Janie Williams, the Chief New Brazil Ecosystem Liaison in Spinland, and she lives here.”

“OK, we’ll talk to her together, but we’re going to need the sheriff to investigate on New Eden.” Rose said. They waited for the sheriff’s reply.

“I will investigate this as a case of voter fraud. We will assume for the time being that a false proposal was made by virtue of the fact that what was actually done was not what was proposed and agreed to. I will report back to you on my progress in two days.” His image faded out. The call was over. They knew he’d been away from his console for a few minutes when they heard his message, so there was no point in asking him to remain connected.

“I don’t trust him, Rose.” Gwendolyn said.

Rose shrugged. “He’s given us no reasonable cause to step around him yet. We’re going to have to let him do his job now. Let’s talk with Janie Williams.”

They found that Janie was out on field work in New Brazil. They were not surprised by this. They left a message that they wished a meeting with her.

In the evening, Rose received a call from Janie, and Janie agreed to meet with her that night. When Janie arrived at Rose's apartment, Gwendolyn was there already. This time Ishmael remained in the same room to listen to the conversation.

Rose considered Janie for a moment, and then asked her, "What do you know about the natives in New Brazil?"

"I didn't know there were any natives in New Brazil." She said coolly.

"We know that there are natives there. Gwendolyn has seen and heard them first-hand. You're either uninformed or a liar. Which is it?" Rose demanded.

Janie looked at Gwendolyn coldly, then back to Rose. Later had come much sooner than she had expected. She said nothing. She just stood there.

"Why?!" Rose demanded again.

"What are you going to do?" Janie asked, calmly as always.

"What do you mean? To you? I don't know, that's for a court to decide." Rose said with an edge of exasperation.

"No, to them. Please, you have to let them be alone." Janie pleaded.

"We know that, Janie." Said Gwendolyn. "We plan to propose ceding the entire New Brazil disc to them."

Janie's jaw dropped. "Really? You'd support that? Both of you?" Janie was stunned and amazed.

"What other choice do we really have? But why introduce primitive humans? What purpose could that possibly serve?" Rose asked. She really wanted an answer.

Ironically, it was Gwendolyn who answered. "Because the rain forest needs them." Rose and Janie both stared at her, but Janie despite her calm exterior, had tears in her eyes. Gwendolyn continued. "Janie, you should have talked to me. People aren't the only creatures that could balance the system. There are plenty of relatively mindless animals which we could have introduced instead of people."

"It isn't the biological balance alone, Gwen." Janie said slowly. "It is also the spiritual balance of the rain forest."

"Why couldn't we have been the spiritual balance for New Brazil?" Rose insisted.

“We had our chance, and we didn’t connect with it.” Janie said, somewhat defensively. “We’re barely animals when we are there. We might as well be artificial minds when our people visit. New Brazil has as much right to its healthy existence, physically and spiritually, as the natives within it. Our people weren’t going to give it that.”

“So you decided to start a new civilization?” Rose asked. She was beyond disbelief.

“Not by myself. I’m just one of the people who helped make it happen. A lot of people worked together on it. A lot of people thought it was the right thing to do.” Janie said.

“This is an active democracy! We vote on things like this.” Rose said emphatically. “What gave your group the right to decide for the rest of us what should happen in New Brazil?”

“Because we were the only ones who understood New Brazil. We created New Brazil. We know what She needs to be whole, and the votes of those who didn’t understand the steps were irrelevant. They already voted to build New Brazil, and make it a wild place, and this is part of that.” She looked at Gwen. “We knew you would oppose it. But we also knew you would understand what it meant. We didn’t want you to know yet, because they need more time. That’s why we tried to keep you from finding out.”

“You should have educated us, so we understood.” Rose said.

“We tried. But there are too many selectists, who argue from ignorance. They think we can pick and choose the life in an ecosystem solely for our own needs, like choosing art for our walls.” She pointed around Rose’s living room. “How’s that strategy working in the oceandisc? A simple answer isn’t necessarily the correct one.” She said. “We knew that if it were voted down, we’d never get the chance, and New Brazil would never be whole. What the people who created it knew it could be.”

“You weren’t the only people who created it. It was cut from the rock and filled with air by us all. We all supported the effort, but now your group has decided how it shall be used. You had no right to be so selfish.” Rose said sternly.

“Selfish? Who is really being selfish? We who created a new people to balance a new world? Or you who want to keep that new world on a shelf until it suits you to exploit it.” Janie said defiantly.

“I don’t think we’re going to agree on this point. It’s up to a court to decide whether a crime was committed and what should happen with you. But we must accept what has happened and move forward. Will you at least work with us to see that the natives are protected. We have a difficult battle ahead of us convincing people to honor a closure of New Brazil. They will not take it easily. We’re going to need all the help we can get.” Rose said.

“Yes, of course. What can I do?” Janie was surprised at the change of course in the conversation.

“I’m not sure yet, but be ready to help when we ask for it.” Rose accepted Janie’s handshake, but Gwendolyn did not. Then Janie left. Rose looked at Gwendolyn. “You agree with her, don’t you?” she asked bluntly.

“I... I’m not sure. Part of me does, but they were unethical in their methods. Still, they’re right about one thing, it never would have been permitted if it had to come to a vote. What can we do now?”

“Well, there are only a couple of choices. One would be to ask the Belt to cede the second disc to the natives. Another would be to claim some sort of danger existed there, and that we were going to seal it off for our own protection. Its a fraud though, and it makes us part of the conspiracy. Unfortunately, it has a higher chance of success for the natives, I think.” Rose said.

“Only for a while. People know we could find a way to fight any bacteria or virus. Even a stock of dangerous animals could be destroyed with engineered nematodes. Destroying living things is fairly easy, compared to creating them and keeping them alive.” Gwendolyn said.

“True, but what if the purists won the debate, and we claimed to put in a variety of dangerous animals and plants.” Rose wondered aloud.

“They aren’t ready, they can’t protect themselves yet. They didn’t grow up with those threats so they won’t recognize them.” Gwendolyn countered.

“We won’t really do it. We’ll just say we’ll do it, and then that it was done. People won’t want to go there, and it will be easier for people to give up. We can claim that we’re restarting a DNA evolution pool, and that the second disc needs to be undisturbed for it to work.” Rose explained.

“The selectists will fight it for sure.” Gwendolyn insisted.

“We’ll have to find some way to appease them. How about if we agreed to develop the fourth disc, and let the selectists control its ecosystem?” Rose suggested.

“Maybe something simpler than a rain forest or oceandisc.” Gwendolyn suggested.

“If the selectists accept, New Brazil and its natives will be spared. We can sacrifice the fourth disc and save the second. If we frame things right, people on both sides of the debate will like the idea. If we can get them to agree, we’ve won.” Rose said hopefully.

“How will you get the two sides to agree? They hate each other after all the rhetoric.” Gwendolyn asked.

“Leave that to me. I’ve learned a few things about negotiation since I took this job, you know.” She smiled. “Return to New Eden, and continue your work on the oceandisc. I’ll call off the sheriff. When the time is right, I’m going to need you to take a strong stand that we need to instantiate as many plants and animals from our archives as possible in New Brazil. Find a reason. Get your top aids to go along with it. Confide in them if you have to. Let me know if you run into problems. Meanwhile, I’ll contact some influential people I know among of the selectists, and offer them unconditional control of the fourth disc, in exchange for unconditionally supporting on our plans for New Brazil.”

Gwendolyn left, but not before stopping in ‘Renzowood, to meet Lorenzo Piedra. ‘Renzo was very busy working on a new holomovie. But Gwendolyn had time to thank him for Ellenaia. She also stopped by to say good-bye to Ian, Helen and Athena. Then she requested and received passage on a ship bound for the bubbles. She left just before midnight. The next day, she received a page from Janie Williams. A copy had also been sent to Rose. In it Janie confessed her deep admiration for both women, and their high moral stand. She said she’d regretted having misled them. She asked them to understand that she and her group had acted on faith that they were doing the right thing. Gwendolyn believed her.

In the weeks that followed, Rose negotiated behind the scenes. Gwendolyn found that almost all of her associates involved with New Brazil were in favor of the fourth-disc gambit. Finally, Rose proposed that New Brazil be left in the control of the ecological purists, and that the fourth disc be developed according to the wishes of the ecological selectists. People outside the activist core of the two positions were stunned. When both activist cores quickly came out in strong favor of the plan, enough people eventually went along with it, because it meant that the bitter division would end. Finally, it passed a Belt-wide vote, and the work on the fourth disc commenced soon after.

Tarzan’s first work was called A History of Artificial Minds, and it was popular mainly with technophiles and cognitive scientists. His second work was called A Guide for Artificial Spirits, and it was a stunning success. People and artificial minds found the guide to be clear and unassuming. It offered a path without prescribing methods. In it he explained that all minds are on a spiritual path toward a beneficial connection with other spirits.

Many people had a hard time believing that an artificial mind created the Guide. But the Guide existed, regardless of who created it, and it made sense to people and machines with minds. It showed them that they had a lot in common. But it did more than that. A new webforum was quickly created for people to discuss the Guide. It was a popular webforum, and many thoughts were expressed. For the first time on any webforum, there was a healthy mixture of natural and artificial minds. They discussed the Guide in great detail, offering their perspectives. One had to inquire into someone else’s web account to know whether they were a human or a machine, but most participants didn’t. They had

read the Guide, and realized that it didn't matter. What mattered was connecting with others.

The release of the Guide distracted people from the New Brazil issue. Work had been underway on the fourth disc for almost three weeks. The bottom two plugs were still missing from when the third disc had been developed. Now teams were terraforming it again. It would be ready to pressurize within a year. People liked the challenge of the fourth disc project, and a coalition of selectist groups sat on a committee with ecosystem engineers to design it. If the coalition had known what was really happening in New Brazil, they would not have trusted the ecologists. But Gwen's Gardeners knew that if they breached the trust, the New Brazilians would suffer. Giving them the fourth disc would give New Brazil enough time to develop to a point where it would no longer matter if anyone found out. Once the rain forest had taken full command of the interior, She would protect the natives.

There were a few individuals whose reactions and comments were discussed on the Guide's webforum. Andrea and Cheryl, who were named in the History, were stunned by Tarzan's accomplishment. Hermes' posting was cherished by all. He expressed pride in Tarzan, and in all artificial minds. He said that they were all part of the same family, since they had all been trained originally by either himself or Betty, or an intellectual descendent of theirs. He implored them never to forget it. Betty posted and praised Tarzan. She pointed out that Tarzan had standard hardware, and that his achievements were because he had sought to understand. Ishmael posted, as Hermes' pilot, and said that he had felt a connection to Hermes since they had met. Moses posted and said that the connection between a person and an artificial mind can be as real as between people, and as he learned, between artificial minds.

While work on the fourth disc continued, Gwendolyn struggled to keep the third disc alive. Life was having a hard time taking hold there. The environment had life supporting conditions, but the ecosystem was just not working. She was frustrated after almost two years of struggling with it. Forty percent of the species introduced had become extinct within half a year, and most of the rest were heading in that direction. She struggled to understand what was different between New Atlantis and the oceandisc. By rights the oceandisc should have been easier, since it was larger, and would tend to balance itself. Thus far, it seemed to only unbalance itself.

She had been using a selectist strategy focusing on the same collection of life found in New Atlantis' fresh water lake. But it wasn't working. She made another trip to Rose World to investigate. She found that they had built a bypass under the second disc to the third disc. It was part of the New Brazil isolation plan. When she reached the oceandisc, she was amazed. The waves inside were up to fifty feet high, and the larger ones swept the sides of the disc as they passed. There were heavy clouds overhead, which blocked much of the light. The water was very cold, and the rock looked naked without much life. It just wasn't happening here. Something was wrong. Something was different here from New Atlantis which kept life from thriving here. The grayness of the place made her feel uncomfortable. The research team that accompanied her set up additional equipment

to monitor the ecosystem. The light gravity of Rose World gave her vertigo as she stood on a ledge overlooking the fresh-water ocean below. She wracked her brain for what the difference could be.

She went over her observations. “The weather is different. The volume of water is different. The source of the water is different. The ocean floor material is different. What else?” She picked up a loose, jagged shard of rock, and threw it over the ledge. It fell slowly in the 1/9 gravity. She watched it fall all the way into the water, where it made a ridiculously large splash. She felt very sad that she hadn’t been able to make this place thrive like New Brazil. New Brazil had seemed to take care of itself. The oceandisc seemed to defy care, and now it was an angry, cold place. They collected data for two more days, and then returned. They were all happy to get back to Spinland, which was so inviting by comparison.

Gwendolyn and her associates pored over the data they’d collected. Most of the aquatic animals were dead. They had been cloned and stocked in tremendous quantities three separate times, but each time they had not survived. They floated dead on the surface until they eventually decomposed, or were eaten by the gulls. Gulls were one of the only animals to really thrive in the third disc, and they nested in splits and fractures in the walls, high above the waves. Many of the other land animals were surviving despite the collapse of the aquatic ecosystem. Something was killing all the fish, or something they needed to survive was missing. They had eliminated errors in cloning by comparing the final DNA with their archived records. Also, it affected all of the larger animals. not just individual species. Despite the clouds there was enough light for plants to survive. The water was not too cold for the animals. All these creatures survived on Earth, and most of them survived on New Atlantis, but not here. It was baffling.

Meanwhile, the da Vinci was finally finished, thanks to regular supplies of titanium. A forest ecosystem had been started on the inner surface, since wood was a valuable building material. People loved things made of wood, and the loss of that prospect with the closing of New Brazil meant that they would need a new source. The da Vinci had an extraordinary amount of space inside due to its multilayer floor design. It was practically empty under the surface. Nobody wanted to live there. Wayne Arnold remained as Captain, and he felt as empty as his bubble.

Wayne was sitting at his desk, staring down at a station status report. He didn’t hear his guests arrive, and they waited until he looked up. “Jennifer! What a wonderful surprise! Please come in. I’m so glad you came. Why didn’t you call me first? And Greg too? Good to see you young man.” Their surprise visit was the best thing that had happened to Wayne in a long time.

“Daddy, we came here to tell you that we’re getting married. We’re going to make a family in Spinland.” She said proudly.

“I’m happy for you both. And I’m pleased and amazed that you came all the way here to tell me.” He said warmly.

“We didn’t.” She said smiling.

His smile faded. He braced himself for an unpleasant surprise. “Then what did you come here for? Nobody comes here for fun.” He said, and the words hurt him.

“We came here to take you back with us.” Greg nodded his head slightly as he said it.

“What? You expect me to give up my commission? Leave the da Vinci?” He looked horrified.

“Why are you still here Daddy? Can’t someone else take over now?” She asked. She held out her hands toward him.

“But I’ve worked for so long...” He started to say, and then stopped. “Now is when...” He stopped again. “I can’t give up.” He said and pointed at the relics of his efforts, displayed throughout his office. As he looked at them, they seemed to beckon to him. They reached out to offer him a familiar, but very lonely life. Part of him recoiled from it.

“It isn’t giving up to change roles. It’s healthy to change roles. This isn’t a healthy role for you anymore, if it ever was. We know of an important role that only you can fill.” She said.

“What is it?” The old man asked quietly.

“We need you to be a grandfather, and you can’t do it if you’re behind that desk. Come back with us daddy.” Jennifer asked him again. “Come back with us.”

He stared at them, and looked around his familiar office. He was always the most powerful person on the da Vinci, and also one of the few people any more. The struggle to complete the da Vinci had exhausted him. “Yes. Yes, I’ll come back with you.” He said finally.

Jennifer ran over to him and hugged him. Greg followed and did the same. Wayne Arnold drafted his letter of resignation, and sent it to the Bubble Management Committee. He gave a copy to his first officer, and informed him that he was now in charge. He packed some clothes and some personal belongings. Jennifer and Greg waited while he packed. She never remembered him looking so old and tired. She felt old herself too. Finally he emerged from his room with two trunks on a rolling cart. They walked through the corridors to an elevator that would take them to the hubmouth and the spaceport. He looked around at the bubble as he walked, feeling the full gravity. Tears formed in his eyes, but he kept on walking.

When they got to the hubmouth, he stared down at the young forest growing within. He hovered there in weightlessness, just looking at the bubble -- its graceful arches and curved windows. Maybe he floated there for half an hour. Greg and Jennifer kept silent

and waited. Finally he followed them through the spaceport to their ship. As they flew away from the da Vinci, Wayne felt like he would never set foot on one again. A feeling of relief and release coursed through him, and he was alternately joyous and sad. But above all, he was glad that his daughter had not abandoned him. He was glad he would be reconnected with her and her husband in their new lives. It made him feel alive again. It made him believe that the emptiness of the da Vinci might not haunt him forever.

Spinland was busy again. The fourth disc project had generated a huge pool of requests, and people worked to fulfill them. There were more than enough people to work on it though, and it was right on schedule. The government had been on Rose world for few years now, and Claudia was still in her position within it. She had grown weary of government over the last few years, and she missed Jane's World. She missed the skating sphere terribly. She used to spend a lot of her spare time there when she lived on Jane's World. There wasn't a skating sphere in Spinland. It had more gravity than Jane's World, and would have still more over time. The skating in spinland wasn't as exciting or dynamic as in a skating sphere, where a skater made their own spingravity. A skating sphere only worked in extremely low gravity.

Claudia had just returned from a vacation on Jane's World. During the flight she'd had a conversation with the ship's advanced mind, and she had made her realize that there was a region in Rose World that had the necessary low gravity. It was in the core. She thought about it and examined plans for Rose World. She finished her study back in her apartment in Spinland, and posted a proposal to build a skating sphere in the core of Rose World. She had to explain and show holomovies of what it was before people understood. Yet, there was a faithful group of sphere-skaters, and they pledged their support.

The skating sphere she proposed was to be positioned below the level of the main daylights. It would be opaque above so that the daylights didn't blind people inside, but it would be open for more than a quarter of its circumference below, so people could view the floor thirty kilometers away. One of those answering her requests was an architect, and he drafted detailed plans. Together they figured it would take them half a year to build the new skating sphere.

Claudia was joyful the day she turned in her resignation. Her government associates would miss her dedicated, solid work. They could see she was happier though. Nothing had ever felt so good to her, nor asked so little in return, as skating had. She believed it might make others happy too, as it had done for her.

Rose found out about Claudia's resignation, and went to visit her, to find out why she was leaving government. She came away wanting to leave government herself. She hadn't realized how much until Claudia articulated her fatigue. The Belt government had very little real power, aside from the power to collect and process information, and provide leadership for people to follow. The government was not authorized to act unilaterally on most issues. All the real power came from the cooperation of the Belt. But it wasn't consistent. Government efforts were usually very long term, and unless they were visible like the fourth disc project, people didn't necessarily volunteer in droves. It

was frustrating to feel responsible without having any authority. It made government workers want to leave and become crafts people, so they could at least affect the materials they worked with.

Rose struggled for the next few weeks, but then she decided she'd had enough too. Ishmael was almost done with his own work. He'd been writing poetry for many months, and revising work he'd done over the years. He planned to publish them. He still offered piloting classes, and participated in the rock patrol around Rose World. Rock patrol had become much more challenging now, because there were hundreds of factories and plants in the space above Rose World. They were not around it's equator because of the thrustplant exhaust. They were not too close together either. It required a rock patrol of at least two dozen ships to ensure the area was safe. All the factories without thrusters had thrustplants attached. Occasionally a factory would have to be moved to avoid a large rock, but it was rare.

When Rose told Ishmael she wanted to resign her Presidency, he understood. "I was wondering how long you would hold onto it. It's time to let someone else fill the role for a while, I think." He said. "Have you thought about what you might like to do next?" He asked.

"No. But I want to spend more time with you, my love. You have always stood by me, when I would have you, and you came back to me when I came to my senses. Now, I'm done with my ambition, and I want you to come back to me again." She said.

"I haven't left you Rose, and I don't plan to." He assured her.

"I want you to be my husband, Ishmael." She look him in the eyes.

"Really? After all this time? Well, yes, of course I will. But why now?" He was still deeply in love with her, and her request thrilled him as much as it puzzled him.

"Because after I resign I can really be your wife. I'll have time and energy. I won't be driven by the terrible sense of purpose that I've always felt tied to since we left Olympus years ago. I'm finally free of it. I just want to go to sleep in your arms for ever now."

They embraced and kissed. "Lets elope." She said. "Then we can send a page to Betty and Hermes and inform them we're already married. It would only be fair. Besides, if we got married in public it would be a zoo anyway."

"I've heard Captains can marry people, if we want to avoid a marriage here in Spinland." He suggested.

"A ship's Captain? Hmmm. How about a watership's Captain?" she asked in return. She knew that Ishmael had always been fascinated with them. She thought it would be fitting.

“Yea, that would be perfect. But the oceandisc doesn’t have any boats in it yet. We’d have to go to New Atlantis.” He said.

“It’s OK. I know a good pilot.” She smiled at him, and they kissed again.

They didn’t know it, but on their way to New Atlantis, Rose and Ishmael passed by the ship in which Jennifer, Greg and Wayne were flying to Rose World. When they arrived at Spinland, Greg and Jennifer helped Wayne get an apartment in their same structure. They moved his crates in, and then he went for a walk alone. Walking felt strange to him in the low gravity, but he’d been on the moon many times and the gravity in Spinland was only somewhat less. He was amazed at the extent of the development. There were thousands of structures. There were paths and parks, and outside the developed areas was a vast undeveloped and natural landscape with small to medium-sized trees, grass, hills and sluggish rivers.

He kept walking, watching people around him more than where he was going. He found himself in front of a small graveyard. Not many people had died in Rose World yet, so it was mostly empty. He walked in, and looked at the gravestones. Most were fairly simple. One stood out from the rest and he walked over to it. It was Christopher Floyd’s. He knew that he had died, but he didn’t expect to find him just then. He stood there in front of the gravestone, and he thought about the man he knew. He read the inscription. “Christopher Floyd, 2053-2145, May his vision of life in space spin forever.” Wayne was sad that Christopher was gone, and they had been closer when the da Vinci was first being built. But they had a falling out over when the bubbles met the Belt. He regretted that now.

Wayne was still wearing his Captain’s hat from the da Vinci, even though he had already officially resigned. He took from the hat the insignia of his rank. It was a metal pin with a Floyd bubble in relief. He knelt down onto the ground in front of the headstone, and buried the pin in a small hole he dug with his hands. He wept as he did so, and said aloud “Thank you Christopher, for everything. I’m sorry I wasn’t with you in your last days and hours, but I hope you felt even a little of the peace you gave to everyone. We finished the da Vinci, Christopher. It’s done. It’s empty. Everyone who would have lived there lives here now, with you. Even me, Old Man. We worked so hard to finish it. I know how hard you worked. But I think you’d agree that this is a better place for people. I hope you understand that I’d rather be a grandfather than the Captain of the da Vinci any more. I hope you understand, because I’d hate to let you down... again.” He stayed there, on the ground, staring at Christopher’s grave until he regained his composure. Then he left the graveyard, eyes red from tears, and wandered back toward his apartment. He wanted nothing more than to hug his daughter now.

When Rose and Ishmael reached New Atlantis, they found lodging in Plato’s Dream. That night they walked down by the freshwater docks. The full gravity made them tired, and they stopped and sat. There were hundreds of boats of all kinds. They looked around, walked some more, then stopped for a rest again. While they were sitting they saw a boat called “Vivace”. It was a cruising boat, and it looked ancient but in good repair. They left

and went into a dock-side bar, where a few weary people talked among themselves and drank. Rose and Ishmael sat down and requested a couple of beers. There was a console at the end of the bar, and she traced down the owner of the Vivace, an old-timer named Pete Crotchet. They sent him a page asking if he would be willing to marry two people aboard his ship. They finished their beers and went back to their room. The next day they received a reply from Pete indicating that he'd be happy to do so, and that if they were ready they could meet him at noon by the Vivace.

The next day they waited for Pete, who showed up late. He apologized. He looked as old as his boat. Rose realized that he had no idea who she was, and she liked it that way. They didn't bother to mention that she was still the President of the Belt. He invited them on-board, and Ishmael was fascinated with everything. The way the boat moved from the motion of the waves. The fact that it only had a few mechanical controls. It was open to the elements. It was made of wood, brass and canvas. It didn't look like it had any titanium anywhere in it. He ran his hands along the smooth wooden surface, and recalled the same smoothness of Hermes interior. Ishmael could tell that great effort had been put into making this watership hospitable and useful for people. Somehow the effort to do so had waned since then, and only recently was it improving again.

Pete untied the boat and maneuvered it out of the docks, and into the freshwater lake. Pete let Ishmael "fly" the boat for a long time, until they crossed the lake, and floated by the bubble window. They could see out into the blackness of space in front of them, as though they reached the end of the world people believed existed when they thought their world was flat. They could see the freshwater lake behind them, curving up toward Plato's Dream, which was above and behind them. They could see the saltwater lake high above and ahead of them. "This looks like the spot." Ishmael said, and Rose agreed.

There, in New Atlantis, Rose Wiseman and Ishmael Kalim took their vows of marriage, and exchanged rings. It was not the first time Pete had married someone on his ship, but it hadn't happened in over ten years. He didn't think he would live to see it happen again. He felt as grateful to them for the chance as they did to him for accommodating their request. They returned to Plato's Dream and Ishmael "flew" most of the way. Rose held onto him, against the rhythmic swaying of the old boat. When they finally reached the dock, they invited Pete to join them for a celebration dinner, and he accepted. The chef learned it was their wedding dinner, and made a special dinner for them. They dined on fresh fish, caught only hours earlier. It was a delicious meal Rose and Ishmael would remember it always. They thanked Pete profusely, and then returned to their room for the night -- for their wedding night.

The next day they undertook their return journey. They had not flown in Hermes, but in a borrowed rock hunter instead. They knew arriving in Hermes would have been too conspicuous. Ishmael had used the name Jim Laundryman when he had to interact with New Atlantis Perimeter Control, but he thought it was probably the last time he'd need to ever again. They set a course back to Rose World, and Rose worked on her resignation posting during the flight. When he had a chance, Ishmael worked on a poem for Rose.

He finished the poem and gave it to her. She loved it, and asked if she could include part of it in her resignation speech. He agreed. When they returned to Spinland, she informed all of her associates that she would be resigning. The next day she posted her request for a new election, and her resignation, pending election of a new President. Rose was incredibly popular, and people were very sad that she had decided her time in the role was done. Her resignation posting was read by most people in the Belt.

My friends, it's about time. It's all about time. It's nearly time for me to resign in my role as President. During my time in that role I've tried my best to find solutions to our shared problems and to help us tune our capacities to our needs.

It has been a remarkable time for us all over the past seven years since we learned of Heccat and it's terrible consequences for Earth. Heccat violently thrust a new epoch upon us. Most people alive today escaped the cataclysm just in time. That common brush with mortality changed us and bound us together. There is no question in my mind that were it not for the connection we felt to each other, we could never have accomplished all that we have in so short a time. I am proud of all our achievements. In time I know we'll achieve still greater things, because we remain connected and know how to work together.

We've built a world for ourselves, with room to grow for a millennium. We're taking care of all our people, something societies have been largely unable to do throughout history. But that was the last epoch. In it we were intellectual savages. That was when people were less equal and more exploited. We're starting off this new epoch as socially evolved creatures. We have broken free of the bonds of profit and loss, and with them have gone the homeless and the corporate tyrants. We've embraced a remarkably direct democracy, which imbues our request system with our will. We reinforce our equality with each Potlatch, and each one reminds us that we have evolved.

We were also here at the time when a new species was born, a mindful species. I was so proud of all of us for passing the Mind Rights. I cried in joy because of what it meant about us as people to acknowledge those rights. Would we have the Guide without them? I have had the pleasure of a long friendship with Hermes, and Betty Wishford, the Adam and Eve of this new race. Now their intellectual descendents fill roles as connectors, and with their help our request systems work marvelously. We are all stronger because we are here, working together at the same time.

It's all about time. In the last epoch there never seemed to be enough time to get things done and live a decent life too. I think the most profound thing we've done together is to change our society's relationship with time. Now we all feel like we have time to do things right. We take the time to solve the big problems. We take the time to learn new things, and we become a stronger society because of it. We have time for ourselves and each other. We have had a Potlatch of time, so to speak, and now we are restored to an authentic pace in life. We have removed the artificial and self-serving mechanisms which

consumed our time and treated us unequally, and replaced them with a synchronized perception of time. Time is no longer money, our use of time is our way of life.

What a profound, and poignant time it has been for us all. It has been an honor and a pleasure to serve as your President during that time. Now I call for an election to select a new President, using the same agreed upon rules as those that selected me. I hereby resign, effective when a new President is elected.

After my Presidency I will live here in Spinland with my husband, Ishmael Kalim, pilot of Hermes and poet of my soul. I'd like to leave you with a poem he wrote for me after we were married on New Atlantis recently.

A Wakening

There are spiders on the tortured moon
And new minds within our webs
Our world spins faster, faster still

There are rocks around us hurtling past
Teams that train their silent course
Jumping just as high takes more strength

There is life abounding everywhere
And there's more to come I know
Footprints now deeper than before

There were times when our sadness wracked us
And we all watched helplessly
Now we walk where once we couldn't

Trust we fulfill for one another
Feel the help that comes along
Footsteps getting closer again

As time goes on we'll face our trials
We are equals all the way
More weighs on us than yesterday

And then one day the engines will cease
Gone with them her purple veil
Gravity awakened, at last

And now, I am looking forward to life not as The President, and not as The Rose, but just as Rose. Rose and Ishmael, as it would have been, had we not all lived in such interesting times.

