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Revelation5

Fel

Chapter 5

Kaira, 36 Hiraa , 4408, Faey Orthodox Calendar

Friday, 14 August 2023, Terran Standard Calendar

Kaira, 36 Hiraa, year 1333 of the 97th Generation, Karinne Historical Reference Calendar

Foxwood East, Karsa, Karis

Jason Karinne was a fairly athletic guy. He played football in college for a top tier program. He was highly trained in all forms of modern combat, from hand to hand to long range mecha to mecha. He worked out regularly, he played sports, he'd even gone hunting with the wolves on Tir Tairngire.

But all of that was no help for *this*.

Sitting up after stumbling over his own feet and tripping like a complete dumbass, he slammed his hand into the ground in frustration. This shouldn't be that hard! It was a *dance*, for Christ sake! He slid a foot up and pushed off, getting back to his feet, putting his hands on his hips as he turned to the side and looked at a playback on a floating flat hologram. The dance he was trying to learn was one of the Ulala dances, which Estrella wanted to perform with him during a party next takir. The Ulala were holding a party for their Faey visitors at the next scheduled meeting, and Jason wanted to honor their Ulalan guests by dancing with Estrella. The party would consist of guests from all four of the related species, Faey,

Dreamers, Terrans, and Ulala, mainly scholars and historians who were part of the cultural exchange program the two parties had devised. The party was as much part of that cultural exchange as the trading of data and information between the scientists, for it was a chance to experience Ulalan culture from the inside.

Their visits with the Ulala had been both enlightening and productive. They'd learned a lot about each other, and he could be honest in saying that he had a genuine interest in and affection for his very distant cousins. Their culture was much more peaceful than the Faey, and they had a love of fine art, fine food, and the good parts of life. They were curious, inquisitive, intelligent, and refined. They preferred talking to fighting, but when it came to fighting, they were *extremely* good at it. And that was no real surprise to Jason, given he was so intimately familiar with the Faey. The fact that they were telepaths meant they had decided advantages over their enemies, both in a tactical and a strategic sense. Telepathy was a weapon in and of itself, but telepaths had advantages over non-telepaths in how fast their minds worked, which gave them scary fast reflexes and the ability to think fast and react calmly and logically in stressful situations.

The Ulala were what Jason hoped the Faey would someday become, intelligent, highly skilled and powerful warriors that didn't think with their guns, who fought only in self defense. But when they did fight, watch out.

Jason wanted to honor Estrella and the Ulala by dancing with her, but at the rate he was going, he'd be programming his bionoid to do it for him like a complete coward.

At least his dance partner wasn't making it worse. Cyrsi held her hand out to him to help him get back up, and at that moment he was almost murderously jealous of her. She'd turned off her limiter and learned the

dance in about a microsecond, so she was able to perform it with flawless elegance and grace. She was the CBIM that handled all relations with the Ulala, as an extension of her being the CBIM in service to the KES. “It’s not your usual realm of expertise, Jason, and you just started practicing yesterday. Don’t be so angry at yourself,” she told him reassuringly.

[Not helping, little miss perfect,] he replied in a surly mental state.
[You prancing around like a master ballerina is definite salt in the wound.]

[Then I’ll make sure to fall down next time, just for you,] she answered him, giving him an impish smile.

[Now you’re just mocking me,] he accused as he stood back up.

[You’re so perfect, Jason, it’s the only way I really can,] she winked.

He punched her in the arm irritably, which made her laugh. “Let’s start over from the beginning,” he said aloud, mainly for Kemaari’s benefit. She was sitting on the edge of his desk in a demure pose much like the one Cybi always used, her tail swishing slowly back and forth behind her as she watched. Kemaari was the Kimdori in Miaari’s office that was overseeing the contact between the Karinnes and the Galactic Republic, handling the security and analyzing the potential threats to the Karinnes, which was a real step up in her career. Miaari was actually putting her neck out a little bit for her little sister in giving her this assignment, her first very important assignment since coming to work in Miaari’s office. She was watching almost the way a hunter would watch the prey she was stalking, a creepily predatory gaze that gave him a distinctly itchy feeling between his shoulder blades when he turned his back to her.

They started again, and this time he managed not to fall on his ass. But, that didn’t mean that he did a very good job, either. He tripped up five

different times, and just couldn't get the arm movements in the middle part right. He had to take a break after that, because he was getting frustrated, and that was affecting his ability to concentrate. He stood by the desk beside Kemaari and tried to relax, holding the ends of the towel draped over his shoulders as he watched Cyrsi go through the steps, watching her intently along with Kemaari, studying her movements to reinforce what he'd learned. The two of them moved their heads in almost perfect unison as they watched Cyrsi move across his office floor, her motion fluid, her steps precise and light, every motion exacting, even down to the spread of her fingers as she swished her hand across her body.

But other work intruded, in the person of Siyhaa and Myleena. They came in without announcement, a couple of the few who could, Siyhaa ducking to get her head and horns under the door as she stepped through. "Cousins," he said without looking as he watched Cyrsi.

"Jayce," Myleena returned. "We're done with the project analysis."

"What's the prognosis?"

"Building a CBIM in a dedicated mobile facility is feasible," Siyhaa answered, looking down at him. "We can build it with everything that it needs to perform up to expected standards and capabilities. We have both the infrastructure required to execute the operation and the resources to complete the project."

"The drawback is that it'd take us about twelve years to do it," Myleena continued. "We'd have to build the ship from scratch, since its entire design would revolve around its mission to serve as the primary Academy CBIM. We have the ability to build a ship that size, and we could gather the resources to do it, but that in and of itself may take us three or

four years. So, if everything goes exactly right, it may be seventeen years before it's up and running.”

“And I take it the price tag would make Kumi faint?”

“More like hunt us down one by one and torture us to death with one of the whips in her porn collection,” Myleena said dryly, which made Jason chuckle lightly. “Initial cost estimates are around one hundred and fifty billion credits. We could terraform three planets for less than it would cost to build the ship.”

“We'd be effectively building our own planet, so that makes sense, in a strange way,” Jason mused. “I've been considering it, and with the recent advances in biogenic comm, as well as the resonance system, we may not need to put the CBIM on a mobile platform for it to do its job. I want you two to put 3D on seeing if it would be feasible to build the CBIM on Karis or some other remote location, and if we did, what it would take to give the CBIM full integration with the Academy's current system, in addition to at least three additional main satellite campuses on every single inhabited planet in the galaxy.”

“I anticipated you asking that question,” Siyhaa said, touching her interface. A hologram popped up over his desk, which caused Cyrsi to stop dancing and join them. “Considering remote links was part of the mobile CBIM research, and I included a projection of the CBIM having upwards of two trillion individual connections to computers all over the galaxy, each and every one transferring data at all times. My results were that such a system is possible, but that facility will be roughly five times the size of Karsa. In addition, building such a facility would violate your fifteen percent rule with CBIMs, that no CBIM carries a constant operational load greater than fifteen percent. There are ways to reduce the load under fifteen

percent, by installing mainframe-level subsystems to manage archiving tasks, but each one we employ increases the size of the main facility by nearly thirty percent. At the maximum size I projected, where the CBIM may be managing approximately thirty trillion individual connections that all actively transfer data at all times, to keep the CBIM core under fifteen percent, it would take a facility roughly half the size of Sarga.”

“So, about the size of a super-ship, which means our original plan was viable,” Jason noted, to which Siyhaa nodded. “What if we decentralized that system, Hadjha? We build Academy-level mainframes on the capitol planet of every participating empire then use a tree system, where that mainframe reports to the CBIM but manages all Academy data within its own territory? How big would the facility need to be if we go with that design?”

“I researched that as well,” she announced. “It would reduce the facility size by roughly half.”

“It sounds like you’ve really looked into this. What’s your recommendation for the most efficient system?”

“In truth, the system you just described would be the most efficient, as well as the most comprehensive and stable,” she answered, putting up a connection chart holo over his desk that had a CBIM at the center. “We create a system where each planet or major inhabited location in the galaxy is managed by a mainframe, the ones on the larger planets on par with the one currently managing the Academy. Those mainframes are then grouped into roughly equal units representing data transfer volume, and each one is controlled by a major facility that is roughly ten times more powerful than the Academy mainframe. Given the size and complexity of those facilities, they would be the size of a small city. Each of those facilities in turn

answers to the CBIM, which allows the CBIM to control the entire system yet not be responsible for every string of data that moves through it, keeping the CBIM's load under fifteen percent. We can set up a resonance comm node intranet dedicated to the transfer of Academy data, not on Civnet, which will give the Academy much faster transfer speeds. Independent of this system will be a master archive facility, a biogenic facility built here on Karis that will utilize biogenic data storage crystals to store the entire archived data of the entire Academy system, every single string of data. Needless to say, that facility will be...large," she said blandly. "Given that biogenic chips store data much the way an organic brain does, as memories held within its lattice rather than data, it means that biogenic archival storage is much more compact than conventional computer systems. But still, to create an archive that can hold the Academy's full and complete archive, and give it room to store more, the size of that facility is going to be almost daunting. A moleculartronic archive with the same storage capacity would take up an entire planet. It would require the Shimmer Dome to come up with a new way to grow the data storage crystals to make them big enough to serve our purposes, since the crystals would need to be contiguous in order to be able to store the data without it being fragmented. It is *this* system, Jason, that I suggest be placed in some kind of orbital facility, something that can be expanded as necessary, and also something that can be moved to protect the Academy's data if necessary. It would be possible to put the CBIM on this facility, but not necessary. And in the interests of protecting that information, it would be best if the CBIM were *not* in the same facility as the archive.

"This operational plan allows room for growth by adding new planets as they are colonized and the ability to move planets or facilities from one controlling facility to another in order to maintain dataflow balance through

the system. But, given this system will effectively require establishing data facilities on local planets, we'd need to discuss this with the various empires and get their approval to install it."

"Outstanding," Jason said. "I take it you've already prepared a presentation to give to the galactic summit?"

"I haven't finished it yet," she said demurely. "I should have an initial draft ready for your inspection by the end of the takir."

"Those mainframes don't necessarily need to be *on* the planets," Myleena said. "We could design an orbital computer facility that we simply insert into orbit at the planet and then let the planet's controlling authority connect to it. That way each planet has access to the mainframe and the ability to access the archive through it, and do it on those dedicated Academy resonance nodes to keep that traffic off Civnet."

"Yeah, that'd work," Jason agreed with a nod. "That way no planet can quibble about *where* the facility is going to be built. It'll just be sitting in orbit within range of the planet's comm nodes. We could contract that out to the Moridon so it doesn't tie up our own production as well. They did so well building the Academy mainframe, we could let them build the planetary Academy mainframe for planets."

"And we could create a standardized design for the facility that each empire could build on its own," Kemaari added. "They build the facility, then the Moridon come in and install the mainframe. The only things that we may need to supply would be the comm nodes themselves."

"Good point," Jason nodded. [*Chirk, make an appointment to speak with Overseer Brayrak Kruu. It's not an emergency, but impress upon the Moridon that I'd like to speak to the Overseer at his earliest convenience.*]

[I will set up the appointment immediately, revered Hive-leader,] she answered.

[Thanks.] “I’ll have a chat with Brayrak and see if the Moridon would do it,” he told the others. “I’m fairly sure he will, that’s a pretty lucrative contract, on top of elevating the Moridon’s prestige across the galaxy. Keep that idea in mind when you write up your presentation, Hadjha.”

“It is practical, and my people would be foolish to say no,” she nodded, her horns bobbing.

“Do me a favor and send a copy of the presentation to Ayuma once you finish it,” he said. “She has to be kept in the loop when it comes to the Academy. Hell, she should be here now, but if I asked her to come to the meeting we have scheduled today early, she’d brain me.”

Myleena laughed. “She’s that busy?”

“Oh yeah,” he grunted.

[Jason, do you have a few minutes?] Songa called over the network.
[There’s something you need to see.]

[Sure, I’m not doing too much at the moment but making myself look stupid, and my next appointment isn’t for an hour. Need me to come there or is it something we can talk about like this?]

[We can do it either way, but you might want to come if you want to see the pretty holos we’ve prepared.]

He had to laugh aloud. *[You know I can’t say no to pretty pictures, dear. I’ll be there in a bit.]* “Songa asked me to come to the annex, she says she has something to show me. So, guess we’ll call this exercise in humility

to a close for now, Cyrsi,” he told her. “Kem, tag along, that way Mee doesn’t have to snoop to find out what we talked about.”

“We’ll get on this, Jayce,” Myleena told him. “We should have something to send to Ayuma in just a couple of hours.”

“Awesome. Just don’t get too busy, Myli, remember you have to be back here in an hour. We have something to talk about.”

It was a short hop from the White House to the medical annex, Songa meeting him on the roof as his dropship landed on a smaller pad on the 35th floor, so he didn’t take up the main pad for emergency ambulance dropships. He kissed her on the cheek when she reached him, taking his hands, then she let Kemaari put a hand on her neck in greeting. “That was quick.”

“In truth, you saved me from making an ass out of myself in company,” he replied, which made her laugh.

“Dancing practice?”

“Yeah, and I’m not getting any better,” he growled sourly.

“I’m sure you’ll get it, dear,” she assured him, turning towards the door into the annex. “Let’s go up to my office.”

“Sure thing.”

She took them up to her office, which was large yet cluttered with a bunch of stuff, part of her collection of things from running the Medical Service for fifteen years. She’d been in this office since the annex was built, so it was definitely “lived in.” Jason and Kemaari sat down in the chairs facing her desk, and she sat down behind it. “As you know, we’ve been

very busy studying the transition of the many different species to Generations,” she began. “We know the biology of Faey and Terran Generations, but we’ve been studying how becoming a Generation changes the biology of other species, from those very much like Faey and Terrans to those that are very different. And we’ve run into something very, very interesting. Jason, Kemaari, meet Heryk and Gwen Redstone,” she said, putting up a holo of a Shio man and a Terran woman. “They’ve been married for about two years. Six days ago, Gwen came in for a scheduled check-up, and we found out that she’s pregnant. By her *husband*,” she stressed.

“Whoa, wait, I thought Shio and Terrans weren’t genetically compatible,” he said immediately.

“They’re not. Or more to the point, they *weren’t*,” she replied. “This made us take a very close, hard look at something we hadn’t really thought to study, and that’s how the biology of Generations of different species interact with each other. What we’ve found, dear, is that being a Generation can close the genetic gap between species in some situations to allow them to interbreed.”

“How is that possible? Shio have forty-eight chromosomes, and Terrans only forty-six. It should be impossible for them to produce a child.”

“That’s where the unique aspects of Generation DNA come into play,” she said, putting up a holo of a DNA helix. “In the case of the Redstones, when the Shio male’s sperm met the Terran female’s egg, their disparate DNA tried to merge as part of the fertilization process. Normally, the egg wouldn’t be viable because the DNA strand can’t complete, and it wouldn’t begin to divide. But when the incomplete DNA helix was formed, missing half of its last two chromosomes, the self-repairing aspect of Generation

DNA triggered. It *cloned* the other half of the chromosomes supplied by the male, mirroring itself. In effect, the egg cloned any part of the DNA that was missing from one side and copied it over to the other, creating a complete DNA strand.”

“That’s...that can’t be good. Wouldn’t that mean that the egg is in danger of having birth defects?” he asked quickly. “Down’s Syndrome in Terrans is when the Terran has an extra chromosome.”

“Genetic defects, yes, but modern medical technology can mitigate that risk,” she nodded. “Down’s Syndrome in Terrans exists because that extra chromosome is a copy of an existing chromosome, dear, and the two copies of the chromosome cause genetic errors when the fetus develops. So it doesn’t really apply in this case. The extra chromosomes in this child were *intended*, so it is, in effect, complete once it clones the other half of itself to form a complete chromosome. If a parent carries a genetic disorder as a trait, and that part of the DNA gets cloned to complete the strand, then that means it’s as if the egg received the same genetic flaw from both parents. In effect, Jason, what we’ve discovered is that Generations of different species can reproduce, within certain ranges. Vastly different species can’t, like a Skaa and a Strath, but those with the same basic genus form groups that have similar biological processes that can interbreed with each other. All the Faey-like species are in one such group. The Faey, Dreamers, Terrans, Strath, Rathii, Aridai, Subrians, Sha’i-ree, Koui, Farguut, Jun, all the races your people term *humanoid* are now compatible with each other, thanks to being a Generation. Among other races, if they originate from the same basic genus, they’re compatible. The Verutans and the Jirunji are one such example, as are the Skaa and the Urumi, or the Grimja and the Jhri, believe it or not.”

“That’s...wow,” Jason said soberly, leaning back and looking at Kemaari. “I would have never thought something like that possible.”

“We hadn’t even considered it,” she admitted. “So we were all kinds of surprised when we found out that the Redstone baby was a Terran-Shio hybrid.”

“Is the baby going to be viable? Is it okay?”

“We’ve run extensive tests, and yes. The baby will be healthy,” she replied, which made him sigh in relief. “Fortunately, no severe genetic flaws cloned from the father when the DNA strand completed itself. We’ve already determined that the baby will have Shio green blood, and the fact that it will be so different from the mother will require us to keep a very close eye on the pregnancy. We’re not entirely sure how the mother’s body is going to handle passing nutrients and oxygen across the placenta, since the baby’s blood is going to be copper-based. I take it you want to be kept informed?”

“Oh yes,” he replied, his thoughts not on this unknown couple, but on Kevin Ball and Sano Strongblade. He had little doubt that those two were going to end up married, and since they were both Generations, that meant that their marriage was *not* going to be childless. “I just don’t get it, dear. I just don’t see how that works. If the Terran has iron-based blood and the Shio copper-based blood, I don’t see how those two vastly different biological processes can reconcile in the DNA strand as the baby develops. The fetus should, by all rights, become unviable the instant it tries to start producing blood.”

“We’ve already run tests, and we’ve concluded that the baby *will* be viable,” she said. “In the fetus’ case, the Shio’s green blood genetic trait

became dominant, so the baby will have copper-based blood, and a Shio blood type. However, the Terran genetic code for iron-based blood will be within the DNA, existing as a recessed genetic trait. But it may not be that way with another Terran-Shio child. It depends on how the DNA assigns genetic traits as dominant. The only Shio traits that are guaranteed in this child will be from the segments of the DNA that was cloned from the father to make the egg viable. There's no competing Terran gene to try to counter the Shio gene."

"What about other areas where biology conflicts? What if a nitrogen-breathing Grimja had a baby with an oxygen-breathing Jhri?"

"We don't entirely know yet," she replied honestly. "We'll have to do a lot of research to figure out just how the DNA would react to that. As you know, Generation DNA is self-repairing, and because it in some ways works like a viral structure, it's capable of considerable mutation. In the case of a Grimja-Jhri egg, it's my educated guess that the baby would inherit the ability to breathe *both* gases. Grimja biology does use oxygen like most other carbon-based life, and is very nearly a closed biological process that uses nitrogen as a catalyst to convert carbon dioxide back into oxygen within the Grimja's body. Grimja red blood cells don't give up the oxygen bonded to the iron within the cell the way Terran and Faey red blood cells do. That's why they exhale a fairly complex nitrogen carbide molecule, that fairly quickly breaks down when exposed to other atmospheric gases, since the molecule isn't inherently stable.. Grimja have an extra organ attached to their lungs that pulls the carbon off the carbon dioxide molecule and bind it to a nitrogen molecule, which frees the oxygen within the red blood cell to be used by other cells. Grimja lungs pass nitrogen to that organ, and then the organ passes nitrogen carbide back to

the lungs to be exhaled. Fueling this process is why the Grimja have such a high metabolism, and also why they can't eat meat. The proteins in meat disrupt the complex respiration process in the body if they get absorbed, so the body has a hardwired response to those proteins by trying to purge them out of the digestive tract. I'd guess that a hybrid child would have the Paruk's Organ, the organ that uses nitrogen, but also have lungs capable of direct transfer of oxygen and carbon dioxide. It would depend on how the baby's red blood cells develop as to if the child would be able to exchange oxygen and carbon dioxide across the alveoli membrane. But since the Grimja has the Paruk's Organ and the Jhri doesn't, it would guarantee that the baby would have the organ. That would clone from the Grimja parent's DNA and become part of the baby. That's why a Sha'i-ree hybrid would always have a tail, at least if she's a female. The male hybrid would have the genetic code for a tail in his DNA, and it might express in any of his female children."

"Huh," he sounded, leaning back in the chair as he looked at the holo that was hovering over her desk. "Is there any danger in the pregnancy?"

"We don't know yet, which is why we'll be keeping a very close eye on her," she answered. "I've already ordered a med-scanner to be placed in the house, and she'll be wearing a personal med-scanner that will keep very close watch on both her and the baby's condition."

"No doubt. We're getting into Frankenstein territory here," he said worriedly. "Has your initial research come up with any problems, like technically viable species that had better not try to reproduce together for fear that they produce something out of a horror movie?"

She didn't laugh, because she understood that he wasn't joking. "Not yet, but I have an entire ward of biologists on it," she answered. "We're still

trying to determine just who is compatible with who, dear. Once we know that, we can start studying the possible combinations, and determine if any of them should be avoided. What I can say is that at least within our group, the Faey-like species, we've found no such dangerous combinations. Even though we may have different colored blood, or different biological processes, or breathe different gases, or even have different numbers of limbs, we're all carbon-based life forms that utilize oxygen and glucose in our cellular metabolisms. That same basic biological foundation will allow any children produced by our group to be viable, at least in a general sense. We may run into instances where the unique genetic aspects of the parents may introduce a fatal genetic anomaly into their offspring, but we can do something about that if we catch it early enough. There are several gene therapy techniques that are approved by the Medical Service we could apply to that situation."

"So, if I had a baby with a Farguut, it would have four eyes and a tail?"

Songa nodded. "The DNA of what one parent has but the other lacks always carries through as a dominant trait in the baby," she replied. "If one parent has a tail, then the child will have a tail. If one parent has an internal organ the other lacks, the child will have that organ. But that has already showed up between humans and Faey, since all Faey-Terran children have a spleen, where we Faey don't have that organ. Our initial research only shows randomization in things like cosmetic appearance and the number of fingers on a hand, which is a matter of development. If a Faey mated with a Rathii, the baby may have four fingers or five, depending on which gene becomes dominant. The child may even have four fingers on one hand and five on the other. But the genetic code for *both* would exist in the child, and may express in the child's offspring."

“Okay, this is getting into headache territory,” Jason said, rubbing his temples. “I just hope we don’t run into any major problems.”

“I have a lot of people making sure of that,” she assured him. “From what we’ve learned so far, the reason that Generations can’t interbreed freely is *because* it would produce non-viable children. If the DNA can’t combine to create a viable child, then it won’t. But, it does mean that couples who married for love and couldn’t have children before can now,” she said with a smile.

Again, he thought of Kevin and Sano, who were deeply in love, and only weren’t already married because of Shio customs. Kevin was courting Sano the Shio way, because that was really the only way to go about it; Shio women were very, very deeply rooted in their courtship customs, and about the only way a man was going to get them to say yes to marriage was to do it the Shio way. He did feel happy for them in that their marriage wouldn’t be childless, that they wouldn’t have to adopt in order to experience the joy of having children in their lives. He just hoped that it didn’t cause them any problems, like severe genetic deformities.

He made a mental note to keep a very close eye on those two. He fully expected to hear about their engagement within about a year, and it wouldn’t take long after that for them to be expecting. So, Songa had at least a year to make sure that it wouldn’t be an issue for them.

There wasn’t very much that he could do, but that didn’t stop him from spending nearly two hours discussing the issue with Songa, racking his brain for all of the biology he’d ever learned over his life to try to understand an issue that was definitely far, far beyond his pay grade. He did it mainly for his own peace of mind, and she was incredibly patient with him, entertaining him when she could be spending her time much more

wisely. But ultimately, he gave up on the interrogation to let her get back to work, when he simply changed from discussing it with Songa to discussing it with Kemaari, then adding the CB units into it once he got back to his office. None of the CB units were what one may call specialized in medicine, each of them having equal access to the information, and none of them served the Medical Service exclusively, the way Cybi paired to the KMS, Cyvanne to KERA, and Cyrsi to the KES. He fixed that by assigning Cybri as the CBIM in primary partnership with the Medical Service, and tasked her with learning as much about the situation as possible. Given Cybri's exceedingly nurturing personality, it made her the best choice for the job. He shot Songa a quick note about that over the network, and their discussion ended almost right as Rann and Shya came into the office. Rann took off his uniform blazer, as he tended to do, and Shya was carrying Sasha as Chichi bounded around her ankles, looking a tiny bit jealous over it.

[Hey Dad. You look a little worried.]

[A bit. We just found out something pretty startling,] he answered, then summarized things for them in about five seconds, something he could have only done through communion.

[Wow, that's pretty cool,] Shya returned. *[I kinda like it. It makes us feel less and less like we're different and more and more like we're the same. Family.]*

[More or less yeah, but I'm still worried that we may have some babies born with some nasty genetic defects,] Jason told her. *[Medical tech can help with that, but it still may end up killing some babies before the Medical Service can finish treatment. And I really don't want to see that.]*

[I doubt it'll be too too bad,] she communed, her thought supportive and loyal, showing her towering respect for Songa and the Medical Service. *[I'm sure they can fix things, as long as the moms find out they're pregnant early enough.]*

[That's what I'm hoping. I can't imagine what it would be like as a parent to lose a baby. It would be...just devastating.]

[We don't have any kids yet, and even I can understand that sentiment,] Rann agreed, his thought laced with both love and fear, fear that it might happen to them. And that was a realistic fear, since Rann and Shya were sexually active, and it was always possible that Shya might conceive before 25. Pregnancies of young teen Faey were exceedingly rare because of how Faey biology worked, but it could theoretically happen.

And if it did, Jason would be overjoyed. He would gladly welcome his first grandchild.

For a moment, just a moment, it made him feel...*old*, to think that his son may soon have a child of his own. Where did the time go? It seemed like just yesterday that he was holding Rann in his arms, marveling over his head full of orange hair. But that hair had changed over time—something of a relatively common quirk among Faey—as did his body and his personality.

Chichi jumped up into his lap, then reared up and put her paws on his chest, staring into his eyes. He smiled down at her and put his hand on her head, flattening her ears a bit as he gave her a fond pet. *[You two don't wander, I want you there when I have my next meeting. It's in about fifteen minutes.]*

[Sure thing, Dad.]

Jason got a few things done before his next meeting, which was attended by a fairly diverse group. Kemaari and Miaari were there, as were Myleena, Ayuma, and Alphabet, the Ruu very nearly late. They filed in and sat down in chairs that Chirk brought in, with Rann and Shya sitting in chairs behind and to the left of his desk. Kemaari stood by his chair, and Miaari sat on the corner of his desk much like Cybi liked to do. “You’re almost late, Alphabet,” he chided.

“I was settling in at my new post,” she said carefully.

“Ayuma knows about 3D, as well as who’s in it, so you can be at least somewhat honest around her,” Jason told her with a slight smile. “The fact she knows is one reason why she’s here.”

“Ah. I had no idea you were inside the loop, Dean.”

“Not the specifics of what you’re working on in there, but I know more than most,” Ayuma said mildly. “Now, what’s so important that you call me here all the way from Terra, Jayce? You of all people know how busy I am.”

“We’re gonna need your input on this, Ayuma,” he told her, leaning over his desk and putting his elbows on it. “I’m not sure if you guys have heard this yet, so let me start by revealing something that might make my decision make more sense. Last takir, the Subrians successfully tested their first prototype Stargate,” he announced, revealing something that Zaa had brought to him.

“They finally did it,” Miaari said, her eyes widening a bit.

“Took them longer than I expected, but yeah, they did,” Jason answered, nodding in her direction. “What that means is that the Coalition’s long-term plan of not staying in the Confederation to get around the

restrictions we place on the use of our technology paid off for them. In just a few years, they're gonna be building Stargates and we'll have no real control over how they use them. It also puts them in a majorly advantageous position compared to other empires not in the Confederation. I've been expecting this to happen for a while, and I have something of an idea of how to mitigate that potential damage, to keep the Coalition from getting any bright ideas about preying on their less advanced neighbors, and the solution is to increase the level of base Confederation standard technology, make it more competitive against proprietary technologies held by individual empires.. That's why you ladies are here," he announced.

"Alphabet, I know you *just* joined 3D, but I'm gonna lean on you a little bit. I want you to head up a new research division that on paper is gonna be under the purview of the Academy. The reason for this research division is to find ways to take what Karinne tech can do and find ways to make it work using Confederation standard technology," he told her. "You'll still be working in 3D and doing the ultra top-secret projects, but you'll be splitting your time with your own elite research arm that will be trying to prevent any one empire from getting so far ahead of the others that it upsets the balance in the galaxy."

"I am Ruu, your Grace, I live to learn," she said simply, smiling. "I accept your offer. How will this research team operate?"

"That's up to you," he told her. "You're building it, both its permanent members and how you handle bringing in consultants for specific projects. I want you to find the best scientists within the Academy organization that can handle what your division will do, with the mission that they'll be working on any number of different technologies and theories. For example, one of your first major tasks will be to fully convert resonance technology

to Confederation standard, integrating it into all current technology, so that it more fully mimics what biogenics can do. Basically, Alpha, you're going to be building your own version of 3D within the Academy whose task is to produce cutting-edge technology using only Confederation standard tech, mainly with an eye on taking next-gen tech held by individual empires and finding ways to mimic it with Confederation standard technology, then release it to the general public. You'll more or less be taking over that task from 3D, letting 3D focus on new tech and applications. Then you take the result and find ways to make it work with Confederation standard tech. You'll be pulling double duty, helping develop that cutting edge tech in 3D, then taking what you learn and trying to make it work with Confederation tech. I feel that of all the members of 3D, you're best suited for this task," he told her. "Well, Myli would be, but she'd brain me if I gave her *another* job," he added dryly, which made Myleena grin savagely at him.

"Damn right I would," she agreed. "And I like the idea of it, cousin. Since Alpha's gonna be in both, she'll be best to convert 3D tech we release into the House and find ways to adapt it to Confederation tech, at least those things we feel the rest of the galaxy is ready to have."

"So you need me to set up their labs?" Ayuma asked.

Jason nodded. "Their facilities and their budget. You'll be paying for them on paper, but in reality their budget will come from us. I want them in top tier facilities that have everything they need to do their jobs, Ayuma. The best you can arrange."

"I'll have a building built just for them, on the Norfolk campus," she said, tapping her chin. "We'll have to go over what you need for it, Alphabet, so we more or less set up to your specifications. You'll be running it, so you need to tell us what you need for it."

“Mee, you need to get with Kee and arrange security for the building,” Jason told the Kimdori. “Given what they’ll be doing there, it’ll be one of the biggest targets on Terra.”

“I’ll take care of it, Jason.”

“Am I allowed to recruit members of 3D for this team, Jason?” Alphabet asked.

“Within reason,” he replied. “You can’t monopolize their time, or your own time. Remember, you’ll have your own 3D projects, and those take priority, so a lot of what you’ll be doing in your own division is delegating authority, then lending your expertise when and where it’s needed to help your projects along. But if you need consultants, then sure, feel free to bring in 3D members when you need them. But you don’t reveal they’re 3D. You don’t even reveal that *you’re* 3D,” he reminded her. “The galaxy only knows of 19 confirmed members of 3D, mainly our field ops from the war, and I don’t want that list to get any longer. And that’s another part we need from you, Ayuma. Make sure Alpha’s records conceal her moonlighting. Set her up as one of your full-time Academy researchers with her own separate lab, so she has a plausible cover story. And feel free to use that lab, Alpha,” Jason smiled. “Just don’t use it for anything 3D related.”

“Sure thing, Jayce,” Ayuma nodded.

“Of course, Jason. I can get started on it tomorrow, since I haven’t been assigned any projects in 3D yet.”

“You’re about to, I already have you on the schedule for something,” Myleena warned. “But I’ll delay that project til you’re ready.”

“I don’t see any real problems setting this up,” Ayuma injected, leaning back in her chair. “Since we’re in the middle of the expansion plan, it won’t be that hard to have a new building designed and built. In fact, I know exactly where to put it. We can move the new student orientation center that we were going to build not far from the main admin building and build the research lab there, and move the center closer to the A block dorms. That puts it close to the center of the Academy, both figuratively and literally. I think Kiaari would prefer it being close to her offices, both her official one and her real one.”

“Someday I will understand this Kimdori need to dig holes in the ground and put their important stuff in them,” he said, giving Miaari a furtive smile.

“Don’t mock perfection, Jason,” she replied primly, which made Ayuma grin.

“I’ll have the plans made for the change and send you a report on it,” Ayuma said.

“Sounds good. Make sure you run everything by Kee first, I don’t want her bitching at me then upending everything.”

“Then why isn’t she here?” Alphabet asked.

“She’s on maternity leave,” Jason told her. “She can’t leave her cubs unattended right now, so she’s running everything from her home. As a first time mom, she’s not allowed to have any nannies helping her, it’s an old Kimdori custom. So she’s handling her Gamekeeper duties from home.”

“She could at least show a modicum of common sense and take actual time off instead of trying to work,” Miaari said shortly. “Those poor cubs

aren't receiving the attention they deserve."

Jason had to laugh. "Sibling rivalry is the ugliest of all jealousies," he said slyly, grabbing her tail and tugging on it a little bit.

"What do you mean?"

"Kiaari had four cubs, which is both somewhat unusual for a Kimdori female and seen as very good luck," Jason explained. "The number four is considered the luckiest of all numbers in Kimdori folklore, and the cubs in a litter of four are seen as having tremendous potential. On top of that, her very first litter was four, which is also seen as very good luck. It's one of the few ways Kimdori are superstitious. See, Miaari doesn't like sharing her glory with her sisters, but she's especially prickly about it when it comes to Kiaari," he grinned, looking up at her. "Next thing you know, Kiaari's gonna be strutting around with her own Handmaiden's white band, and that'll make Miaari go up in flames."

She whacked him on the shoulder, which made the women laugh.

"Sister Kiaari doesn't need an even bigger head than she has now," Miaari said stuffily.

"She'll be fine, Mee, you don't have to look over her shoulder," he chuckled. "Anyway, anyone see anything wrong with the plan? Questions? Observations? Opinions?"

"I think it's a great idea, and we can have it up and running in just a few takirs," Myleena answered. "It'll take some of the load off 3D, let us focus on research and not backwards compatibility."

"I'll need access to the personnel files, Ayuma, so I can start looking for candidates," Alphabet told her. "I can get that for you," she replied.

“You’re gonna need a dedicated office in the warehouse to handle your extra duties,” Myleena mused. “I hope the others don’t get too jealous.”

“There’s room in the sub-basement storage room. I don’t need much, since I won’t be doing any real work on either side from it. A small room with a comm terminal is all I’ll need.”

“Sounds like a plan, then,” Jason said. “But I wouldn’t get too comfortable in there, Alpha. With the expansion of 3D, things are getting too crowded in the warehouse. It may be time to move the operation somewhere bigger,” he speculated. “Actually, I think it’s past time. Myli, start looking into moving us into a new facility, somewhere secure and with access to what we’ll need. If anything, it’ll give the Shimmer Dome more space if we give them back the warehouse, they can use it with the increased demand for biogenic chips. Maybe onto an island, like how we did it with Project F.”

“Actually, moving to Skeyai Island may be the best solution. The Project F facility is still there, and it’s big enough to hold all of us and all our stuff. It won’t be that hard to fortify the island. We’ll just need to upgrade the uplink there so the CBIMs have more bandwidth.” She leaned back in her chair. “I’ll look into it, put Cybi on it to see if it’s the best place, or if another site may be better. But in my opinion, I think Skeyai might be our best bet.”

“I’ll do a feasibility study,” Cybi said from the node in the ceiling. *“But I do agree that Skeyai does have a lot of potential as the new 3D facility. The same qualities that made it perfect to house Project F make it appealing to host 3D.”*

“Then we’ll leave it to you, Cybi,” Jason said, looking up at the biogenic node. “Find us the perfect place to house 3D.”

“Naturally.”

“So modest,” Jason teased. “Now then, to the last order of business, which is what I need you for, Myli,” he said. “How much data do we have on the Syndicate’s QE system?”

“What we pulled off the super-ships we captured that still had them,” she replied. “Why, what have you got in mind?”

“We need a way to communicate with the Galactic Republic in C6D in real time, without stringing a series of beacons all the way out there,” he said. “And I think that QE is our solution to that problem. So, Myli, a question. Can you design a comm beacon using quantum entanglement that’s capable of enough bandwidth to allow, say, about a thousand people to simultaneously merge to a bionoid through it? We don’t need full connectivity to the Republic, but we do need enough bandwidth to handle diplomatic bionoids and data transfers to and from the Academy.”

She gave him a bright look. “That’s a damn smart idea!” she nearly gushed. “I...I think we could do it. We may need to get more research information from the Syndicate, but I’m pretty sure we can upgrade their concept to something usable.”

“Alright, I’ll make an appointment with Dai Su to talk about getting their research and specs on QE systems,” he said, sending off a memo about it to the Galaxy Express office in the Wheel. They’d have to arrange the appointment “We have the best chance to get what we need if we go through her and Dynamax. They’re more willing to cooperate with us than the rest of the Syndicate.”

“I didn’t study the QE system overmuch,” Alphabet spoke up. “Why isn’t it viable right now?”

“Because it runs on a computer architecture that was mainstream about five thousand years ago,” Myleena answered. “Plus, it’s not easy to build them because managing entangled particles is a total fuckin’ nightmare. It’s very, very slow, and in its current state, about the only thing it’s good for is exchanging text messages back and forth between the paired units. But the theory behind how it works tells me that we should be able to adapt it to biogenic or moleculartronic architecture. Maybe we could use the entangled particles as a bridge between two systems instead of how the Syndicate uses them, just make them part of the transceiver. I’d like more information about the exact science behind how it works, the kind of stuff you can’t easily get just by inspecting a piece of hardware. I can put Siyhaa on it, if there’s anyone that can figure out how to do it, it’s her.”

“Good, because we need this, Myli, like *yesterday*. It’s getting prohibitive to set out the Stargates and beacons and defend them every time we have a meeting with the Ulala, then pack everything back up and bring it home. If we want to have any semblance of a normalized relationship with the Ulala and the Republic, we need a way to talk to them without nearly two takirs of preparation before hand.”

“I’m confident we can come up with something,” she told him. “I’ll put Siyhaa on it, and I’ll look into it myself after I finish what I’m doing on Project H.”

“I think we need to make this a full-blown project, Myli,” he noted. “I feel it’s that important.”

“No problem, I’ll set it up as Project J,” she nodded. “I’ll put Siyhaa in charge of it. Just get that data from the Syndicate as fast as you can. The sooner Siyhaa has it, the faster she can get it done.”

“I already had the GE office contact Dynamax to make an appointment,” he answered. “And usually when I ask to see Dai Su, she gets me on her schedule fairly quickly. I’ll probably have a reply back within the hour, though it’s no guarantee I’ll get to see her anytime soon.”

“Least you got it done on your end,” she smiled, then made a bit of a rueful face. “When you started cozying up to the Syndicate, I thought you were nuts. I can admit now that I was wrong,” she chuckled.

“They’ve been more helpful to us than even I expected,” he said mildly. “We still can’t trust them, but it hasn’t been as hard as I expected to get things out of them. You just buy it,” he drawled. “I’m sure Dai Su will sell me the data I want. I just have to make sure it’s a price I’m willing to pay.”

“Might I take a look at the QE data?” Alphabet asked. “Now I’m a bit curious.”

“You’re 3D now, Alpha, you have access to almost any research data you want. Just get it before it becomes part of Project J, that’s when it’ll get restricted,” Jason told her. “Just request the data through the hot 3D mainframe, it has unlimited access to any archived information that’s not flagged for a project. If you’re that curious, you can always try to get Siyhaa to put you on the Project J team. Your work history should qualify you for a project like this.”

“I just might,” she mused, tapping her cheek.

“Alright then, I’ll let you ladies get to work. I need to get back to the boring paperwork. Orrr, I’ll introduce Rann to the joys of reading my boring reports while I go play CO,” he said, casting a glance to the side. “Xen offered to take me to Madra Ban, he found a way to bring people along with him, and I’d love to stick it to Cyvanne by sneaking into the elemental planes before they’re fully open.”

“That’s it, I’m deleting Blackfang off Methrian,” Cyvanne threatened playfully.

“Oh no, I won that bet fair and square, girl,” Jason retorted, looking up and pointing at the node threateningly. “You back out and I’ll kick your ass.”

“I think this is a good time to run, Ranny,” Shya suggested, which made Jason laugh.

“We need to discuss the Subrians, Jason,” Miaari told him. “Things are going to get more complicated with them having Stargates. We should discuss things before we meet with the Denmother about it, so we’re well informed.”

“Well, there goes playing CO. Hurry up and take over my job, Rann, it’s really getting to be a drag,” he sighed, which earned him another slap.

Kaira, 9 Oraa, 4408, Faey Orthodox Calendar

Monday, 24 August 2023, Terran Standard Calendar

Kaira, 9 Oraa, year 1333 of the 97th Generation, Karinne Historical Reference Calendar

RMS Setrai, Galaxy C6D

It was hard to believe they were on a ship sitting just inside the galactic rim.

The hall was decorated in rich woods and highly polished stone, with Japanese style low tables and many cushions and pillows on the floor. The Ulala had a very Japanese mindset when it came to furniture, preferring a very minimalist outlook where only furniture that was absolutely necessary was used. There was no such thing as a chair in a traditionally decorated Ulalan room, and all furniture that was used was designed to be accessible for an Ulala who was either standing or sitting. The grand dance hall that was hosting the party of the four related species held tables for food and low wrought iron stands holding torches, with cloth banners, bunting, and streamers hanging from the walls and columns, the colors bright and bold. Ulalan preference for bright, rich colors was very Indian, and the style of their furniture reminded him of Japan, and their manner of dress was almost gypsy. The Ulalans themselves were a people that enjoyed life, who were quick to smile and laugh, and were friendly, kind, and caring, and they made their Milky Way and Andromedan cousins feel very welcome among them.

The Ulala had gotten quite used to the quirks of the Faey and Terran members of the KES assigned to the cultural exchange program, but this was their first real exposure to the Dreamers. It was a bit interesting to watch the very extroverted Ulala interact with the very socially reserved Dreamers, showing that while they were closely related genetically, their cultures were very different. While Aria was an outlier among her people thanks to living in Karinne society, the average Dreamer was quiet,

reserved, modest, and unassuming. They weren't afraid to talk to people, they just had deep-rooted customs about acting with decorum and respect when dealing with strangers and outsiders.

He'd sat during dinner and listened as Estrella had quite a deep and involved conversation with Edamur, one of the Dreamer Elders that had agreed to come meet their Ulalan cousins. He'd been quite up front about how their culture was built on their precognates, the origin of the very name of their people, the Dreamers, and that their society was arranged around understanding the prophetic dreams experienced by a sizable segment of their population. Estrella proved her diplomatic chops by quite thoroughly charming Edamur during their conversation over what tasted suspiciously like seasoned, fire-roasted pork cutlets, proving that the Ulala had some accomplished chefs among their number. She was just as open about her own people, answering any question that Edamur posed.

They'd sent full spec bionoids for this party, giving them ability to eat and enjoy the banquet, and also show the Ulala some of the capabilities of bionoids that they'd researched. The Republic had access to nanite technology, so they weren't revealing any huge secrets when the bionoids were scanned by Ulalan sensors when they arrived. Each one was custom, accurately representing the person driving it from their home galaxy, something that Estrella asked almost immediately upon seeing Edamur, since his skin tone was similar to an Ulalan's. Edamur was a bit darker and lacked the coppery undertone of an Ulalan, but it was close enough.

It wasn't only relatives here, however. Several other species were represented from both the KES and the Republic, including Captain Saruki from the *Astra*. The Crai certainly stood out in the ballroom due to both his reptilian body and his height, but he was quite the polite gentleman,

resplendent in his KES formal dress uniform. Aides and delegates from other species that made up the Galactic Republic were also attending the ball, but no other members of the Supreme Council were in attendance. That was by design, as Estrella was the Council member that was responsible for their relations with the Karinnes, and the other members would consider it to be stepping on Estrella's toes if they were here.

Estrella was a master of the social game, able to easily weave light conversation in with questions that were designed to dig for information, and she'd been focusing on Edamur because he wasn't a member of the KES. She had her white hair tied back away from her face with a gold-trimmed red ribbon, silver and gold chains woven in among the bone white locks, and she was wearing a series of gold chains connected by rings that overlaid the rather skimpy bustier she was wearing, barely more than an bikini top that showed off her expanse of flat, toned midriff, though most of it was hidden by the rich, polished dark wood table. She was sitting with Jason to her right, him occupying the seat of honor at an Ulalan's table, at the right side of the party's host.

The reason for that was simple. In a reverse from Terrans and Dreamers, the vast majority of Ulalans were left handed, so putting the guest of honor on the right side of the host made sure the guest wasn't jostled by the host while eating. There wasn't much room between them at the table, which looked to be quite normal for them. That worked for him, since Jason was also left handed, and he rather liked not being the odd man out as he was among his own species.

Not so much among the Faey. The Faey were almost evenly split down the middle when it came to hand dominance, so their furnishings and such weren't designed around people who were predominantly left or right

handed. That generic design made it much easier to operate in Faey society for someone like him. Among the Faey, he wasn't subject to everything being designed for the convenience of his right handed overlords.

While he was left handed, being the Grand Duke had taught him how to be effectively ambidextrous, mainly because some cultures and societies saw using either the left or the right hand as rude or taboo. The Strega, for example, would be highly insulted if someone offered their left hand to them, or offered them anything they were holding in their left hand. So, anyone that interacted with them culturally had to learn how to do everything right-handed to avoid causing offense, and Jason had to learn how to eat and function as a right handed person when he dealt with them. He also had to learn to fight right-handed because the original Mark I Titans used during the Syndicate War only had the melee shield on the left arm of the mecha, forcing all pilots to use weapons and monomolecular blades with the right arm while employing their shield. Newer Titan models had shield units in both arms, once they managed to miniaturize components to make enough room for a the generator to fit in the right arm unit, so that problem didn't exist anymore.

Besides, Kyva had drilled it into his head that there was no such thing as a *dominant hand* when it came to fighting. If you couldn't do absolutely anything with either hand or leg, then you were crippled by your own limitation. Kyva was fully and completely ambidextrous, and she wasn't born that way. She'd trained herself to be ambidextrous, and it showed itself mostly in her preference to fight with two weapons in hand to hand combat.

Jason had taken that lesson to heart, both on the battlefield and in his personal life.

Jason had often found it interesting that the three closely related species genetically, Terrans, Dreamers, and Faey, could have different inclination when it came to hand dominance. Terrans and Dreamers were mostly right handed, Faey were evenly split between right and left handedness. And now the Ulala were added to the mix, who were mostly left handed. And yet all four species were so closely related genetically that they could produce children together, which told him that when it came to hand dominance, it had to only represent an extremely tiny segment of a species' genetic makeup, part of the very small variances between the four races.

Another curiosity was that the Ulala used wooden chopsticks with sharpened ends rather than forks, chopsticks that were tied together at the top with a little red string for some reason, like a tiny little pair of weird nunchuks, the string only about three tikra long. They used them like forks for things that could be pierced and picked up, but also used them like conventional chopsticks for picking things up that weren't conducive to being forked, like noodles. It was definitely a little odd, especially since Estrella was more than able to use them like a fork and hold down the cutlet while she cut it with a knife, then used them like regular chopsticks to pick up the cut meat and bring it to her mouth.

It was like spork chopsticks, and they were very curious and rather ingenious.

She used the chopsticks with her left hand, and used the knife with her right, where he would usually used a knife with his left hand when cutting meat. He supposed it was because chopsticks weren't exactly easy to use to begin with, and using them in the off hand would be even trickier for someone who didn't go out of her way to learn to do it. So, the Ulala used a

knife with the right hand when using chopsticks with their left.

Though, he noticed that all Ulala did the same, even those that had to be right handed. He doubted that every single Ulala at the table was left handed. So perhaps using chopsticks with the left hand was a social custom and not a matter of hand preference.

Well, he felt a little sorry for right-handed Ulalans now. Using chopsticks took a lot more practice than using a fork, and it looked like it was a social custom to use them with the left hand, their off hand.

Of course, not everyone was following Ulalan custom. Aria was holding them in her right hand, at least after having the foresight to cut her cutlet up into manageable pieces before switching the chopsticks to her right hand. She knew how to use chopsticks thanks to all the Chinese restaurants around Karsa, so she wasn't embarrassing herself. Like him, she was adapting to the idea that her chopsticks ended in sharp points, like trying to eat using two sharpened pencils for chopsticks, which were very different from the chopsticks they used at home.

It was a great example of how cultures could be similar to each other, have similar practices, but also different. Each taking an idea shared by others, cultures they'd never even met, and making it their own. In this case, it was the concept of chopsticks.

"You really must tell me the story of how you came to live with Jason, Aria," Estrella said after Edamur finished his rather exhaustive description of how the Dreamers recorded their prophecies.

"I, uh, it's a rather long and involved story," she said hesitantly.

"Aria is a procog, like Elder Edamur," Jason said evenly. "She came to live with me after I rescued her from a government called the Syndicate,

that used the Dreamers to predict future events so they could win wars.”

“So, you have had military confrontations.”

“A couple,” he replied. “Mainly from the galaxy beside ours. Much like you have your issues with the Bru, we had issues with two empires from another galaxy in our cluster. But that’s all over now. We’re at peace with both of them. Those wars are what caused the Confederation to come to be,” he added. “It was the threat of the Consortium, and then the Syndicate, that convinced the assorted empires of our galaxy to band together in common defense against their invasions. Thankfully, we’ve all realized that we’re better off together than we are alone, so the Confederation has endured despite the reason that it came be has passed.”

“The Grand Duke is known as the Phoenix among the Dreamers, and has been part of our prophecies for over a thousand cycles,” Edamur added. “It was prophesized long ago that he would come and free us from our oppressors and bring us to Tir Tairngire, our promised land, where we would live in peace and happiness. And I am lucky beyond measure that I was alive to see it come to pass.”

“Oh really? That must be quite a tale,” Estrella said, looking back to him. “I could certainly see Jason as a heroic warrior, riding on a noble steed as he rides to your rescue.”

“Be nice, Estrella,” Jason murmured, which made her chuckle softly.

“The Grand Duke is very much the warrior you envision,” Edamur told her. “He is the Phoenix,” he added, as if that explained everything.

“And what does that title mean to the Dreamers, Edamur?”

“It is not a title, Estrella, it is a name. A name has power among our people, has deep meaning, as it represents not just who a person is, but *what* he is. The name Jason was the name given to him when he was born. The name Phoenix is the name of his soul, given to him when fate wove him into its design. Those for whom fate has given purpose are named by it when their purpose is determined, and our dreams reveal those names to us. We all have names given to us by fate, but they’re not always revealed by the dream,” he explained. “Fate likes to conceal far more than it reveals, and even what it does reveal is not always clear or direct. It often takes the study of the dreams of many of us to fully see the scope of fate’s design, which is why we’re so careful and methodical about recording them.”

“It sounds like the Dreamers believe in destiny, a concept not followed by the Ulala.”

“Fate is not destiny, Estrella, so your people are in the right to not believe in destiny. The future is not set. The future can be foreseen, but not foretold. There are dreams of the future we work to bring to fruition, and also ones we strive to prevent, for fate’s design can be a warning as much as it is a promise. And both can be unraveled by pulling a single thread within the weaving,” he intoned, taking a professorial tone. “Fate shows us what can be, what may be, and leaves it up to us to either embrace it or oppose it as we will.”

“That is absolutely fascinating,” Estrella said earnestly, looking back to Edamur. “And all of your people are telepathic, like us?”

He nodded. “But not all of us dream,” he added.

“But the Terrans are not?”

“No, we’re not telepaths. We’re the odd ones out in this strange little family,” Jason said lightly. “The only telepaths among the Terrans actually have Faey ancestry, from an incident where a small number of Faey came to live on Terra about eight hundred standard years ago, by the Republic calendar. I’m a telepath because one of my ancestors was one of those Faey, which is also why I’m the Grand Duke. When the House of Karinne was destroyed in the Faey Third Civil War, one of its nobles fled to Terra to hide. Aaaaand, that Karinne was my ancestor,” he admitted. “That gave me a claim to the House throne and let me reform the house.”

“Ah yes, I remember reading about that in the history archives you sent us,” she said, taking another bite of her cutlet. “The Imperium is a monarchy, and that war brought the current dynasty into power.”

“The Merranes,” he nodded.

“And that the House of Karinne seceded from the Imperium.”

“That was by mutual agreement, at least after a lot of convincing,” he said wryly. “The House of Karinne needed independence in order to do its job as administrators of the Academy, to prove to the galaxy that the Academy would be completely neutral. It took me a while, but I eventually convinced Dahnai that it was for the best.”

“The queen?”

“Empress,” he corrected absently.

“I would hope to meet her someday,” Estrella mused.

“I think you’d like her,” he said mildly. “She’s still one of my closest, deepest friends on top of being one of the allies of the house. Our split from the Imperium was amicable.”

“And she’s the mother of my sister Raisha,” Aria added lightly.

“And that,” he agreed blandly.

“So you and her are more than friends?”

“I’m not sure there’s an equivalent to it in Ulala society,” Jason told her. “It’s called *amu*. She’s my *amu dorai*, which doesn’t really have a translation into Republic Common or Ulalan. It’s best described as a long-lasting romantic relationship that exists outside the pair bond. Me and Dahnai a deep, loving relationship, but we’re not pair-bonded or married. In Faey society, someone can love more than one person without violating the telepathic pair bond. My love for Dahnai doesn’t change my relationship with my wife Jyslin. Faey are very accepting of the idea of *amu*, they believe that the heart has the capacity to love more than just one person. In many ways, they celebrate it as a very romantic concept, and a great deal of Faey literature is about *amu*, far more than about traditional marriage.”

“Yes, we have something similar in Ulala society,” she nodded. “But it’s fairly rare. A woman who commits to a man is expected to honor that commitment.”

“Faey society is a little more open than yours, from what I’ve read,” he told her. “Terran society is far more conservative than them, on par with the Dreamers.”

“There’s nothing wrong with that. What matters is what matters, as the Praxians say,” she smiled. “I’ve always taken that to mean that so long as your culture accepts what you do, then what you do is acceptable.”

“A wise saying,” Jason said with a nod.

After the meal, the moment Jason had been dreading arrived, when he and Estrella performed one of their traditional dances. He and Estrella squared off in the center of the dining hall as everyone watched, clapping along with the music as it began, and he very nearly had the bionoid's AI system take over. But he manned up and began the dance, and was almost shocked that he managed to get through it without tripping over his own feet. He certainly didn't perform it flawlessly, but at least he didn't completely embarrass himself, either. She looked quite pleased after they finished, taking his hand with a bright smile, then leading him out of the circle as another dance began, one meant for groups. She led him out of the chamber, and they talked of less important things as they walked along the passageways of the ship. They eventually ended up on an observation deck, where they looked out over the uninhabited star where they were meeting, a red dwarf that had an extensive asteroid belt orbiting it at relatively close distance. The Republic had a presence here, with several mining operations set up among the larger asteroids in the belt. Jason really, really liked Estrella, and it wasn't the first time that they'd snuck away from the official proceedings and just hung out and talked. He'd learned a great deal about her personal life. Estrella wasn't married, which was a requirement for an Ulala to be a politician, but she did have a man in her life that would be her husband were she not a politician. She had four children, two daughters and two sons, all of which were grown and out of the house, which honestly shocked Jason. She didn't look old enough to have one adult child, let alone four, and it proved that the Ulala shared the Faey attribute of aging very gracefully. Estrella was warm and earthy, a perfect balance of political propriety and cherubic naughtiness, someone who understood her position but didn't take it all that seriously, and that made her exactly the kind of politician Jason liked the most.

She was leaning on the rail, playing with one of the ever-present slim golden bracelets on her wrist, which were a cultural practice much akin to the Jirunji's wearing of feathers that denoted the accomplishments that Jirunji had achieved. Each of those bracelets, and also the anklets she wore on her legs, told a story about Estrella's past, and the number of them on both her wrists and ankles made it clear she had quite a long history filled with success. Those metal rings served an additional function of almost sounding like jingling bells when she danced, as they rattled against each other on her arms and legs as she moved. It was almost a joke among the Ulala that a successful Ulala was never going to sneak up on anyone, since they made so much sound when they walked. "Have you given the Republic's offer consideration?" she asked, looking over at him.

"Yes, and I'm not inclined to agree to it," he replied. "I keep the Republic secret from the rest of my home galaxy for a *reason*, Estrella. Not because of you, but because of *them*. I'm absolutely certain that if they knew about you, they'd get us into a war with you within ten years, all manufactured to give them the opportunity to get their hands on your technology."

"How are they going to get here?"

"They won't. They'll get you to come to them, thus why it's vital to keep you separate from them. If they don't even know about you, they can't engineer an atrocity big enough to incite you to declare war and send ships to exact revenge for it."

"My, I had no idea things were so exciting in your home galaxy," she said lightly, putting her hands on the rail behind her.

“We’re all uneducated barbarians, Estrella, and more than a few of them have way too much aggression stuffed in their pants for me to trust them. But, I am working on something that the Supreme Council may find to be an acceptable substitute.”

“What is that?”

“I’m having some of my best people look into using a technology that deals with quantum entanglement theory to build a comm device that will let us talk to each other in real time,” he answered. “We’re hoping we can come up with something that has enough communication bandwidth to operate a bionoid across it, which will solve a whole lot of problems. It takes a hell of a lot of planning and ties up a lot of my resources to arrange these meetings,” he reminded her. “You see the few hours we’re together. What you don’t see is the nine days it took to set everything up and the nine days it’ll take to take it all apart again.”

“Quantum entanglement. I’ve heard that somewhere before,” she mused, tapping her cheek in thought.

“It’s a relatively uncommon branch of quantum physics. Simply put, how it works is that you can connect to quantum particles together in a way that changes in one cause the same changes in the other, no matter how much distance there is between them. The Syndicate used QE devices to communicate with their ships in real time between their galaxy and ours when they invaded, and I’m going to see if I can get more information about the technology from them.”

“You have diplomatic relations with them?”

“It’s a bit murky, but yes,” he replied. “When it comes to the Syndicate, they don’t hold grudges, and they don’t really care about

anything except making money. I can buy the information I want from them, and they'll sell it to me. They don't care that we were at war just a few years ago. All they care about is profit. It was the potential to make profit that caused them to invade our galaxy in the first place," he grunted. "Once they realized that fucking with us was a money-losing proposition, they ended the war. And now they're willing to sell us anything we want from them. As long as they make a profit, they don't care."

"My, they sound...lovely," she said darkly.

He chuckled and nodded in agreement, leaning on the rail beside her. "They're complete honorless snakes and you can't trust them in any way, but you *can* deal with them if you understand how their society works, and you have very strictly defined objectives that allow you to focus your interaction on advancing that one goal. And I have to say, not all of them are completely brainwashed by their society. There are a few Syndicate citizens that I can honestly call my friends," he said earnestly. "And I have a good working relationship with a member of their governing body, a political entity known as the Board. It's to her that I'll take my request for more data about their quantum entanglement technology, and she'll sell me what I want. And if it comes from her, I'll trust that what I get is exactly what I asked for. She's never once tried to backstab me in a business dealing, so there's a tentative measure of trust between us."

"I think we may have some information about that ourselves," she said. "I'll ask the Technical Division if there's any information they can contribute to your cause. Since the Supreme Council has made it a priority to normalize relations between us and you, I might be able to convince them to hand it over. Establishing continuous real-time communications with your people will go a long way towards normalizing our relations."

“It’ll help,” he said honestly. “Given your people are far more advanced than we are, I dare say any information we get from you will be far beyond what I’ll get from the Syndicate. I have my best people on this, so I’m fairly confident they’ll come up with something that’ll work. It may not be perfect, but it’ll definitely do what we need it to do. The more data they have to work with, the faster they’ll come up with a solution.”

“I’ll make a few inquiries, Jason,” she said. “If anything, I’ll try to convince the Supreme Council that we should cooperate on this project, allow us to work together in an official capacity.”

“That might be hard since we can’t leave the beacons out to let our people use bionoids out here, and we can’t really bring you home with us. There wouldn’t be that much of them left by the time they got there.”

“No, but you can send your people here,” she said.

“Yeah...no,” he said. “I trust you, Estrella, but the rest of the Republic hasn’t earned that much trust from me yet. One of those best and brightest also happens to be my best friend, as close as a sister and all but a member of my family, and no way in hell am I going to put her in any potential danger. What I can do is arrange to have my people send you regular updates and you have your people do the same. Have two separate research teams trying to accomplish the same objective, and they’ll share their data so they help each other.”

“I think I can talk the council into accepting that proposal,” she said. “But I think we can get our people there safely. You said that the Syndicate used suspended animation technology to allow them to cross to your galaxy. We have something similar in our medical technology we could adapt. We *could* send some of our people home with you.”

He sighed and looked over at her, crossing his arms. “I haven’t told you everything, Estrella,” he told her honestly. “There is a very, very, *very* important reason why I can’t do that. It’s something that I can’t tell you yet, not until we’re absolutely sure that you learning the truth of things won’t cause a war. All I can say is that if you value your relationship with us and you want it to continue, you will convince the Supreme Council to drop that idea. If they press the issue, we’ll sever all ties with the Republic, and you will never see us again.”

She was silent for a long moment, then looked over at him. “It must truly be a grave matter.”

“It is. To put it simply, my friend, I’m doing this to protect *you* from *us* far more than to protect us from you,” he replied. “If you had direct contact with our galaxy, as in you had people there, it might destabilize the entire Galactic Republic and plunge you into civil war, or it might set off a war between the Republic and the Confederation, or cause total war to erupt in my home galaxy. The balance of power among the empires in my galaxy is delicate, and it could easily be tipped by an outside force. We both need more time before we reach that step, time for me to determine if you being exposed to us won’t destroy the Republic, and time to make sure that you being in our galaxy won’t completely destroy the balance of power that keeps everything peaceful. I know that sounds outlandish, but understand that I speak with complete honesty when I say that it is entirely possible.”

“Can you explain with more detail than that?”

He was silent a moment, then looked up at the ceiling, his expression neutral. “Imagine, for a moment, that you’re out exploring some part of this galaxy that for some reason has never been visited before,” he began. “You come across a star system with a habitable planet, and on that planet you

discover a species of intelligent beings. They're still in their stone age, this species, and they're peaceful and friendly, amenable to you when you come down to visit them. But, while you're there visiting them, you discover that this species of primitives that use rocks tied to sticks can do magic. *Real* magic. What they can do defies all physical laws. What they do should be impossible according to everything you've learned, everything you believe. Yet they can. You see it with your own eyes, you have no doubt that they can do what you see them do. You have a nice visit with the species, and find that they are a simple, kind, gentle people, who have no interest in conquest or war and don't use their magic as a weapon, only as a tool to assist them in their daily tasks and increase their quality of life. But, despite how they use their magic, you can see that it very much *can* be a potent weapon, in the hands of those who are willing to use it for violence. In some ways, it can stand on even ground with your technology, at least on a small scale. You can see that a landing party sent to the planet would stand no chance against them if things became violent, but they would be utterly defenseless if you sent a fleet of ships to bombard the planet from orbit. You come back to your ship, but you find out that now *you* can do magic too," he said intensely. "Just being on that planet, among those people, has given you the ability to use their magic, but you don't know how it works. Now, Estrella, what do you do? Do you say and do nothing to protect the planet and its people from those who would flock there to seize that power for themselves? Do you go back to the planet to try to learn how the magic works, keeping them secret from the rest of the Republic? Do you to take over the planet for the Ulala and use it the power it gives you for your own benefit?

“And what would the Supreme Council do if they found out about it? Would they send people to study the magic, learn how it works, fully

knowing that every person they send to the planet is going to get changed by it, which introduces magic into the Republic's general population? Do they conquer the planet as part of a plan to eliminate the Bru threat, empowering their soldiers and subjugating the peaceful race there to force them to train their soldiers how to use the magic? Do they quarantine the planet, forbidding anyone from ever visiting it again? Or do they destroy the planet, to ensure that their magic never falls into the wrong hands?

“That is the dilemma you face if you pursue the idea of sending people to my home galaxy, because just being there runs the risk that exposure to us is going to change them, and change them in ways that you may see as a threat to the Republic,” he said strongly. “You coming to our galaxy in person, it could conceivably create a scenario that might destabilize the entire Republic. It might cause the Republic to try to invade our galaxy to conquer us, to take our magic for themselves and force us to teach them how it works. Until I can determine just how the Republic and the Supreme Council will react to the magic that the people in my galaxy can wield, I have to be very, very careful..”

She was quiet a long, long time, then took a breath. “So, would this magic have something to do with the fact that the genetic profile of every living crew member on your exploration ship has an unusual commonality, exhibiting aspects of both cellular and viral biology? We found that to be quite puzzling, since you have so many different species on your ship. Yet every single one, no matter how disparate their genetic makeup from one another, all display the same unusual viral aspects, something we've never seen before.”

“It just might,” he acceded. “The magic we can do has changed us in some ways. And that's why it's safe for you to interact with the crewmen of

the *Astra* in person, because the only way you can be changed to do the magic is to be exposed to the force that creates that change. That can only be found in our home galaxy.”

“Which somehow alters your biology to introduce aspects of viral biology into you.”

“Magic is a force of mystery, Estrella. There’s no telling how or why it does what it does. You can only accept the fact that it does what it does.”

“So, the truth of the matter is that there exists some kind of retroviral agent in your galaxy that alters your genetic code and gives you abilities of some sort, and the lingering trace of it is detectable to our bio-scanners,” she surmised.

“Just about,” he admitted. “You can’t come to our galaxy because you may get changed by that agent, which will give you the ability to use our magic. And if you do gain our magic, it’s going to change you and your people in ways that may destabilize the Republic. There’s no telling how those who gain our magic will act when placed in a situation where they come to believe that they are *superior* to those around them. It’s something that very nearly tore my home galaxy apart, and we carry that bitter lesson with us in all interactions with civilizations outside of our galaxy. We hide our magic in order to prevent hostilities from erupting with those we meet in our explorations, from those who would either fear us for what we can do or covet our magic and try to take it for themselves. We’ve learned the hard way that it’s best to keep our magic a secret, but since you are our cousins, those normal rules don’t apply to you. We don’t want to be evasive with people who we see as family, but we still have to be careful because it’s not just *you* in the Republic. To hide something like that from those we seek to trust us would be a terrible way to go about it, but we have to be very

careful because it's not just those we see as family that are going to hear what we say to you. So, in the interests of establishing stronger relations with our Ulalan cousins, I'm being far more frank and forthright than I'd be with just about anyone else, even within the Republic, and trusting that your strong relations and trust in your allies doesn't come back to bite us in the butt later on. That's why I'm telling you what I can without telling you everything, because while I trust you and the Ulala, Estrella, the rest of the Supreme Council has not earned that same trust. At least yet," he added. "I'm willing to give them the chance to earn that trust, if only because they are your friends and allies. But if you weren't here, weren't part of the Republic, then I would have never said a word about any of this. I would have simply stonewalled their offer to send Republic scientists back home with us. And if they pressed the issue, I would have walked away and ordered the KES to never come back to this galactic cluster, completely washing my hands of them."

She was quiet for nearly five minutes, her arms crossed beneath her breasts, then she looked over at him. "That explains quite a bit," she said. "We could tell that there was something you were hiding, and our sensors made it clear that your people were...unusual. Your telepathy is something we've never encountered before, it's like there's more than one mind inside you, all of them using telepathy at the same time, and it's so alien that not even our high bandwidth resonance nodes can decipher it. And every single member of your crew exhibited that same property, no matter what species they were. Every single one is a telepath, and every single one shares that strange ability to use telepathy...in a non-linear fashion, like a chorus of voices, each singing a different part of the song simultaneously, which creates a cacophony that confuses the ears," she said, groping for the right adjective. "Is that related to your magic?"

“It is,” he said calmly. “But it’s not the only way our magic has changed us.”

“And what other magic can you do, Jason?” she asked, almost winsomely.

“I won’t reveal what I can do until I can trust that that information won’t start a war between us,” he said calmly. “Until then, both your people and mine have to walk a careful path in order to reach that goal.”

“Alright, I can accept that. In the meantime, I’ll try to explain your trepidation to the Supreme Council. Until then, I think I can talk them into sharing what research we’ve done on quantum entanglement theory,” she said. “We can both set up a research team to develop a quantum communication device to let us communicate in real time. And we’ll see who makes a breakthrough first,” she said liltily.

He chuckled. “I guess competitiveness runs through every branch of our unique little family,” he noted lightly. “Once we get our hands on the Syndicate’s data on the subject, I’ll have it sent to your team so they can study it. I’ll put Cyrsi on it, this falls under her purview as the head coordinator of the KES.”

“Cyrsi. She’s...unusual,” Estrella said, looking over at him with her lucid green eyes, a hue not far from Jason’s own. “She’s a charming young lady and I’m very fond of her, but she’s...she’s...odd. I can’t quite put my finger on it.”

“Well, that proves that you’re observant,” he noted dryly. “Let’s just say that she is a very, very special and gifted young lady, wise beyond her years and more capable and dependable than you could ever imagine. The fact that a woman as young as her is in charge of a mission as important as

this should tell you how capable she is. That kind of talent would no doubt make her seem different from everyone else.”

“Is that *her* magic?”

“Cyrsi’s talents have nothing to do with her magic. It’s all just natural potential,” he said proudly.

“I’m not surprised. I can tell from our talks that she is an exceptionally intelligent young lady.”

“That she is,” he agreed.

She smiled over at him. “I think we should wander our way back to the party, before they miss us,” she suggested. “We need to discuss your joint research offer with Cyrsi, so she might get things moving on your end of it.”

“Of course,” he said, standing up off the rail and offering his hand to her. “Shall we?”

“I’d be honored,” she smiled, taking it.