

CHAPTER 8: REVOLUTION

Log date: December 24, 2418

Location: Xanthe

Log note: Darkness can only lead to deeper darkness

"SO YOUR QUEST HAS FINALLY COME TO AN END, HAS IT?" Professor Grimes asked.

The esteemed professor was standing in Victor's apartment, holding a single book in his hand. The apartment had changed considerably since his last visit. In the past Victor's apartment had been sparsely furnished, but now it was crammed with bookshelves. Every wall had as many bookshelves as it could hold, and the books were stacked two deep.

"It is *definitely* over," Victor said firmly. "I've shut down the remaining probes on Alpha Mensae and stopped the search for more volumes. After hundreds of hours of work I've finally gone through the mountains of books that the probes returned. The best ones are now here, in my humble home. The ones that were not worthy are stored in crates in the basement of this building."

"Except for the evil ones, which I was delighted to burn," Grimes added. "Some things are not worthy of preservation."

"You really don't like romance novels, do you?"

"Have you ever tried to read any of them? It would be one thing if they were godly books that portrayed a Christ-like love. If they urged men and women to act in a virtuous manner, to seek to honor God in their relationships, and to do what was right, then that would be one thing. But Victor, that is not what the romance industry is about. In our day it is focused on inflaming the sinful passions of mankind and urging them to give in to their evil desires. That is precisely what this world does *not* need. There was no redeeming those works, and so they had to be destroyed."

"I suppose. But I noticed you seem to enjoy setting things on fire."

"Only things that are worthy of being set on fire. It is our solemn duty to seek out evil and destroy it, wherever we may find it. There is nothing honorable about allowing evil to flourish. I am nothing like the vandals who live outside our building, who seek to destroy everyone and everything; that is senseless."

"You know, I can't say I've ever set anything on fire. But anyway, are you sure that's the only book you'll take? I assure you I have plenty more to spare."

Grimes shook his head. "No, no, this is fine. You have already given me dozens of volumes and I have only just begun to read through them. It is a bit greedy of me to ask for more, but since this book could not be found in the Corporation's archives I could not resist the opportunity to acquire it. Not all books were preserved in digital format, you know."

Victor glanced at the thick black book that Grimes was holding. "What is that book, anyway?"

"It is *The Lost Doctrines*. It was written more than 200 years ago, back when men still devoted themselves to the study of theology. The author wrote the book in response to the great downgrade that he saw going on around him. He noticed that the churches of his day were abandoning the study of doctrine and instead preaching messages that were designed to please people. He was appalled at the way pastors abandoned the truths of the Bible in favor of what the culture wanted to hear, and so he wrote this book to proclaim these 'lost doctrines'. One can only imagine what he would think if he

could see us today.”

“He probably wouldn't be pleased. In fact, it sounds like his book failed pretty hard. The visible church certainly didn't correct their course. Why, there are only a couple churches left on this entire planet, and none of them will teach anything that might upset anyone. I don't think I've ever heard a single sermon on the evils of sin – of *any* sin. All I hear is that I'm a wonderful person and I should follow my heart and achieve my dreams. There's no doctrine, no truth, and no mention of the cross. It's sickening.”

“It is indeed – but remember, young man, standing up against evil is *never* a waste of time. God often used His prophets to rebuke the evils of their day. It is true that people rarely listened to them, but that did not mean it was foolish of them to obey the Lord and proclaim what was right. The real fools were the wicked people who would not heed the Lord and chose instead to continue in their wickedness. If a prophet offers their world salvation and hope, and the world takes that offer and sets it on fire, the fault does not lie with the prophet.”

“I suppose. It just all seems so futile, you know? Everything we do seems to be such a waste of time.”

“I see,” Grimes said thoughtfully. “It sounds like Dr. Mazatl's new AI project is getting to you. Things must not be going as well as you would like.”

“They're not going *at all*,” Victor complained. “I know it's only been a few months, but it's been a pretty epic disaster so far. Mazatl wants to build a system that can figure out how to fix the probes when they break. Given that the children are made out of artificial atoms, I'm sure they will break all the time. Now, we know what the probes *should* be doing, and we know how to spot problems. But fixing the problems is an entirely different matter. We can't tell the AI *how* to fix the problems because we're talking about problems we haven't even found yet! Since the entire probe is subject to decay there is nearly an infinite amount of things that can go wrong. Yes, we have the original pattern, but we can't have the children be constantly doing atomic-level scans of themselves – it takes way too long, and the children can't be doing anything else at the time. When a problem arises we can't just shut the probe down and have it dissect itself. The AI needs to be able to find the problems and repair them without disturbing the ongoing terraformation operation. So far the only approach anyone has suggested is to have the AI create a simulation of the probe, recreate the problem, and then randomly try things until the problem goes away. Do you know how long it takes to find a solution when you do things that way? *All of eternity!* These probes are the most complicated machines ever built. Trying to fix them by making random changes to their design is complete madness.”

“Of course it's madness. It's equally mad to assume that random chance is how mankind came to exist in the first place. The Lord created us by His great power and might; we did *not* evolve. As you are discovering, mutations are incredibly likely to cause harm and have no real chance of providing any benefit. The few times when mutations do benefit an organism, they do so by causing a loss of information. To a cave fish, losing its eyesight may help it survive because eyes are a liability in the dark – but you cannot evolve from a lower being to a higher one by losing information. If you take any complex system and apply a process that is guaranteed to cause great harm, but which has no real chance of doing any good, then that process is going to destroy your system. Your genetic algorithms are not going to work, Victor.”

“But they do work in some cases,” Victor insisted. “After all, I used them to design my book probes.”

“That is quite true, but that was a very different situation. In that case you used a computer to

develop a billion different possible configurations for your microprobe. You then wrote an algorithm to test all of them and pick the one that worked the best. You set up the design parameters, you set up the fitness test, and you used your intelligence and skill to guide the experiment to the conclusion that you preselected. There was nothing random about what you were doing – and the only reason it worked was because of the incredible simplicity of your design.

“You have to realize, Victor, the Nehemiah IV probe is more complicated than your microprobes by at least ten orders of magnitude. Randomly changing its design will only work if the problem can be fixed by, say, slightly tweaking its parts. But if the problem requires an entirely new approach then it's hopeless. Do you know how many quadrillions of possible ways one could design a circuit board or a computer system? Do you know all the different places it could be installed, and what impact that might have on the overall design? Not only does it have to work and not break anything else, but it also has to *fix the actual problem*. No, Victor, random chance is not going to help you, and there isn't enough trillions of years for you to iterate through every possibility. You need true intelligence.”

“But I thought we already had true intelligence! I mean, we have bots everywhere, don't we? AI has existed since the days of the Spanish Empire – why, there was an AI system on board the *Sparrow* back in the 19th century. Can't AI just figure this out?”

Grimes laughed. “Goodness, Victor, I had no idea that you didn't know! I thought this was common knowledge among all software developers. Have you asked Dr. Mazatl that question?”

“He's been busy. Besides, all the smart people have been trying to get this mutation approach to work, and I'm sure they have a reason for it. But I'm kind of baffled. Using AI seems so much easier.”

“I suppose that is understandable. They don't really teach history anymore in schools, which is quite a tragedy. How can you understand the present if you don't know the past? The truth is that artificial intelligence does not exist. The AIs that we have today are just tricks. There's nothing intelligent about them.”

“But bots run our entire civilization!” Victor exclaimed. “They make all kinds of intelligent decisions every day.”

“Well, yes and no. You see, back in the 6th century the Roman Empire realized they had a labor problem. Their economy was built on slavery, but the institution of slavery wasn't providing them with the manpower they needed. They saw that the Mayan Republic – which did *not* use slavery – was outpacing them economically because their workers were more productive. Since slaves were expensive to maintain, and since it took years to breed and acquire more slaves, the Romans decided to take another approach. They thought that if they could create an intelligent machine that could do the same job as slaves, they could manufacture them by the billions and become the dominant world power.

“Of course, the Romans had no idea how to build an AI. So they did what they were famous for doing: they solved the problem by brute force. They spent two hundred years training a neural network how to respond to all the different situations that a slave might encounter. Tens of thousands of people worked to design situations to teach the computer how to be a good slave. Essentially, Victor, they told the computer 'In all these cases, you should do this.'”

“Well, that seems reasonable,” Victor replied.

“Perhaps. It certainly worked – for their purposes, at least. Once they had the network trained they miniaturized it and created the world's first intelligent robots. The Mayan Republic immediately panicked and stole the technology for themselves. This led to all sorts of problems that culminated in

the nuclear war of 989 that destroyed both sides. But the AI technology lived on. The Spanish Empire acquired the technology from the ruins that were left behind, and we still use it today. Our modern AI systems may run on vastly superior hardware, but it's pretty much the same code that the Romans wrote nearly two thousand years ago."

"But doesn't it work? I mean, it seems very successful to me."

Grimes shook his head. "You have to remember that the Romans built AI to replace their slaves. Slaves were only supposed to obey orders and do simple tasks. They were not supposed to make decisions or respond to new situations. If something unexpected came up, slaves were taught to go to their masters and let them decide how to respond. The reason our AIs work so well as maintenance bots is because they are designed to serve and follow instructions. But AI technology *cannot* respond to a new situation. It cannot solve a problem that it has never seen before. What Dr. Mazatl wants to do is use AI to fix problems that have never been encountered in the history of the universe. Roman AI technology simply cannot do that. It can only handle situations that it has been programmed to handle."

"Oh. So that's why they want to use a genetic algorithm. They're hoping that the AI will stumble across the solution by blind chance."

"Which it most certainly will not. That road is a dead end. What Dr. Mazatl really needs is a true artificial intellect – a machine that has understanding. But I am afraid that is a contradiction in terms. You see, Victor, computers are nothing more than a collection of rules. It is impossible to build a set of rules that understands something. Now, you *can* build a set of rules that, if installed in a machine, makes it appear that the machine is intelligent. You can create the illusion of intelligence, but in the end it is just an illusion. Rules can create a situation that imitates sentience in certain circumstances, but rules cannot *be* sentient. The reason you and I have understanding is because we have a soul. There is a ghost, so to speak, in the biological machine that God created for us. That soul is the missing piece."

"But we can't put a soul in a computer!" Victor exclaimed.

"Precisely. That is the entire problem. I have made it clear to Dr. Mazatl that if he wants his artifact to work, he is going to have to provide it with a soul. Otherwise it is doomed to failure."

"But that doesn't make any sense! If what you are saying is true then how could we ever succeed?"

"That is an excellent question," Grimes replied. "I will leave that as an exercise for you to figure out. At any rate, I have taken up far too much of your time. I will leave you in peace. I wish you a joyous Christmas Eve and a most blessed Christmas Day."

"Oh," Victor said, startled. "Christmas is tomorrow, isn't it? I had actually kind of forgotten about it."

"Forgotten about Christmas? Good heavens! How is that possible?"

"Well, I mean, is it really all that surprising? Our culture doesn't really celebrate it anymore. All they care about is Santa Claus and mass consumerism. Besides, I don't have any friends, and my entire family is dead. What do I have to celebrate?"

"You have *Christmas* to celebrate! Don't you know what the day represents? It is one of the most astounding and fantastic events in all of history: it is the day when God Himself became a man so that He might die in our place, for our sins. Even if you were the most miserable man in all the world, who had lost all of this world's comforts and had only pain and suffering left, Christmas Day would still be enough reason to lift up your head and thank God. The Lord had pity on us, Victor! Do you know

how marvelous that is? He saw us in our wretched and sinful condition and, in order to save us, He became one of us – fully God and yet fully man as well. He did this so that He might die for us and pay the penalty for our sins. His death gave us the incredible gift of everlasting life and joy. Christmas Day changed your life, Victor. You have every reason to celebrate and thank God for what He did. Don't let the pagan festivities of the world distract you from the wonder of Christ's gift. He left Heaven itself to be born a man. That story will be told for the rest of time.”

“Well, I guess that's true. But I'm still surprised you celebrate Christmas. I mean, Jesus wasn't born on the 25th, right? This is all based on paganism.”

Grimes sighed. “The celebration of Christmas on December 25th is most certainly *not* based on the ancient pagan festival of Saturnalia. The date of the 25th was chosen in the 2nd century. If you read the writings of the saints who lived in that century, you would discover that Saturnalia played no role in their decision making. It turns out they had an entirely different reason. Tertullian of Carthage believed that in the year Christ died, Passover fell on March 25th. Because he thought that Christ was conceived on the same day of the year that He died, he therefore concluded that the Lord must have been born nine months later – on December 25th. Augustine mentions this line of reasoning in his work *On The Trinity*.

“Now, Victor, I do agree with you on one point. Tertullian was greatly mistaken. There is no evidence that Christ was conceived on the 25th of March, or that He was born exactly nine months later. I think the Scriptures point in a very different direction. The shepherds, remember, were keeping watch over their flocks by night. I believe that they were doing this because the sheep were giving birth, which would place the time in the spring. Given that Christ was the Lamb of God and died on the very same day that the sacrificial lambs were killed for Passover, I think it is quite likely that He was born at the same time the sacrificial lambs were born.

“Regardless, the truth is that every day is a good day to celebrate the many things our Lord has done for us. I have no qualms with setting aside a day to celebrate the Incarnation. I will celebrate that any day of the year – or every day, for that matter. Likewise, every Sunday is a glorious celebration of the resurrection of Christ. At least, it *can* be, if you choose to make it one. The choice is yours, Victor – to live in darkness, or to celebrate the great things God has done for you.”

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Professor Grimes was not the only one who found reason to rejoice. To Carroll Lane's great surprise, the construction bots completed Vault 37 on schedule. When January 1 came and the Vault opened, it filled up to maximum capacity within an hour. People loved the realistic virtual worlds that Lane's team had created, and they hated leaving them. The technology was still too primitive to allow people to live in them full-time, but that was clearly what everyone wanted to do. Lane found all of this immensely gratifying. There were now tens of thousands of people who agreed with Lane's vision.

In fact, the waiting list became so long that Lane was forced to make people take turns. Once a simulation ended, the person had to go to the end of the line and wait for their next turn. At first this was a matter of days, but it slowly grew to weeks. The new Vault was operated around the clock and it still could not keep up with the demand.

Since the technology was working so well, Lane launched a new construction project to upgrade his Vault. By June of 2419 he had enlarged his operation to the point where it could handle 385,000 people at once. That was a great step forward – but in a city of 10 million it was not nearly

enough. People still had to wait weeks between their visits, and waiting was not their strong suit. Lane had to triple the size of his security squad in order to keep people from forcing their way inside.

The city did not like having to wait. People clamored for full-time access to the Vault, and they demanded that the lines be shortened. Lane had hoped that the Vault would make the city happier, but it ended up having the opposite effect. The citizens of Star City wanted something badly and could not have it – and that made them angrier than they had been in a long time. That presented President Rios with an opportunity.

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Lane was in the laboratory in the Diano Building when Adrian brought him the news. “I'm afraid you're not going to like this, sir. It seems that you have finally gotten the attention of the city government. President Rios wants to see you. In person.”

“Really? Well, I guess I shouldn't be surprised. Did he say why?”

“The summons he sent to us did not contain very much information – just a date and time. But he has been telling the press that you are deliberately infringing on people's right to be happy. He said that limiting people's access to the Vault was cruel and unusual punishment, and he intended on forcing you to give people what they deserved.”

“I see,” Lane replied thoughtfully. “You know, Adrian, maybe it *is* time that we gave people exactly what they deserved. When did Rios want to see us?”

“On June 16th – a little more than a week from now. But there is no 'us', sir. He only wanted to see you – not me. And you can't possibly be considering going! I am certain that he only wants to make himself look good and make you look bad. He is probably going to kill you and steal your Vault for himself.”

“Oh, I have no doubt that he wants my Vault. Rios probably believes that he can win this conversation. But this time he has made a serious mistake. I am not Dr. Mazatl, and I am not the Diano Corporation. I know how to fight back and I'm not afraid to defend myself. I think Rios is giving us a golden opportunity here.”

“An opportunity to get killed, you mean! Don't you remember what the SSF did to you?”

“Absolutely. In fact, that is precisely why I think we should pay Rios a visit. *Both* of us. *Together*. Adrian, it's time for new leadership. I think a revolution is in the air. If Rios is threatening the future of our Vault program then we need to change his mind.”

“How, exactly, are you going to do that? Rios is an unhinged lunatic! He is not going to listen to reason.”

“True. But there may be another way to deal with this. I think technology just might have the answer.”

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At seven o'clock in the evening on June 16th, Adrian and Lane found themselves on the outskirts of Star City, walking down the road toward the President's mansion. Adrian did not like it one bit. The sun had set and the sky was dark. The sidewalk was lit by a handful of battered and rusted lampposts – most of which gave off only a very feeble light. Trash and graffiti was everywhere, and the nearby buildings were little more than piles of ash. The air smelled of smoke and there was darkness

and shadows everywhere.

Adrian had only been outside the Building a few times in his life and he felt very exposed. "It's not safe for us to be here," he insisted.

"It will be fine," Lane replied. "We have nothing to worry about. Rios is the one who should be concerned."

"Do you have any idea just how well-protected Rios is? His palace is patrolled by loyal SSF who will not hesitate to kill us. His compound is surrounded by a very well-fortified wall, and there are guards inside and guards outside. We are going right into the heart of his lair and I have not the slightest doubt that he is going to try to kill us. This is insanity. Rios is not going to listen to reason! He never has before."

"That's why I'm not going to depend on reason." Lane removed a small electronic device from his pocket. "Yesterday I used a small copter bot to disperse airborne nanites throughout the President's palace. This controller allows me to give them commands. We've been over this, remember? If Rios tries anything then I've got an entire army at my disposal. We will be fine."

"Your army is composed of invisible machines. I assure you that Rios will *not* find them intimidating. How many field trials have you done with them, anyway?"

"I've been using them extensively in the Vault – you know that. It's true that I've never tried them in this particular situation before. But I'm sure they will work."

"I think your optimism is completely unwarranted," Adrian replied.

By now the two men had reached the entrance to Rios' palace. There were four armed guards standing outside. Lane started to identify himself but one of the guards cut him off. "I know who you are. Go on in – the President is expecting you. But behave yourself. We are watching you."

The massive metal gates slowly creaked open. Lane and Adrian stepped into the compound and began walking down the path to the mansion. Lane was calm and in a good mood. Adrian was not.

The mansion was well-lit and beautifully maintained. Its exterior was covered in white marble, and the lawn and flower beds were immaculate. The exterior of the building was dotted with large windows – but all of them were protected by thick metal bars. The palace was five stories tall and covered more than a hundred thousand square feet.

"That is a very impressive house," Adrian said in a low voice. "Considering it is more than two hundred years old, it is in excellent condition. It is quite regal."

"It's also incredibly small, if you think about it. Compared to the Building it's just an ant."

"True. But the Building is home to thousands of people. This palace is the home of just one man."

Adrian could not help but notice that SSF were everywhere. Lane saw two teams of eight men patrolling the grounds, and another team guarding the front door. When the two men reached the entrance they were met by a security detail of four men. All of them wore body armor and carried fully-automatic machine guns.

The lead guard stepped directly in front of Lane and eyed him suspiciously. "Why did you come here?"

"Because Rios ordered me to come."

"I don't believe you. No Corporation employee ever leaves the building. You could easily have visited him electronically. That's what everyone was expecting. But yet you have shown up in person. I find that highly suspicious."

"Your news is out of date," Lane said casually. "Adrian and I leave the Building all the time. Vault 37 is outside, you know. We're not like everyone else."

"Which is exactly what makes you a security risk. I understand everyone else. I do not understand you. What are you doing here?"

"I'm here to meet with President Rios and listen to what he has to say. I don't know why you are so suspicious. This place is filled with armed guards. Surely your helmet sensors tell you that we are unarmed. What do you expect us to do?"

"You could do anything. Do you think we're morons? You Building people have all the technology that's ever been invented. You probably have stuff that we can't even imagine. There's no telling what secrets you're not sharing with us. You could have matter transporters, or invisible weapons, or anything. You could kill us all if you wanted."

"But we haven't. In fact, we've never attacked any of you. I seem to recall that the SSF are the ones who attacked us."

"Maybe you've had a change of heart," the guard said. "Maybe you've finally grown a brain. I'm sure we must seem like some kind of insignificant insect to you. You science people terraform planets and blow up stars. Maybe up until now we've been not worth bothering with."

"I've just come to see the President," Lane insisted. "I believe he is waiting on us."

"You are lying. Do you think I'm a fool? If you just wanted to talk to him you could have done that without putting yourself at risk. Since you're here, you must believe you are untouchable. That means there is something going on that I can't see. That bothers me."

"Or maybe we're on the President's side," Lane replied. "Maybe we're his allies. Maybe I just want to help the people of the city by building Vaults that make all their dreams come true."

"You have built the Vault," the guard agreed. "I still don't believe you, but since Rios wants to see you I'm going to take you to him. But if you try anything you're dead. Do you understand?"

"I'm not here to cause trouble," Lane replied. "I'm just here to see the President and listen to what he has to say."

A squad of four SSF, led by the suspicious guard, took the two men inside the palace. The interior of the mansion was decorated in an incredibly opulent fashion. There were gold furnishings everywhere. The chairs, tables, and lamps were covered in gold, or made of the finest simulated wood. Adrian was astonished at the luxury on display. The only thing that was missing was people. Aside from guards, Lane did not see any human beings of any kind. The mansion was large and well-furnished, but it was almost uninhabited. All of the palace servants were bots.

The guards led them down a flight of stairs, and then down another flight of stairs, and then down a long hallway. After several minutes the group finally reached a vault door. The massive grey door had four guards posted outside it.

Adrian was surprised to see that Rios' office was in a literal vault. Lane, however, was not. He had used his nanites the day before to scan the property. He knew what he was getting into.

The squad stopped. "As you can see," the guard said, "the President is well protected. There are heavily armed guards stationed outside the office, and I will be with you inside the office. The walls of that room are made of a very impressive and very thick metal that was designed to survive any attack the Corporation could launch. In all the years that Rios has been President, no assassination attempt has ever succeeded."

"The Corporation has never tried to assassinate him," Lane pointed out.

"That is simply because he is too well-protected. I am going to go with you into his office and I

will be watching you. Do not do anything foolish.”

Lane nodded. A moment later the guards who were protecting the door opened it and allowed Lane and Adrian inside. As the two men and the squad of four guards entered the enormous, luxurious office, the door was closed behind them.

Lane admired their attempt at security but he marveled at how misguided it was. His nanites communicated using faster-than-light communication in order to minimize lag. The metal walls of the vault would not stop him from sending commands to his dispersed nanite cloud. *Besides, no material substance can withstand a hit from a probe antiparticle beam. His vault might as well be made out of tissue paper. His security only makes him feel safe because of his tremendous ignorance.*

When they walked in, the squad of four guards took their positions by the vault door. President Rios stood in front of a giant gold-plated desk. When Rios saw them he gestured toward two chairs that had been positioned in front of his desk. “It’s good to see you gentlemen! I must say I am surprised that you have agreed to meet with me in person. Please, have a seat.”

Lane sat down in the nearest chair. Adrian nervously took the seat next to him.

As the President walked behind his desk and sat down, the lead guard spoke up. “Sir, I do not trust those two men. I believe they are up to something.”

Rios laughed. “What could they possibly be up to? They are inside my sanctuary and are cut off from the rest of the Corporation. They are surrounded by my best men and are completely unarmed. You worry too much, Tristan. They are not dangerous.”

Rios then turned to address Lane. “I appreciate your willingness to meet with me. Dr. Mazatl seems to believe that I am an unreasonable monster, but I assure you I can be most agreeable. I have found your work to be quite satisfactory. Unlike the rest of your colleagues, you care about the city and the people who live within it. Your Vault concept is a brilliant use of technology. It has proven quite popular.”

“It certainly has,” Lane agreed. “The people seem to enjoy it. I trust that you have found it satisfying as well?”

“Oh yes! I have indeed. Incidentally, I appreciate the place that you reserved for me. I dislike waiting in lines.”

“Of course.”

Adrian spoke up. “We are always glad to make room for our friends.”

“That is most wise. The two of you have been much more flexible than Dr. Mazatl. Your employer has proven most obstinate over the years. Unlike you, he will not even agree to meet with me. He rejects the ordinances that were lawfully passed by the duly elected government of this world. He seems to place himself above the law – but I can see that you do not. Our demands are very reasonable and yet Dr. Mazatl insists upon being difficult. His attitude is not winning him very many friends.”

“Quite so,” Adrian replied.

There was a pause in the conversation. “So how can we be of service?” Lane asked.

“Gentlemen, I believe that your Vaults represents the future of humanity. For years my government has sought a solution to the poverty and violence that plagues our city. Yet, despite all we have done, the Diano Corporation refuses to be of any help whatsoever. They just point the finger back to us – as if we are somehow to blame. It has placed us in an impossible situation. Why, with poverty at all-time highs, they even had the audacity to launch three ZPEs into deep space! We protested, but it was of no use.”

Lane remembered the “protest” which had been delivered by the SSF. He decided to bide his time. His opportunity would come.

President Rios continued. “I was convinced that we would have to nationalize the Corporation itself in order to change its ways, but then you created Vault 37 and showed us a different path. Lane, I believe in your philosophy. The real world leaves a great deal to be desired; it is full of limitations. The virtual worlds that you have created are better than the real world in every way. Yet, despite their promise, there are a certain number of drawbacks that still need to be resolved.”

“What sort of drawbacks?” Lane asked.

“Capacity, for one. The good citizens of this planet are not happy about the wait times. One Vault simply cannot meet the needs of this entire planet. You need to build more – a lot more.”

“I agree,” Lane replied. “Fortunately, my project has the full backing of the Corporation. Since Vault 37 has reached its maximum capacity, I have drawn up plans to create new vaults all over the city. Ultimately I want to create enough capacity to house everyone in Star City.”

“That is most excellent,” Rios said. “But I do not think that will be necessary.”

“What do you mean? Didn't you just say that capacity was a problem?”

“Oh, certainly! But you see, I am not a fool. I know how your technology works. Every invention in the world exists as a pattern in a replicator. In order to create new Vaults, all you need to do is load up the pattern and generate it. There is nothing to it.”

Adrian quickly spoke up. “The Vaults aren't a pattern. It's much more complicated than that. You see—”

Rios interrupted him. “I believe you are stalling. I think you could easily create enough vaults for everyone in a matter of days – perhaps in a matter of hours. All of this talk of construction bots and committees and planning is a lot of lies. You are deliberately causing delays in order to stir up unrest. As that unrest grows, you will use it to show that you are the true savior of the people. You will ride the problem to increase your popularity and turn the people against me – their true leader. After all, I am not the one making the vaults. I am not the one who is helping them. What you are doing is nothing less than starting a revolution!”

Lane tried to speak up, but Rios cut him off. “This situation is intolerable. Therefore, it is up to me to save the city from your devious plans. As of this very moment I am seizing control of Vault 37. Your Vault now belongs to me – along with its technological secrets. I will create the additional vaults myself, and I will be the hero of the people. I will not allow you to undercut my popularity with the voters!”

Lane unobtrusively slid his hand into his pocket. “And what about us?”

Rios spread his hands. “What can I say? You are two revolutionaries whose attempt to overthrow the people's government has failed once again. You will meet the fate of all those who came before you. It was very foolish of you to come here.”

“Are you threatening to kill me?” Lane asked calmly.

“It is not a threat. I am the government; my will is the law. I am sentencing you to death. Before you die, however, I require you to give me access to the vault pattern. I will need that in order to secure the future of the people.”

“You are making a very serious mistake,” Lane said. “First of all, there is no vault pattern. The replicators can only create small things; large items have to be created in pieces. This will end very badly for you. Let us go, Rios, and we will create all the vaults you want. We'll even tell people that it was your idea. Give us a chance to help you. There is another way to handle this.”

Rios stood up and scowled at them. "Silence! There is only *my* way. Since you will not cooperate, I have no further use for you. You are wasting my time. Guards, take away these enemies of the people and put them to death."

Lane used the hand that was in his pocket to tap a button on the nanite control device. Since the nanites had been dispersed throughout the palace the day before, they had worked their way into the brains of everyone in the compound. The control device sent the nanites a very simple command: terminate.

The nanites Lane had built were designed to interface with every organ in the body. They knew how to send artificial information to every organ in the body. They knew how to put a person into a sleeplike trance. They could keep organs alive – and they could stop them cold.

The moment Lane sent his signal, the nanites acted on it. It took them less than a second to shut down the heart, the brain, and every other human organ. This termination happened simultaneously to everyone inside the President's palace – everyone, that is, except for Lane and Adrian.

In an instant everyone in and around the palace dropped dead.

For a few seconds neither of the men said anything. One moment the guards were reaching for their guns, and the next moment they were dead on the floor. President Rios was slumped over in his chair. It was a surreal sight.

"What happened?" Adrian asked.

"I changed the game," Lane said calmly. "I checkmated the king. The game is over. From here on out there's going to be a new game."

Adrian looked around nervously. "So... they're all dead? Just like that?"

Lane nodded. "Of course. What other choice did I have? It was either me or them, and it wasn't going to be me. The nanites made it easy. They never really had a chance."

"So what happens now?"

Lane removed the nanite control device from his pocket. "All of the television broadcasts in the city come from the Diano Building. The Corporation has a way to pre-empt them in order to make important announcements. I was able to get a friend of mine to give me access to that system. You see, we are going to make an announcement."

Adrian looked concerned. He started to say something, but Lane stopped him. Lane then pressed a series of buttons on the device he was holding. "All right, we're connected. Here we go. Just wait one more second..."

Lane paused and waited for a light to turn green. He then began speaking. "Hello, Star City. My name is Carroll Lane. You might know me as the person behind the Vaults – the amazing virtual worlds that give you anything and everything you desire.

"I know you've got better things to do than to listen to me, so I'll be brief. I'm sad to announce that a few minutes ago President Rios tried to take the Vaults away from you. He decided they were a threat to his power. In order to maintain control over you and your lives, he tried to kill me. Of course, if I was dead then the Vaults would stop working and you would have to go back to living in reality. I couldn't let that happen. I care too much about the people of this city in order to let Rios steal your happiness from you.

"Since Rios attacked me I had no choice but to defend myself. I am afraid that Rios and his entire SSF forces are now dead. This is unfortunate, but there was no other way to safeguard your

future.

"I want to make it clear that I have no desire to rule over you. I am not seizing power and I am not going to be your new President. If you want to hold a new election and elect a new liar to lead you then you are free to do that. If you want to have no leader at all then you may do that as well. Your future is in your hands.

"However, I would like to give you a different option. Today I am launching a plan to build new Vaults – enough to permanently house all of the citizens of this world. I am going to develop new technology that will enable you to live in the vaults *forever*. You'll never have to come back to this awful world, with its problems and plots and politicians.

"Now, if you decide that you miss Rios you are welcome to elect some new politicians who will steal from you and make you miserable. Or you could register today for a place in my Vaults, where you can have everything that you want for the rest of your lives. No more government, no more limitations, no more problems – just peace and happiness for the rest of time.

"It's up to you. Your future is in your hands, Star City. Choose wisely. This is Carroll Lane, signing off."

* * * * *

When Dr. Mazatl heard Lane's broadcast he was extremely concerned. He called Lane and asked to meet with him immediately. This did not come as a surprise to Lane. He agreed to the meeting and made his way back to the Diano Building. An hour later the two of them met in Dr. Mazatl's office.

"I'm not surprised you wanted to see me," Lane remarked. "However, I am surprised that the rest of the board is not here."

"Oh, there will be a full board hearing," Dr. Mazatl said. "That is scheduled for tomorrow morning. But before that happens I wanted to talk to you myself. Lane, what have you done?"

"I defended myself, of course. I have already sent you a full, unedited video of the entire encounter. If you took the time to watch it before this meeting then you know that I was not the aggressor. I was fully prepared to cooperate with the President. I only took action when he made it clear that he was planning on killing me and seizing the Vaults."

"But surely you knew that would happen before you even went to see him! There is a reason that we never leave this building, Lane. Rios would kill us all if he could. What did you expect?"

"I wanted to give the President a chance. It's true that *you* can live your whole life behind the safe security perimeter of this building, but I cannot. I built the Vault in order to serve the people, and the people are *outside*. That means that my vaults have to be outside. My job – my life – must take place outside this building. Therefore, when Rios wants to cause trouble I cannot simply hide. I have to deal with it. Now, I did not go there with the intention of killing him. If that was my goal then I could have accomplished that without ever leaving the Building. I was fully prepared to give Rios whatever he wanted. In fact, I had even given him preferential treatment. He never had to wait in line."

"But you killed him!" Dr. Mazatl exclaimed. "In fact, you killed them *all*. Do you know how many people are dead?"

"I only killed the President and his guards," Lane pointed out. "I did not harm so much as a single bystander. And I only took action when he tried to kill me. It was a purely defensive act. Doctor, I cannot hide in this building. I was prepared to make a deal with Rios, but unfortunately Rios did not

want a deal. If I had hid in this building and done nothing, Rios would have seized the vaults and destroyed them. I *had* to defend them. You cannot tell me that it is immoral to take the life of someone who is *trying to kill you*.”

“I understand what you are saying,” Dr. Mazatl said. “You have a fair point. But what is going to happen now? What will happen when the other colonies hear that the Diano Corporation assassinated a President?”

“But the Corporation *didn't*. I did. There's a difference. You are free to tell them that I acted without your knowledge of consent – because that is *exactly* what I did. You should also point out that I did not take over the government. The people are still free to do as they please – although I hope they choose to move into the vaults I am building. It is entirely possible that the people of other worlds will look at this and decide that it is dangerous to try to murder Corporation employees. That would be a very good thing in my opinion.”

Dr. Mazatl sighed. “I don't like this, Lane. It looks bad. I admit you have a good case, but you have changed things. Things aren't going to go back to the way they were.”

“Which is a good thing, if you think about it. In the past we were trapped inside the walls of this Building, afraid to step outside. In a few years the citizens of this planet will be in vaults. When that day comes this world will be yours. You will be able to walk its streets and live as you please. All the people who once threatened you will be gone. You will finally be free. I have found a way out. Isn't that what you want?”

“Perhaps,” Dr. Mazatl said, sighing. “Perhaps you are right and this should have happened long ago. Maybe if we had taken a stand a hundred years ago things would be different now. I don't know. Maybe you did the right thing. Let's see what the board has to say in the morning.”

* * * * *

The interview with the board went well. Although they all had some grave concerns about what might happen next, none of them were willing to condemn Lane. Instead they promised their full support to his efforts to build more vault capacity.

Adrian Garza began the expansion project the following day. With the full support of the Corporation Adrian soon had all the plasma he needed. That very same week he broke ground on 9 new Vaults. Once they were completed the ten Vaults would have enough capacity to house 4 million people – nearly half of the city's total population. It would not be enough for everyone, but it would be a big step in the right direction.

While Adrian handled the construction issues and the day-to-day management of the Vaults, Lane continued to work on the simulation technology itself. Finding a way to enable people to live in the Vaults forever was a daunting technical challenge.

His only lead was some suspended animation research that had been done more than 500 years ago. In the early days of space exploration it took an exceedingly long time to travel between the stars. Because of this, space agencies spent a great deal of money trying to find a way to place people into a state of suspended animation. The results were promising, but were quickly cast aside once hyperdrive technology was invented. Lane was hoping to pick up where the Spanish Empire left off – and now that he had more resources to work with, he could hire another team and get to work.

* * * * *

Lane had the support of Dr. Mazatl and the board of directors, but Victor Stryker continued to have grave reservations about the entire project. Victor tracked Dr. Mazatl down and tried to change his mind.

"I just don't see what you're so upset about," Dr. Mazatl commented. "Have you actually tried the technology? It's quite relaxing. I wouldn't want to live in the simulation forever but it's not a bad diversion. I think that Lane has done an excellent job of opening up a new frontier. He is to be commended."

"But what of the danger? Don't you see how society is responding to this? All that people care about these days is life in the Vault! They've completely lost interest in reality."

"They were never interested in reality in the first place," Dr. Mazatl pointed out. "All they wanted was a dream world where they could get whatever they wanted, and now they have it. This is actually having a very beneficial effect. The riots are subsiding, the government no longer cares about plasma allowances, and Rios is no longer around to threaten us. I'd say that everyone is happy about the way this is turning out. We now have a real chance to complete our SOLOMON upgrades. Lane really did us a favor."

"He has made the people even more wicked than they were before! Have you seen what people are simulating? I expected things to be bad, but the simulations are cruel and perverse beyond imagination. The people are turning into demons."

"They were always evil, Victor. All that has changed is that we now have a way to see what is in their heart."

"That is not all that has changed. This tide of evil is just the beginning. Society is going to abandon the real world for Lane's demented, horrific fantasies. They will move into the Vaults forever, and they will live there until they die – and mankind will die with them. No one will ever live in the terraformed worlds. All of the work we are doing will be utterly wasted. The Vaults are a trap. We have to stop them. They are not helping people. They are turning bad people into something much worse."

Dr. Mazatl shook his head. "The Vaults don't appeal to everyone, Victor. I, for one, find them amusing but not very satisfying. I am sure that there are some people who will become addicted to them, but there are others who won't. Once the addicts have died, the ones who are immune to the temptation will go on to build a bold new tomorrow. It will all work out in the end."

"But don't the addicts have souls? Shouldn't we try to save them?"

"We *have* tried. We've been trying for generations but they won't listen. It is a sad thing to see them march toward their doom, but it is inevitable. Opposing the Vaults isn't going to do anyone any good. I'm sorry, Victor, but this really is for the best."

As Victor turned to leave, Dr. Mazatl spoke up. "One more thing, before you go. Some months ago you sent out a message in response to the strange signal that the Nehemiah probes had been receiving. How did your experiment turn out? Did you get any response?"

Victor looked surprised. "Didn't you see my communication about that? I sent you a report."

"Did you? I'm sorry – I must have missed it. I get so many messages."

"Oh. Well, after I sent that message, that was the end. Before I sent out my transmission the probes had been receiving that strange signal every few days. After I sent my message, though, the signal stopped completely. The probes haven't been contacted again."

"Fascinating! It would appear that your message had a definite effect, then. It solved the

problem. Nice work!"

"I suppose," Victor sighed. "I just wish I knew why it happened in the first place. Now we'll never know what was going on."

"Maybe so, but you have fixed the problem and that is a victory right there. Excellent work! I think a new day is dawning, Victor. I finally see a ray of hope, which is something I hadn't seen in a long time. I think better days are right around the corner."