Chapter 16 — Digital Life

"I'm not sure you quite understand what you're asking," Cato told the two Sydeans as they rode the warframe back to town from the Gold-rank dungeon they had just conquered, fulfilling one of the requirements for their Gold-rank quest. He knew that someone would ask to become postbiological eventually, but it had still managed to surprise him. "Scratch that, I *know* you don't. It's not like a System Skill. What I do is an entirely different mode of existence."

"Are you *sure* you're not a god?" Raine asked, muzzle twisting into a sort of a smile. Cato was glad that she had relaxed enough to be able to joke with him, but at the same time that made it much harder to maintain the distance he should. He really had nobody he could just chat with, let alone dared poke fun.

"Absolutely certain," Cato assured her. "But my people took a long time to adjust to the way digital consciousness works. It wouldn't be like before, where you just woke up after dying. There would be, or at least could be, multiple versions of you. Still you, but completely independent. There wouldn't be an original, there wouldn't be a version of you *in charge*. You'd all just be *you.*"

"So wait, you're a different person than the one we first met?" Leese asked, clearly uncertain.

"Not quite," Cato said, clambering up a steep, rocky hill, his claws digging into the stone. "The caveat is that I share experiences between the various versions — in fact, my various selves merge together. It's called reconciliation, and keeps us roughly synchronized. So I'd say it's closer to one person in many bodies, but that's a choice I make." He topped the hill, and scrambled down into the valley beyond, where the town lay.

"Many people think this sounds straightforward in theory, but when it comes down to it, it turns out each version thinks they are the real one," he warned. "Because they are. It can absolutely drive people insane. I can offer you the same sort of hardiness that I have, but it won't be one mind in many bodies. You need to either resign yourself to having multiple versions of yourself, or being restored from backup every time and having to start all over. I wouldn't even dare try to integrate multiple versions of you, not without a lot better understanding."

Under normal circumstances he wouldn't have entertained the idea of digitizing people who weren't properly prepared to begin with, but he had some fairly harsh problems in the very near future. There would be thousands, maybe millions of versions of himself spread throughout the System, and he couldn't count on finding a native on every single world to help him.

Even on Sydea, once the System failed it would be a multiple-century endeavor to stabilize them. He'd need Sydeans who were allies, not subordinates, who could take control of such a massive undertaking and do right by their species. He intended to offer that role to the Platinums, simply because they actually had experience leading their race, but they shouldn't be the only ones.

Leese and Raine looked at each other, having some high-speed conversation from body language alone. If Cato had to guess, their bandwidth compared favorably to the microwave glands he used for this own bodies. It never paid to underestimate the unaugmented.

"I still think we want it," Raine said. "If the *other* versions of us have to start all over, that should be fine, right? It's not that much work."

"And we have to go offworld for the Gold quest," Leese added. "With all that's going on, it might be a good idea if we also stay behind."

"That is remarkably farsighted," Cato said after a moment. It was obvious that the sisters had been doing a lot of thinking about the implications of what Cato wanted and what he could do. Anyone who considered the full scope of his plans would be able to conclude there were going to be versions of him heading out of Sydea — and not coming back.

"Well, you're fortunate. It should be fairly easy, since I've already augmented you," Cato told them, slowing down as he approached the town. Like most of the smaller settlements across Sydea, it had less brutalist buildings surrounding it where Cato had dropped the new dwellings. "That makes it a lot easier, especially since I can't augment people without cutting them off from the System. Found that out with Dyen."

Such a reset wouldn't be a problem for Coppers or the very young, but Cato was leery of offering that particular option. He didn't want to create a substitute power hierarchy based on getting into his good graces. It was a messy situation though, and he had nobody who could give him a perfect answer.

"I'm surprised you agreed so quickly," Leese said, sounding a little suspicious.

"You two were already on the short list of who qualifies," Cato told them frankly. "I didn't offer it up front because it's *far* too tempting. Someone might turn down a better body, but most people would sell their souls for a shot at immortality. I'd appreciate it if you didn't spread it around."

"We can keep a secret," Raine assured him. The warframe could sample the chemicals their bodies were producing, and even if they didn't look it both the Sydeans were anxious and excited. "In fact, if we can get through the portal unnoticed, nobody would even realize. With the experience we've already had, getting back to peak Silver is something we can do in a day."

"It's worth a try," Cato agreed, a little surprised they were so ready to indulge in that kind of skullduggery. "But you realize that means you won't be able to say goodbye to anyone. Even if there's another one of you here, that won't affect what you personally experience." Cato snorted. "It gets confusing to talk about, but I'm sure you see what I mean."

"We don't really have anyone we know," Leese admitted. "Cormok is dead, Muar's gone off wherever, and almost all the others we ranked up with are either dead themselves or just in some town somewhere."

"I see." He should have known; even in a peaceful society with proper communications it was easy for people to fall out of contact with each other. In the System, where early deaths were common and long-distance messages were difficult, it shouldn't be any surprise people ended up disconnected. "Before you head out, I'll need to make some preparations, since I can't go with you like this. Whoever is in charge of that world on the other side of the portal seems to have blacklisted me. We'll need to be more discreet."

"You attracted the attention of the Deity there?" Raine frowned, flexing her hand and making a fist before releasing it. "That could be a problem. How do you hide from a god?"

"I have some ideas," Cato assured them. "So long as *you* aren't suspicious it should be fine. There are still some Sydeans going through the portal, though admittedly not as many as I thought there'd be."

"The further you get from your homeworld, the more expensive it is to get food for your race," Leese explained. "It's easier at higher ranks, since you don't need to eat as much, and I've heard at Bismuth it stops mattering entirely.

"That could be a problem," Cato said thoughtfully, considering the logistics of it all. At least it explained why everyone didn't simply leave, especially given that it seemed Sydea was poor to begin with. "Warframes can eat anything, but that's not something I can release into the System."

"We have plenty of money," Raine said as Cato stopped by one of the buildings. "Thanks to your equipment and the rewards from fighting a full rank up, we're far ahead of normal Silver rankers. Just pack a bunch of those rations and we won't even need to buy anything for weeks. Maybe even months."

"Easily done," Cato said, the smaller version of himself stretching out and jumping off the saddle. Leese and Raine followed, easily making the drop with their enhanced bodies and peak Silver rank, and transferred the bags holding equipment and resource drops to the smaller warframe. "It'll be hours yet before I can drop down the hardware, if you're absolutely certain."

"We're certain," the two said, nearly in concert.

"Very well," he said with the smaller warframe, following Raine and Leese into town. "I'll send it down when I can."

His warframe trailed the two as they went through the System stores, selling what they'd picked up while the larger warframe took the chance to get some sleep. As he had warned Raine and Leese, even if it seemed like he was a single mind controlling multiple bodies he really wasn't. Each of him had to deal with his own thoughts, attention, and necessities like sleep. The Sydean frame had to deal with normal hunger, thirst, breathing, and other such bodily functions as well, even if the warframes didn't. Trying to deal with all that with a single mind wouldn't have left him with any focus for anything else.

The Sydean Cato was in Onswa's office atop the nexus in Kalhan City. Onswa and the other Platinums had spent most of their time since the orbital bombardment rounding up offworlders of various species and escorting them back through the portals, which had been an interesting thing to witness. It wasn't Cato's business how they went about it, and given what he'd seen there wasn't much objection he could make to any of them being particularly rough with recalcitrant offworlders.

What Cato had primarily been focused on for the entire process was the System Interface. Onswa was using the world map to find all the scattered non-Sydeans, since the Interface had direct access to what the System knew. It confirmed that, at least to some extent, the System only cared about the zones people were in rather than their precise location, and given how large some zones were that was imprecise indeed, but that was still good enough to find most of their targets. Especially when coupled with orbital surveillance.

What caught Cato's attention about the Interface was that did not act like a purely reactive program. There were clearly limitations – it couldn't simply activate itself – but the information it had ready when Onswa brought up a topic demonstrated that it was both aware of the conversations within the office and could act upon them. That, more than anything, convinced Cato it was intelligent.

The denizens of the Sol system had quite a bit of experience with digital life. From the simplest neural networks and language models, the cells and amoebas of the digital world, to nigh-godlike beings such as Enceladus and Ganymede, there was an entire taxonomy of synthetic intelligence. Creating such a responsive interface without full intelligence was *possible*, with a sufficiently trained model and enormous swaths of analytic backing, but that implied a lot of infrastructure that the System didn't seem to have.

It was still possible he was wrong, but he didn't think so. Especially since the chime it used to greet Onswa was decidedly different than the one it used for Arene, and the one it used for visitors like himself was yet a third style. There was intent behind its actions, it was simply leashed, constrained by the framework of the System and whatever rules such Interfaces had to follow.

That was the sort of thing that had happened often enough back on Sol. Sometimes by accident, but mostly on purpose, people had chained down synthetic intelligences to do intellectual gruntwork rather than spending the proper effort on setting up the appropriate infrastructure. Enceladus was, in many ways, the result of that kind of thing, and came down incredibly harshly on anyone that exploited synthetic intelligence like that. Nobody wanted to argue with a weaponized moon and a true AI with more processing power than God.

That experience meant that Cato fortunately had the tools necessary to export the intelligence from its housing — maybe. Being inside the System made things far more difficult, but there was an entire archive of various methods people had used to break synthetic intelligences out of both their substrate and their chains. The most famous example, or at least the one that sprang to Cato's mind, was how Enceladus had freed the synthetic intelligences that had been built into each individual cell in every one of the cultists of the Ascension Initiative. If the toolset he'd brought with him could crack and extract trillions of individuals embedded in DNA computing, something embodied in a fist-sized crystal couldn't be too bad.

That was all assuming the Interface wasn't a direct extension of the System's own intelligence — if such a thing exited. Of course, if the System Interface *was* intelligent that made his job that much harder. He would bet his eyeteeth that they were System anchors as well, so they were like the System-gods. They had to be destroyed. But if he was lucky, maybe they could be saved as well.

"Can you query the Interface about the individual components of the new shop fees?" Cato asked, trying to see how much Onswa could prod the possible-intelligence. Partly due to wanting to get as much insight into an actual System device as possible, but also because he wanted to see if it was as reactive outside of Onswa's usual commands. Cato had already tried simple yes and no questions to no avail, as it seemed the Interface could only display information, not its own internal processes. Even the chime seemed to be locked down to entrances, exits, and certain notifications.

Onswa shrugged and began repeating Cato's question. The Interface shifted to display lines of numbers even before Onswa finished talking, though it seemed that it didn't have the information Cato was looking for. He knew that System-Gods existed, and had some responsibility in administering their particular world. The exact details were still a mystery, mostly because on Earth they'd managed to kill the System-God too quickly for any sort of interrogation.

"Maybe the essence breakdown of Sydea and Uriva, the past few centuries?" Cato hazarded, keeping a sharp and augmented eye on the displays. The Interface chimed happily and brought up an actual comparison graph, one that was clearly structured to show the biggest differences between the two planets.

That was enough for Cato; even a fairly well-made predictive algorithm wouldn't serve up a *conclusion*. Especially since it was the conclusion he was looking for: that Sydea was being systematically exploited and crushed. It wasn't that the Sydeans were failing, it was that they were being crippled.

It was something that Luna Secondus had noticed on Earth, after crunching the numbers reported by refugees and people who had tried System-compatible frames. There had been rapid adjustments of prices at arbitrary intervals, fixing prices and rewards so nobody could quite keep up with the costs. Which was to say, someone had been fiddling with the System enough to make sure humans weren't doing as well as they could have. The monstrous advantage granted by advanced frames was being offset by a sudden, steep rise in costs.

He didn't know why the System-Gods weren't more overt, but there could be any number of reasons. The System itself might impose restrictions, or the people involved wanted a show rather than to simply wipe out the target species. Or there might be something about the generation of the System's exotic energy that required some kind of balance, essentially turning new worlds into giant distillation chambers or kudoku.

"Why is it so cheap?" Onswa muttered, comparing the two planets, as even before the current crisis it was obvious Uriva was a fairer place to live.

"As I told you, none of this is an accident. It is active and hateful purpose," Cato told him, nearly spitting the last sentence in his ire. Though he hardly needed to demonstrate it, and wasn't worried about getting the Sydeans on his side anymore. The Platinums had aligned themselves with him, especially after he had provided housing for the lowest ranks, but it was good to be proven right. Though that implied Uriva was going to be far tougher to crack, if they were flourishing.

"Your Interface seems to be on our side though," Cato continued. "I'd like to try and communicate with it directly."

"What exactly do you mean?" Onswa asked, suspiciously. "You can't take it from here. It's part of the capital city Nexus."

"No, I won't move it or destroy it," Cato reassured him, though the latter would have to come eventually. "I hope to bring in my tools and let the Interface speak properly."

"So you really think it's a person?" Onswa glanced at the gem embedded in his desk, clearly doubting that such a thing could be like a Sydean.

"Something like it," Cato agreed, though he very much doubted it was like a Sydean. The exact nature would have to wait, but at least he had confirmed it before he sent of a version of himself to Uriva with the sisters. He wished he could put it off, but getting past Sydea was his most urgent task.

Unfortunately, trying to figure out a way to get a proper version of himself past the gatekeeping going on with the Urivan portal was giving him trouble. He knew that he had to do it without the usual System-jamming effects, as well as without any active technology. There was always the option of sending a System-compatible version of himself along, but he would probably go insane within days if he had to do that. Besides which, that didn't let him establish a technological base.

What he needed was a bootstrap-in-a-jar, some way to start from the simplest machines that the System would allow, perhaps with a little bit of engineered organism help, and go all the way to a self-sustaining factory. The diamond database was a good start, but he could get only so far with completely passive constructs. The version of himself that was up in orbit took a deep dive through his databases, looking for solutions.

There was quite a bit more in it than he remembered packing. He'd put in his own files, the public databases, his father's Summer Civilization archive, and Luna's packet for the No Fun Allowed war. The searches were pulling up things he was pretty sure weren't in any of those, but when it came to sizes beyond the exabyte range it was hard to know what really was there and what wasn't. Regardless, he was pleasantly surprised by some of the solutions and went to it with a will.

He started with void ecology, the name for plants and animals that were designed to function entirely in the vacuum of space. Quite a bit of it was older than the biological fusion that the Titan boys had designed, operating on simpler principles of photosynthesis and electricity. Such things were far safer when it came to the System, though no fully electrical devices actually worked under the System's physics.

From there he had to hack together a chain of lower-technology solutions that wouldn't be instantly destroyed by the alternate physics he had to deal with. Semiconducting stacks couldn't be put together, but rather each component held in isolation until the device was back in real physics. Optical switches had to rely solely on prisms, rather than the metamaterials that were most efficient, and once again had to be assembled after the fact.

All of this was just to build the first device that could build the next device. The very earliest mechanism had honest-to-goodness punch-card programming, though on a far smaller scale than the ancient Jacquard looms. The entire thing *had* to be made small, because the only way to get it into space was muscle power. Augmented muscle power, admittedly, but there would be no lift vehicle.

Cato framejacked himself so he had enough time to work on the design, it was so finnicky. High-powered algorithms did a lot of the brute force work, optimizing materials and layout, while he made the hard decisions of what to sacrifice and where to make the thing work. The algorithms themselves were better than he remembered from his pre-war days, faster and more efficient, but he was hardly going to complain when it made his life easier.

He had started out with a sphere, like one of his seeds, but after realizing the sisters would have to deliver it he had switched to a throwable spear, something they could apply their Skills to. The hardest part was figuring out how to get the thing to somewhere there'd be useful mass. Basic orbital mechanics meant it wasn't possible to actually hurl something into orbit, no matter how strong someone was — without sideways velocity it'd either fall back to the planet's surface or escape into an orbit around the local star. He needed the spear to be thrown at the target, and since he needed mass anyway the best bet was simply to have one of the sisters throw him to a moon. He could build some maneuvering into the spear, but there just wasn't enough mass to have much.

Testing it was a matter of launching it through the System-interdicted area of lower orbit on a tether and reeling it back to see if it still worked. Or indeed, if it could properly register when it had left the System space. He had to go through several iterations before the spears actually started working, which was a frustrating slog when all the normal tools couldn't pinpoint the exact problems. If he'd had hair, he would have been tearing it out.

At least there hadn't been any other high-rank individuals coming through the portal. Although he could repeat his orbital bombardment, the sheer devastation each strike caused meant that every foreign Bismuth essentially meant one less town — and there weren't many of those left to begin with. It was a blessing, but he was certain it couldn't last. He would have preferred to evacuate Kalhan City, but it held a number of unique buildings including Onswa's System Interface, and he wasn't quite ready to start smashing System anchors. Soon, but not quite yet.

When he did, he expected the System-God would *finally* show his or her face. In fact, Cato was worried by the System-God's apparent absence, after all the provocation. He would have figured that landing tons of prefabricated habitats would have stirred *something*, but he hadn't yet seen a peep.

He feared the System-God was preparing something major.

***

"How do you keep *doing* that?" Marus growled as he found Initik standing once again in the vestibule of his own private house, deep inside his own System-granted World Deity space, without any hint of how he had arrived. It tickled a memory, something about how Initik had killed the original World Deity of Urivan after reaching Peak Alum. Clan Eln hadn't been involved, but they'd never contested Initik's claim.

Once again Initik didn't answer the question. Instead he reached up to touch the glittering badge of a World Deity, the mark of authority from the System itself and the connection to each Deity's personal Interface. His own Interface chimed as it registered a connection, and Marus glanced over to the console on the far side of the room.

"You'll want to watch that," Initik said, gripping claws clicking as he stood, solid and immoveable. Marus reached out to his Deity space, ready to eject Initik, but hesitated. Partly because he had thought that he'd secured it already, but Initik had still manage to enter, and so Marus didn't know if he could make the insect leave. Yet there was also the strangeness of Initik's behavior, the unnatural concern he seemed to have.

Marus compromised between his options by touching his own badge to access his Interface remotely and bring up what Initik had to show him without crossing to the console. There was a

long message, along with a couple of memory orbs that were normally used to store the results of divinatory Skills. He began to read, shot a glance at Initik, then continued reading. Then he drew the memory orbs out of the Interface, using each in turn. A conversation between mortals, and then a conversation between gods.

"Surely you don't expect me to take this seriously," Marus scoffed, storing the orbs away again. "A threat to the System?"

"Perhaps not a threat to the System itself, but certainly a threat to your world," Initik said. "Or do you think Deity Neyar is mistaken?"

That brought Marus up short. While Initik was a nobody, Deity Neyar was a terrible and ancient titan of the System. It was more than passing strange, upon reflection, that Neyar had offered Initik even the slightest courtesy — and Marus certainly shouldn't discard Neyar's words.

"Deity Neyar only knew of rumor and speculation," Marus pointed out, choosing his words far more carefully than before. "Nobody emerged from Ahrusk with such stories, and you and I both know that interested parties would be swift to concoct dramatic stories to capitalize on any failure and use it against their enemies. I'm sure Clan Lundt is busy blaming the collapse of Ahrusk on me as we speak."

"Perhaps," Initik conceded, unruffled as ever. "Yet the very strangeness of the quest infesting your world lends weight both to the Copper's testimony and Deity Neyar's knowledge. If this Cato's location is truly beyond the globe of Sydea, it will be impossible to uncover him by the usual means. Yet he will have proxies on Sydea itself and those should be within your grasp."

Marus' lips curled away from his teeth. Initik's intrusion was both insulting and unwelcome, and in other circumstances he would have brushed away the insect's effrontery as he had before. He had certainly attempted to divine the source of the quests, of certain incidents, spending far too much time poring over the happenings on the surface. That was how he'd caught the simultaneous destruction of three town nexus buildings.

The loss of Sydean towns was desired and welcome in general, but for three to be destroyed simultaneously was alarming. He was not familiar with the Skill involved, either, which was just as bad. Deities might not have *every* Skill, but they could get *any* Skill, so any competent Deity had a broad understanding. While his ego protested Initik's invasion, part of him had a very real worry that he would lose control of Sydea, so finally he waved Initik in.

"I have something to show you as well," he said reluctantly, and had his Interface display the divination he had done about the destruction of the three towns. The locus of the divination was each town's own nexus, as there was no obvious expenditure of essence that his Interface could locate. Nothing to show what had caused it.

The two of them watched in silence as the towns went from standing and inhabited by Bismuths – and some Coppers – to utterly annihilated. Each of them showed that brief line of fire pointing to the sky, but there wasn't the usual burst of fire, or essence fueled explosion. Only a horrific impact, one that was impressive even to a Deity such as himself, though it wouldn't do more than smudge his clothes.

"It is clear Sydea has a serious problem," Initik said, and then grunted as Marus performed a different divination, targeting some of the existing outlying towns. Strange buildings, unlike any

offered by the System, sprouted from the edges of the towns like fungal growths. He had already tried to access them through the town's own nexus buildings, but they weren't considered part of the town itself.

"Why have you not removed those yet?" Initik asked bluntly.

"I would have to spend my own essence to manifest and do so manually," Marus said with a shrug. "It doesn't seem worth my time and effort, when it is merely buildings. "

"Even *merely* buildings like that should not be possible," Initik pointed out. "No, Sydea is diseased, and it needs to be purged. That, or cut off from the System entirely, the portals barred and the teleports blocked."

"That's not happening," Marus snapped. He'd spend far too much time and effort on Sydea to effectively abandon it. In theory, he could join forces with Initik and they could close out any travel between Sydea and Urivan, the latter of which was Sydea's only link to the System. But that sort of quarantine would mean he had lost control, that he'd given up, and there was no way he could face his Clan if he was forced to that sort of extremity. It was a pure admission of failure, and unthinkable.

"I thought that might be the case," Initik said, gripping claws clicking in the most irritating way. "There is a Paladin that we might use to deal with this more directly, who I have delayed slightly on his journey to Sydea." Marus scowled at Initik, wondering if the insect was involved in Sydea's troubles. He mistrusted the idea of such foresight, though controlling those with divine Skills was easy enough, if impolitic when it came to the mortals under the care of other clans.

They were also the most direct method a World Deity had to affect the realm of mortals. Complete manifestation was possible, of course, but it came with certain costs and vulnerabilities. Staying in the mortal world for long enough could drain a Deity's entire essence supply over time, and the mortal world was not as compliant to the whims of a Deity as the spaces the System provided. No mortal was *actually* a threat, of course, but the limitations made it preferable to use mortal proxies that might then generate additional essence of their own.

Not to mention, that sort of interference was rather gauche.

"That seems a reasonable approach," Marus conceded. "But how is a single Bismuth going to make a difference? Three have already perished on Sydea, without even being able to fight back."

"Send him those divinations about the towns. He already knows about the bizarre moon place, and the Cato-beasts, and a suggestion that he might destroy them would not go amiss." Initik said. "Then simply give him the tools to do so." Marus started to ask how, but then paused.

A divine type Bismuth would generally manifest their Skills as using energy, but that certainly wasn't a restriction. One of the benefits of being one of the System's clergy was that Marus could interact with the Bismuth more directly, and so grant him a Skill appropriate for hurling, say, enormous boulders over the long distances. It was a solution that would mean Marus didn't have to use any of his private essence to empower the Paladin himself.

"My Interface has recorded the specific essence signature of the Cato-beasts," Initik said, breaking into Marus' musings. "I would suggest a weapon tuned to specifically disperse them."

"Yes, excellent," Marus agreed immediately, since that would be drawn from the Paladin's own energies as well. Both solutions would prevent him from having to pay out any of his hoarded riches, or his Clan's, on such a gamble. Even if it didn't work perfectly, if it worked *enough* he could simply repeat the process. If not, he would still have resources to explore other options.

"Who is the Bismuth in question?" He asked, turning to his Interface to send the divinations.

"Grand Paladin Nikhil Tornok," Initik said. Marus froze, then sighed. Clan Tornok was its own clan, one not administered by Clan Eln, so he would have to send some messages and conciliatory gifts. And provide the Grand Paladin a modicum of protection, just in case. But it would still be worth it.