

## CHAPTER 18: GROWTH

**Log date:** February 2, 2424

**Location:** The Artilect homeworld

**Log note:** The road not taken

IT TOOK VICTOR STRYKER ABOUT SIX MONTHS to realize that he didn't enjoy playing chess nearly as much as he first thought. Until he joined the chess association on the *Vanguard* he had only lightly dabbled in the game, and his experience had been largely positive. Most of his matches in adulthood had been against random people he met who only had a passing interest in the game. Victor usually won these encounters simply because he cared more about chess than the other people he knew. It really wasn't much of a challenge to beat someone who barely knew how the pieces moved.

All of that changed when he started playing against the association members. The club was composed of people who had been playing professionally for nearly their entire lives. Victor was by far the least talented and most incompetent person there. In fact, he was so bad that no one really wanted to play him – he simply wasn't good enough to be remotely challenging.

Victor hated to simply give up, so he tried to get someone to teach him how to become a better player. That was when he discovered that chess was largely a game of memorization. In order to do well players had to memorize countless opening strategies, mid-game strategies, and endgame strategies. In some ways chess was actually a very fixed game. If you were good you could recognize the opening that the other player was attempting and then you would play the counter to that opening that was developed hundreds of years ago.

After weeks of effort Victor finally gave up. He decided he really wasn't interested in finding out if he could memorize more strategies than the guy next to him. If other people wanted to spend their time doing that then that was fine, but he preferred something a little less deterministic.

What surprised Victor was how quickly he was recruited into another group. Three days after Victor resigned from the chess association, he received an invitation to join the Order of the Inquiring Mind. A little investigation showed that the group wasn't nearly as fancy as they sounded – it was really just a band of about a dozen people who met on a regular basis to discuss science, theology, and current events. Victor wasn't sure what he would have to contribute but he went anyway. He soon discovered that they had fascinating discussions. It was the sort of group that Professor Grimes would have appreciated – if he wasn't more than a thousand light-years away.

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Over the course of 2424 Dr. Mazatl made good on his promise to turn their base into a functional city. The automated construction bots formed dozens of buildings that soon dotted the brown, barren landscape. There were apartment buildings, residential homes, restaurants, and churches. There were art galleries and sports centers and even a theater. The Diano Building back on Xanthe had many of these same attractions, but this time they were spread out over a city instead of crammed into a single vertical structure.

The city was complete with streets, sidewalks, and even vehicles. The only problem was that

the terraformation process still wasn't quite complete. Things would have gone much faster if the group had brought a Nehemiah IV probe along with them, but since no one was in any particular hurry Dr. Mazatl didn't see a need to commandeer one. People were content to wear oxygen suits when they went outdoors. It was a bit of a hassle, but by the end of the year the terraformation would be done and it wouldn't be a problem anymore.

Time began to pass very quickly, or so it seemed to Victor. He settled into a comfortable routine. He woke up each morning, was beamed on board the *Vanguard*, and worked with Dr. Mazatl on designing the AI core that would house the alien creature that the director had acquired. At the end of each day Victor returned to his home on the planet's surface. On Mondays he would go to the Order's weekly meetings and listen to them discuss the latest news from the Ranger colonies. The rest of the week he largely kept to himself, unless something came up that needed his attention.

Toward the end of November the Order hosted a discussion topic that caught him by surprise. It was a meeting that he remembered for a long time. On that particular evening there were five other people in their conference room on the third floor of the Diano Computing Center. Sean Lancaster, the group organizer, was there. He came without fail to every meeting. Logan Crawford, a member of the AI team, was present. Cynthia Glass was there as well, along with her brother Dale Bailey. The last member in attendance was Allan Lowe. Allen was a member of the terraformation team and rarely had the time to come. However, now that the terraformation project was winding down he had more free time.

The first half hour was spent talking, joking, and eating supper. Once everyone was full they took their seats around the conference table.

Sean began the evening's discussion. "The topic for tonight, as was announced in the message that was sent out three days ago, is Victor Stryker. He has been a member of this group for almost a year now and it's high time he introduced himself."

"I thought I vetoed that topic," Victor protested. "I'm really a very uninteresting person."

Logan spoke up. "That feels like an overstatement to me. For one thing, you are the last living Stryker and a direct descendant of Richard Stryker himself. You are the last to carry that family name. That alone gives you an interesting history. It was your ancestor Timothy who created the first replicating probes, which set the Diano Corporation down the road that we are still following to this very day. You could make the argument that his work led directly to our being on this planet."

"Victor's relatives played another key role as well," Allan commented. "It was Richard's assassination on the *Sparrow* that led to the imprisonment of the entire Sol system. That event changed everything."

"Sure," Victor agreed. "I guess that's true. But you are talking about my *ancestors*. I'll gladly agree that I have a really interesting family line, but that is *completely* different from being an interesting person."

Logan spoke up. "You protest, and yet you have an elite designation than no one else in this room possesses. I know for a fact that you are an Administrator on the Artillect project. The only other Administrator is Dr. Mazatl himself. That is a very rare distinction! Dr. Mazatl has refused to authorize any other system admins."

*Of course he has,* Victor thought. *The last thing he wants is other people poking around his systems and finding out what he's really up to! He's kind of backed himself into a corner.*

"That's right," Dale said. "Why is that, anyway?"

"It's really not as exciting as it sounds," Victor protested. "For me it just means a lot of work."

It's not like being an Administrator grants me magical superpowers! All it really means is that whenever Dr. Mazatl needs anything done he has to get in touch with me. Since I'm the only one with access I can't offload the assignments to anyone else. It takes up a lot of my time without giving me any conceivable benefit."

"That's another thing," Logan said. "There are thousands of people working on the AI project. I know a lot of talented people who have done great things in the field. You have no prior AI experience, and yet Dr. Mazatl chose *you* to be his right-hand man. I mean no disrespect but you are completely unqualified to fill that position. What exactly is he having you do?"

Cynthia spoke up. "He's probably having Victor keep an eye out for the Stryker twins. Who else is going to do that?"

Victor frowned. "That is *not* what I'm doing. I didn't ask to be Dr. Mazatl's assistant; he appointed me to that role. It's really not as glamorous as it sounds. The real strides are being made by people like you, Logan. I'm just assisting him. Do you really want to leave your R&D work to run stored procedures and collect query results?"

"It's a fair point," Logan replied.

Sean spoke up. "So what about the Stryker twins? Victor, you clearly believe that they are still alive. One of the first things you did after you arrived here was upload their security access to the AI project. You made sure that they had Administrative access to both the Nehemiah IV probes and the Artilect. I don't believe for a minute you did it simply because you're sentimental or a stickler for following company policy. I think you did it because you believe they are going to need it."

Victor shrugged. "I won't deny it. I still think I'm going to be proven right in the end."

"But you're *not*!" Cynthia insisted. "It's crazy. You need to let go of this delusion. It's become a really weird obsession."

Logan interrupted her. "Actually I think it is quite rational. Consider this. If Victor is right then by granting access to the Stryker twins he is actually saving mankind. If he is wrong then he has done no harm, for the access only works on the twins and cannot be used by anyone else. Victor therefore has much to gain by taking action and nothing to lose. If I were in his position I would do the same thing. It is the rational option."

"But it's *crazy*," Cynthia insisted. "Look. I can believe that if I don't eat an orange every day then alien frog monsters will invade and kill us all. But that belief doesn't make me a hero if I eat oranges – it just makes me a crazy deluded person who is completely out of touch with reality. There is nothing the least bit rational about Victor's beliefs."

Sean spoke up. "Timothy Stryker believed it. Considering his proven intelligence and his tremendous work in the field of computing and replication, I think we have to take his testimony seriously – especially since he claims to be an eyewitness. Victor has far more reason to believe in the twins than you have to believe in alien frog monsters. At any rate, what I do know is that your continued insults have cost you any potential relationship you might have had with Victor. You can rest assured that you will never be any more than a distant acquaintance with him."

"And what is *that* supposed to mean?" Cynthia asked.

Logan spoke up. "It is quite simple. You have failed to consider the fact that Victor is a rational human being who is simply responding to stimuli. Victor sincerely believes in the existence of the Stryker twins. Not only do you *not* believe it, but whenever it is mentioned you go out of your way to insult Victor. You have clearly expressed to Victor that you believe he is a moron on multiple occasions. Since Victor is actually a rational being, he has figured out that you have no respect for him. Is he

going to enter into a relationship with someone who does not respect him? Absolutely not.”

Victor spoke up. “Why are we even having this discussion?”

“Because it's relevant to the topic at hand,” Sean explained.

Cynthia frowned. “But it *is* crazy. I don't see why you're so accepting of all this! You should be telling Victor that he's out of touch with reality.”

Logan shook his head. “Victor has been extremely rational for his entire life. First of all, he is a software developer. He has spent his entire life thinking through difficult problems and creating a series of logical, rational rules to resolve them. He has been trained to use logic and reason to think through every aspect of his life, and that is what he has done. Victor chose to live in an apartment far from the city, which makes sense as the city was a dangerous den of evil. Victor saw the ill-fated marriages of his companions and decided he did not want to suffer the same fate, so he has remained single. Victor's attempts to reach out and make friends – as he did with Carroll Lane – ended poorly, so he has tried to find other ways to use his time.”

“He just didn't do it right,” Cynthia insisted.

“Victor has actually done fairly well, given the circumstances,” Logan continued. “Most of humanity is unemployed but Victor has a prestigious job working with Dr. Mazatl. Most of humanity has utterly destroyed their lives and are headed to eternal perdition, but Victor is not. Victor has even done some rather unusual things, like sending a fleet of probes to a remote world in order to build a world-class book collection.”

“I guess he *is* a fascinating person,” Dale remarked.

Sean spoke up. “He is also quite mysterious. What does he spend all day doing with Dr. Mazatl on board the *Vanguard*? No one really knows. What secrets does the Stryker family possess that are handed down from generation to generation? No one has any idea. What hidden treasures did Victor's probes find when they were dispatched into the void? Only Victor knows. And how did Victor become so close to both Professor Grimes and Dr. Mazatl – two of the most important people of this era?”

Victor spoke up. “You realize I'm sitting *right here*, right? You act like I'm still on Xanthe or something!”

Cynthia interrupted him. “Let's back up. What do you mean I'll never be friends with Victor?”

“It's not complicated,” Logan said. “Victor will never have a relationship with someone who thinks that one of his core beliefs is pure idiocy. I know *I* wouldn't. As long as you believe he's some kind of goofball he's never going to be interested in pursuing you. You do realize it is very difficult to become friends with someone who sees you in a purely negative light, right?”

“I'm a fascinating person!” Cynthia protested.

“Not to Victor,” Sean replied. “I think you've lost your window of opportunity. You need to move on to a different target.”

“I think this discussion has gotten *way* out of hand,” Victor protested. “I really don't see how any of this is worth discussing in a public setting.”

“Really?” Sean asked. “Then perhaps you haven't thought it through. If your beliefs are correct then you and Dr. Mazatl are building the mind of the most powerful machine that will ever be built – a machine so powerful that it will have control over time itself. What you are doing will not only change the future, but it will also change the past – and it will presumably save mankind from extinction. You are doing something that will impact the endless ages that are to come. In this world you may be no one in particular, but in the next world you will be one of the creators of the Artilect – a man who played a key role in saving the lives of millions of people. You will be a very respected figure.”

"But he's *wrong!*" Cynthia insisted.

"In that case he will just be the man who worked closely with Dr. Mazatl to create the most powerful artificial intelligence that will ever be built – a machine which will safeguard mankind in the years to come and give them a chance to build a new civilization after the coming destruction of the Rangers. If you are correct, Cynthia, then all he did was offer mankind a new path that could save the lives of countless people and usher in a new golden age."

"Right," Logan agreed. "In either case Cynthia is throwing away a valuable opportunity. She could have been the friend that Victor needed during these dark times. Instead, the future will see her as the woman who insulted him. I don't think that will play well in the coming eternal era."

"I think you're going too far," Victor replied. "It's not like I single-handedly built the Artilect or anything. This is a huge project that thousands of people are contributing to and which is the culmination of thousands of years of scientific advancements. I didn't build the Artilect in my garage with stone knives and bearskins."

Sean spoke up. "All of that is true. But there is a larger point here. We tend to forget that we are not living in a single moment in history; we are actually participating in a timeline. We are going to live forever and yet for some reason we tend to overlook that fact. When the final day of judgment is over and all evil and wickedness has been done away with once and for all, we are still going to be alive. We are still going to know each other and we will look back upon what has happened. We will remember who was there for us when we needed them and who was not. Our actions and decisions have consequences that will ripple on for the rest of eternity. It might be helpful to spend a little more time thinking about that."

"Exactly," Logan agreed. "If we keep the future in focus then it could lead us to make wiser choices about how to spend our time in the present."

Dale spoke up. "Speaking of that, what's this about Victor finding buried treasure on Alpha Mensae?"

Victor groaned. "How did that rumor get started, anyway? All I found were books – way too many books, in fact. Most of them are still in the basement of the Diano Building back on Xanthe."

"Except for the ones that Grimes burned," Cynthia added.

"It is a senseless rumor," Sean agreed. "After all, we live in an era when a ZPE can manufacture anything that is desired, in any quantity. What could there possibly be to find out there in the void?"

*If only you knew,* Victor thought.

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Over the next few years Victor continued working with Dr. Mazatl. The work on the new AI core went very well, but it also went very slowly and soon got behind schedule. The problem was not with the wisp; the alien exceeded Dr. Mazatl's wildest expectations. The real problem turned out to be the stability factor. Repeated tests showed that it was very difficult to create an artificial mind that could both grow and remain stable over a long period of time. The problem was that as the mind grew it acquired new information, and eventually that information created an imbalance that caused the mind to re-evaluate its priorities. This always resulted in chaos and insanity. It was like building a foundation for a building and then adding floor after floor after floor. Eventually the foundation could no longer bear the weight of the building and the entire structure would come crumbling down. There were limits, it seemed, to eternal growth.

There were a number of possible strategies to resolve this, but so far none of them had worked. Still, each iteration brought them close to success and taught them valuable lessons. Victor just wished things were going better. It was disheartening to spend an entire year working on a prototype only to see it go insane during the course of a single week of accelerated testing. But that was how progress was made – by continuing to press on. Victor just hoped that 2427 would prove to be more successful than previous years.

The rest of the Diano teams were having much greater success. The Artilect homeworld had been fully terraformed, and people loved the the freedom that they had to come and go as they pleased. Dr. Mazatl's prototype city had been completed and named New Star City. It wasn't a very creative name but people liked it and enjoyed living in the expansive metropolis.

The prototype Seed was also on schedule. In 2425 the Seed was buried deep within the planet's core and began to grow. Now, two years later, it had succeeded in converting much of the planet's crust into machinery. It would take another year before its initial growth was complete, but Victor had no doubt that it would succeed.

Soon – very soon – the body of the Artilect would be complete. When that happened it would be time to activate its mind. Victor just hoped that Dr. Mazatl would be ready in time.

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More than a thousand light-years away, Carroll Lane stood on the streets of Xanthe. It was August 4, 2426 – a beautiful day on a world that was all but empty. The Diano Corporation had fled the planet years before, leaving the entire world to Lane. In 2426 there was no one left who still ventured out into the real world – and that gave Lane a feeling of immense pride and joy.

Lane and Adrian Garza stood alone. The streets of Star City were utterly empty and quiet. There were no rioters and there were no riots. The world was finally at peace. Lane had no doubt that the peace would last forever. Things would never go back to the way they had been.

One thing that amused Lane was the fact that the Diano bots continued their work in Star City. They worked ceaselessly, night and day, to keep the city's infrastructure intact and the buildings in good repair. It was a fruitless effort because there was no one left who cared. The bots were working hard to maintain a city that was utterly deserted.

Lane spoke up. "Isn't this a beautiful sight? This is exactly what I was hoping for. I've created a better world and everyone has embraced it. This city is abandoned – which is exactly what it deserves. It's only a matter of time before those bots break down and the whole city crumbles into dust."

Adrian glanced up at the Diano Building. "You might have to wait a while. I think Dr. Mazatl created bots that could repair themselves. I'm pretty sure the system he built was designed to last forever."

"Oh, it'll fail eventually. After all, that building is empty. No one lives there anymore and no one is left to watch over this world. All of the company's employees have disappeared to who-knows-where. Eventually there will be some kind of system failure that the bots can't fix and it will lead to a chain reaction of problems. It might be a hundred years before that happens, but it will happen. One day there will be nothing left in the whole world except for our Vaults."

"You're probably right. They have been a complete success. Everyone seems to love them!"

Lane continued to stare at the towering Diano skyscraper. "Exactly. We are the future, Adrian. I just don't understand why the Diano Corporation can't see that. Who cares about reality anymore?"

Reality is terrible. Reality has limitations and flaws and puts you in bad situations. In the real world you can never have everything that you want. The real world is always going to disappoint you and hurt you. Who wants to live in reality? Our virtual worlds are vastly better!"

"I agree. There aren't many who would argue otherwise."

"And yet Dr. Mazatl still left! He's out there somewhere, trying to accomplish something in the real world. He's terraforming planets or building colonies or doing who knows what. But why bother? In virtual worlds you can have anything that you want. It's so much cheaper and more efficient. Continuing to build things in the real world is, in my opinion, a sign of stupidity. There's just no future in it."

Lane turned his attention back to the city around him. There were no people in sight. As far as he could tell, he and Adrian were the only two individuals left in Star City.

"I knew this day would come," Lane said. "We're finally done. Every last person is in a vault, and we can now live in the vaults forever. There's nothing left for us to do – nothing, that is, except to enjoy the fruits of our labor."

"Well, *almost* everyone," Adrian corrected. "There is still Professor Grimes. In fact, I believe he would like to speak with you."

"Oh, right. I had forgotten all about him. He's been bugging us for years, hasn't he? I guess it won't hurt to have a conversation with him before we leave reality forever. If he wants to stay in this cold and cruel world then he's welcome to it."

Lane looked up at the sky. Night was coming. The air was still and cold and there were no stars in the sky. The sun had set and the last glow of the sun's rays was starting to fade. There were no other human beings in sight.

*There's no future left here,* he thought to himself. *This planet is dying. The Vaults are the only place to be.*

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That evening Lane entered his office in Vault 37. There was nothing left for him to do and there was no work that still needed to be done. He was only there to have a conversation with the only man on Xanthe who had refused a place in his vaults. Once that conversation was over the two people would go their separate ways.

Lane was tempted to not hold this meeting at all and simply leave, but he couldn't resist the opportunity to gloat. After all, he had won. In spite of all of Grimes' work to oppose the vaults, Grimes had nothing to show for his efforts. There was nothing Grimes could do now but go home empty-handed.

At precisely nine o'clock in the evening an elderly gentleman entered his office. The man did not bother to knock; he simply opened the door, came inside, and sat down in front of Lane's desk – leaving the door open behind him.

Lane looked up at him. "So tell me, professor. This is your last chance. After this meeting has concluded the vaults will be sealed and you will be out of luck. Have you finally come to your senses? Do you wish to join us in paradise? I've saved a place for you, you know."

Professor Grimes frowned. "I have not come to join you, Lane. I have come to stop you. What you are doing here is madness! Can you not see that your path can only lead to death?"

Lane grinned. "And there it is. You know, I've been wanting to talk to you for a long time! This is

going to be so much fun. Tell me, Grimes. Why do you insist on standing in the way of progress?"

"Is that what you call this? This isn't progress; this is insanity. Progress, *by definition*, means drawing closer to a goal. You start out at one place and you end up somewhere else – a place that is an improvement in some way or another. Your Vaults are not progress, Lane. They are a dead end! Your vaults will not lead to a better civilization; instead they will lead to the end of humanity itself. Everyone who enters your vaults is going to die."

"Everyone dies eventually," Lane replied. "The key is to have as much fun as you can, and the vaults make that so much easier. We are evolving, professor. We are moving beyond the need for the physical world. My virtual worlds are vastly better."

"Your virtual worlds are no different from dreams! Can you not see that? People are wasting their lives living out fantasies. They're not doing anything meaningful. They aren't producing anything or making the world a better place. They might as well be asleep for all the good that they're doing."

"Who cares about producing things? We have ZPEs for that. Life is about being happy. People want to be happy, Grimes, and I can give them endless happiness. In my Vaults there are no needs. There are no dreams that go unfulfilled or wishes that are never met. Everyone has everything that they want, all of the time. You can never have that in the physical world! That's why my Vaults are so much better."

"But you aren't actually giving them *anything*! You aren't fulfilling any dreams at all. The people are actually being given *nothing*. It's all a fantasy. It's all make-believe."

Lane shrugged. "It looks real and feels real. People accept it as real. The fact that, technically speaking, it's not part of the physical world is unimportant. People don't care about metaphysics, Grimes. It may matter to you but it doesn't matter to them. In my virtual worlds people can see it, touch it, and taste it. Who cares about the true nature of its substance?"

"That is an excellent point. In fact, let's talk about that for a moment. Why are we here, Lane? Why do we exist?"

"I don't know about you, but I'm here to make a better world and lead humanity into a brighter future. I'm going to make everyone happy."

"Do you have any idea where this universe came from?" Grimes asked.

"I don't see how it matters. All I see is that the people in my Vaults can have whatever they want, and you seem to think that's a bad thing."

"It most certainly is a bad thing. You have become completely disconnected from reality. This universe is not an accident, Lane. It did not come into being as a result of random chance or some erratic fluctuation of nothingness. It was created by God. Not only did He create this universe, but He created mankind as well. He put us into this universe so that we might serve Him. There are certain things that God requires of us. We are not free to simply do as we please."

"I do not recognize your God, nor do I care about Him," Lane said firmly. "He has no power over me. I suspect that everyone else on this world feels the same way."

"That is a very foolish attitude to take! You may choose to disregard the Lord, but that will not make Him go away. God's power is not something that can simply be denied. He spoke the stars into existence and He is equally capable of destroying them. Those who reject the Lord will face His wrath – and refusing to believe in Him will not make you immune from His judgment."

"I don't care," Lane replied. "I really, honestly don't care. You are doing a poor job of making your case."

"Am I? Stop and think about it. Let us reason together for a moment. There are two



possibilities. If there is no God and if this life is all that there is, then what you are doing makes a great deal of sense. We might as well try to find as much happiness as we can in whatever time we have left. If fantasies give us more happiness then by all means go down that road. In the end we're all going to die anyway, so we might as well seek to maximize our own pleasure.

"But *that is not the only possibility*. If there is a God then that changes the equation dramatically. That means that a being of infinite power is going to hold us accountable for the way we have lived our lives. It means He is going to compare our behavior to His standard and He is going to pour out His wrath upon the children of disobedience. It means that rejecting His mercy and grace carries an extraordinary cost. If that is true then ignoring God and living out a life of selfish, wicked fantasies is perhaps the worst mistake you could possibly make."

Lane shrugged. "I think I've already made my position clear."

"Have you given any actual *thought* to your position? Have you bothered to investigate any of the evidence that God is real? Do you understand that if you are wrong, you will be tormented without rest in a lake of fire for all the ages of eternity?"

"Why would I bother? I don't think your position is even worth investigating. It's much too stupid to be true."

Grimes sighed. "Do you realize that if you carry out your plan and put everyone in Vaults, humanity itself will die out? You can't have real children in a Vault, Lane – only virtual ones. If you carry out your plan then this will be the last generation. There won't be a human race after this."

"I don't see how that matters. After all, we're all going to die eventually anyway. The stars are burning out and this universe won't last forever. We might as well enjoy ourselves with whatever time we have left. The future generations can fend for themselves."

Grimes stood up to leave. "Then I suggest you make the most of it. I assure you, Lane, that after you die you will never taste enjoyment again. You have no idea what your future actually holds."

"Oh, but I *do*. I'm going to live for the rest of my life in a world of my own creation, where I can have whatever I want. You, though, are going to live alone in a decaying city until you die. You are going to suffer needlessly. I pity you, Grimes. You could have had it all but you threw it away."

"So you say. But I can see a bit further into the future than you can. I suspect that in the ages to come you would give anything to trade places with me – but by then it will be too late."