

Love and God and Robots: The Science Behind the Science Fiction Prototype “Machinery of Love and Grace”

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Abstract. This paper is an introduction to the short story and science fiction prototype *The Machinery of Love and Grace*. We cover a brief overview of the goals of science fiction prototyping as well as an example for how both Albert Einstein and Sigmund Freud used a very similar process to achieve greatness in their work. Finally we look into the specific science behind the story *The Machinery of Love and Grace* and conclude with the full story.

Keywords. Science fiction, science fiction prototypes, fiction prototypes, virtual reality, design tools, consumer experience architecture, research and design, cultural anthropology, robotics, artificial intelligence, computer science, human computer interaction, intelligent systems, AI, religion, love and God

Introduction

The *Machinery of Love and Grace*, the story that follows this introduction is not only a fast-paced thriller about mysterious deaths on a remote space station but it's also a science fiction (SF) prototype. The SF prototyping process creates science fiction based on science fact with two main goals. First SF prototypes advance the development of the science or technology that they are based on by envisioning the impact of that science or technology on people, culture and wider systems. All good stories are primarily about people not technology. A SF prototype gives development teams a way to envision their work in the real world through fiction. It gives people a way to explore the human and ethical implications of the science or technology in what is essentially a virtual world. It becomes a platform for discussion and deeper exploration of areas that may not have originally been understood or conceived. Exploring these new areas can shed new light on the technology, lay out points for validation and even new scenarios to test.

The second goal of SF prototypes is to offer a possible vision for the future that is based on science and reason. This type of fiction to gives us a language to talk about the future. SF prototypes are a way for everyone to discuss a future that we can build. We can ask ourselves what kind of future we want to live in or maybe even more importantly we can explore the many futures that we do not want to live in.

Ultimately SF prototypes provide us with a vision of the future that we can actually build; they provide a vision for where we think science or technology could go. In the SF prototypes we can explore those possibilities based upon a clear

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understanding of science. This approach provides us a map or for where we could go next or where we might not want to go next. SF prototypes can be thought of as a creative leap based upon facts with the purpose of discovering a new path and possibilities that we would not have imagined if we hadn't explored them in a fictional setting.

1. Albert Einstein and Sigmund Freud as SF Prototypers

Using speculation as an inherent part of the scientific process is not new. In fact two of the 20 century's most famous scientists were firm supporters in the necessity of speculation in the scientific process. In 2004 Richard Panek wrote a book called "The Invisible Century" where he explored two of the most important revolutions of modern life. He places Albert Einstein and Sigmund Freud on parallel tracks as they investigate and illuminate relativity and consciousness. At the conclusion of the book Panek draws an interesting conclusion that applies directly to SF prototyping.

Panek sees that both Einstein and Freud used speculation as a key step in their scientific process. Both men were fierce adherents to a fact and observation based approach but both also saw that when taking science in new directions, scientists needed to speculate, to imagine their next step. Once they had a vision for where their work might go then they would check the facts to see if that speculation was in the right direction.

At the end of Einstein's life, as he reflected on the process he used to develop his theory of relativity, he began to see that speculation was an inherent part of the scientific process. In letters and public lectures he talked about its value and that it had always existed.

"Einstein's self-assigned mission, then, wasn't to change the way that natural philosophers (meaning scientists) did what they did. It was to change the way they thought they did what they did. In effect, Einstein's example gave them permission to do what they'd been doing all along".[1] Similarly, Freud in a 1915 letter talked about scientific creativity as a "succession of daringly playful fantasy". [2]

Both men saw the importance of speculation and imagination as an integral part of the scientific process. Both understood that the innovations that had made them both famous could not have been achieved without tapping into their imaginations. They saw that making that speculation or creative leap based upon science led to new perspectives and innovations that could not have been achieved any other way. SF prototyping is one such tool that formalizes a way for scientists and researchers to make that leap. SF prototypes also give non-scientists a language and vision so that they too can speculate and dream about their future

2. The Science Behind *The Machinery of Love and Grace*

The Machinery of Love and Grace is a SF prototype in a series called *Nebulous Mechanisms: The Dr. Simon Egerton Stories*. Each of these stories is based on multiple sources of scientific research. The story that follows this introduction is the third in this series to benefit from the great research and development conducted in the following publications: *Using Multiple Personas in Service Robots to Improve Exploration Strategies when Mapping new Environments* by Simon Egerton, Vic

Callaghan and Graham Clarke, Michael Brooks' exceptional book *13 Things That Don't Make Sense*, Paola A. Zizzi's *I, Quantum Robot: Quantum Mind control on a Quantum Computer* and *Instability and Irrationality: Destructive and Constructive Services within Intelligent Environments* by Simon Egerton, Victor Callaghan, Victor Zamudio and Graham Clarke. Each of these works fed into the previous stories and *The Machinery of Love and Grace* certainly stands on their shoulders.

However *The Machinery of Love and Grace* charts new territory as a SF prototype. It explores love and God and robots. Primarily the SF prototype utilizes three pieces of research: *Buildings as Intelligent Autonomous Systems: A Model for Integrating Personal and Building Agents* by Vic Callaghan, Graham Clarke, Anthony Pounds-Cornish, Sue Sharples, Genevieve Bell's *No More SMS from Jesus: Ubicomp, Religion and Techno-spiritual Practices* and *Some Socio-Technical Aspects of Intelligent Buildings and Pervasive Computing Research* from Vic Callaghan, Graham Clarke and Jeannette Chin.

Buildings as Intelligent Autonomous Systems: A Model for Integrating Personal and Building Agents really lays the initial groundwork for the SF prototype. In the paper the authors contemplate the nature of an intelligent environment. One way to imagine an intelligent environment is a space that is kitted out with sensors, computers, AIs and possibly robots. Written over a decade ago in 2000 the paper asks one of the most interesting questions about future environments....what if a building is just a robot that we live inside?

Le Corbusier famously remarked that, "A house is a machine for living in". Modern buildings have strong physical similarities to machines in that they contain a myriad of mechanical, electrical, electronic, computing and communications devices. As building services become increasingly sophisticated they contain ever more sensors, effectors, computer based devices and networks. From a computer science viewpoint an Intelligent- Building (IB) can be described as one that "utilises computer technology to autonomously govern the building environment so as to optimise user comfort, energy-consumption, safety and work efficiency". In intelligent-buildings computers together with AI techniques are used to orchestrate the operation of the building services (e.g. light, heat etc) to provide a level of control that we normally associate with human intelligence, such as reasoning, learning, or adaptation. Machines such as robots are able to do this through the inclusion of behaviour-based artificial intelligence (AI). There are enough similarities between machines (particularly mobile robots), and buildings to justify such techniques being applied to building control systems to make them behave more intelligently. Both deal with a highly dynamic, unpredictable world. ...Hence in intelligent-buildings, centralised, traditional AI, with bulky planners and reasoning systems, becomes less attractive. Incorporating sophisticated control techniques into intelligent buildings presents a considerable design challenge. From the considerations above we suggest a modification to Le Corbusier's slogan so that in the future "A building is a robot we live inside".[3]

Building upon this vision for the places where we may live. Dr. Genevieve Bell's *No More SMS from Jesus: Ubicomp, Religion and Techno-spiritual Practices* explores new ways of looking at how we develop the technologies that surround us. She questions the very foundation of how scientists and developers imagine their technology will be used. Bell argues that we should not just understand the work or

tasks of people but we should also understand the cultural and religious practices of the people who will be using the technology. Not only could this make the application and integration of the environment or technology more appealing but Bell questions if it might not change the very nature of the technology itself.

Given the ways in which religious practices are intimately woven into the fabric of daily life in most parts of the world, it is hardly far fetched to imagine that new information and communication technologies (ICTs) might support a range of existing religious and spiritual activities, as well as helping to create new ones.[4]

Religion proves a useful vantage point from which to explore how much social and cultural institutions and practices are occasioned in and through technology. The repurposing of ICTs for religious practices challenges some basic assumptions about what makes good technology; if not about efficiency and speed, then what? How might thinking about techno-spiritual practices inform ideas of privacy, identity, and security, for instance? Religious systems' cultural logic necessarily impact the very ways in which new technologies are created, consumed, and indeed rejected. Our desire to bring new technologies into our homes; the persistence of values such as simplicity, grace, humility, modesty, and purity; and ideas about modernity, subjectivity, and the self are all implicated in shaping the contexts for new technologies. And if we ignore them, we shortchange both our own experiences of the technology itself, as well as our understandings of what it could be for others. [5]

Finally we apply these two previous ideas specifically to a space station through *Some Socio-Technical Aspects of Intelligent Buildings and Pervasive Computing Research* from Vic Callaghan, Graham Clarke and Jeannette Chin. In this work the authors explore the implications of intelligent environments specifically to space stations and also provide a possible frame work for developers when thinking about how to regulate these extreme environments.

Existing intelligent buildings use computers to control building services such as heating and lighting. A vision for this technology is that, as networked computers become ever more pervasive, intelligent building technology will embrace any space that people inhabit extending from homes, offices & factories through cars aeroplanes & spacecraft to the ultimate vision for supporting mankind's long term habitation of deep space. In wholly technological environments such as spaceships and planetary habitats, computer controlled environment will be essential.

With the space colony, in some form or another, we will be moving into an experimental community of an entirely different order of magnitude in that it will need to be reliably autonomous and self-governing at all the levels of critical safety, although individuals will probably still retain a strong desire to personalize aspects of their habitat. [6]

It is certainly true that the exploration of space will require us to look at ourselves and the ways in which we can work together in groups to achieve our common aims. We will be required to do this in a way that has rarely been asked of us before and with a range of tools and theories as to the social nature of human beings that are still being developed. This might enable us not just to go to other planets and found new colonies but in a genuine sense, to found new societies. [7]

In this paper the authors offer up a set of rules in the same vein as Asimov's 3 laws of robotics. They postulate that these rules may help us govern, understand and trust these new computational environments:

- 1) *Do not violate any safety constraints set by law or the manufacturer*
- 2) *Do not violate any privacy constraints set by the user of the environment or community (providing safety constraints are not violated)*
- 3) *Accept instructions (including configuration and training immediately from the stakeholders of the environment) (providing safety and privacy constraints are not violated)*
- 4) *Preserve the pervasive community (providing all the above have not been violated) [8]*

These three works provide the foundation for the world of *The Machinery of Love and Grace*. We use this SF prototype to ask ourselves what is the power of love? Can we use love as an over-arching software architecture for an AI in an hostile environment? What could go wrong? What happens when love and God and robots come together on a deserted deep space station when all the inhabitants have mysteriously disappeared?

3. Science Fiction Prototype: The Machinery of Love and Grace

Falconbriar--2315: Ingersoll-Rand Search and Rescue Ship

"We're going to need a few more minutes," Shanwei snapped at the overweight woman in the ill-fitting business suit.

"We don't *have* a few more minutes," Viki Nakamura jabbed back. "We launch now and get going or we don't do it at all." Viki worked for Ingersoll-Rand and was the project manager in charge of the search and rescue team. Three weeks ago, the Hussmann, an Ingersoll-Rand supply ship was docking with the New Lebanon, the corporation's most remote space station. It was a routine procedure. The New Lebanon was the Hussmann's last drop off before returning home. But then something happened. But the Hussmann and the New Lebanon went silent. No one had heard anything from them since. The Falconbriar was there to find out why.

Viki was tense and stressed but then again everyone on the search and rescue ship was tense and stressed. "I was told you were ready to go twenty minutes ago and...look," she exhaled a quick breathe of coffee and nerves. "I have to send in a status report in two hours—really you can wait all you want but I have to send the report either way—you and your friend here are either done or you failed to deliver. That's all you get." She shook her head in disgust. "You go now or you failed and you are in breach of your contract and..."

"Five minutes!" Shanwei held up five fingers in front of Viki's face as if she was a child or they didn't speak the same language. "I told you I need five minutes and then we go."

"But..."

“Alone!” The yell did it. Viki inhaled an abrupt dissatisfied sniff and left the Falconbriar’s cramped observation deck.

When the door closed Dr. Simon Egerton, who had remained silent and small through the whole exchange smiled, “Wow that was exciting. Do you always scream at people who are paying you?”

“I don’t want you going out there,” Shanwei said flatly. He was a small lean man with a muscled neck and quick bright eyes.

“Oh come on,” Egerton pointed at the dark Hussmann and New Lebanon outside the observation deck window. “Both those things have been shut down for how many weeks?”

“Over three.”

“Great. Yeah, three weeks they’ve been dead. Let’s go make some money. I didn’t come all the way out here to...”

Shanwei rubbed his chin, scratching at a small mole. “I don’t want you going out there.”

“I know you said that about twenty times already.”

“I don’t have a good feeling about it,” concern and worry worked at his face like a tight swarm of invisible bees.

“You don’t have a good feeling...” Egerton started then stopped. He had known Shanwei for years now and he had never seen him so worried. Shanwei was usually the one in charge. He was the one who hired Egerton for these types of jobs. The man was fearless or usually didn’t have time to worry about danger. But not this time. The whole thing was weird.

“Don’t worry,” Egerton continued. “I’ll go in quick and check the systems, yank the data from the New Lebanon and get out. And don’t say you’ll come with me because I won’t let you. I need you in my ear. I don’t want Ms. Nakamura telling me to hurry up so she can send her stupid report.”

Shanwei kept his eyes on the silent New Lebanon outside. “You don’t have to...”

“I’ll take Jimmy if that helps,” Egerton added. Jimmy was Egerton’s bot they usually brought along on these types of jobs. “We’ll go into the Hussmann first and check things out. We’ll take it slow.”

The observation deck was quiet. In the silence the men could hear the hum of the Falconbriar’s ventilation system.

Finally Shanwei spoke, “I don’t like it.”

“Why?” Egerton was growing impatient. If they were going to do this the time had come. No more stalling. “Shanwei you have to tell me why you are so worried.”

“This.” Shanwei pulled a small screen from his pocket and set it against the thick observation window. The screen was damp from Shanwei’s sweaty palm gripping it nervously in his pocket. Wiping off the moisture, Shanwei brought up the official Ingersoll-Rand architectural schematic for the New Lebanon.

“What is it?” Egerton asked.

“Look at the back of the New Lebanon. Look at the back of the station,” Shanwei said flatly. “Can you see it? I still don’t believe it. It looks like a mirage, but it’s got to be right. That is what I’m seeing right?”

Egerton searched the dark station barely lit by the Falconbriar’s blazing security lights. “No. I don’t see it. What are you talking about?”

“It’s grown,” Shanwei pointed at the drawing and then to the window. “Can you see it? I know it sounds crazy and there’s no way I can say this to Viki but it’s bigger. The New Lebanon doesn’t match the schematic from when it was built.”

“I don’t see it.”

“It’s bigger. Look at the back. Can you see the circular section coming out by the observation tower? That wasn’t there five years ago when it was shipped. Look at the drawing.” Shanwei thrust the screen into Egerton’s hand and walked away from the window.

“Oh yeah, I see it now,” Egerton was surprised how clear it was when you actually saw it. “That is weird. Why would they build an addition on to the station?”

“They wouldn’t,” Shanwei shot back. “They couldn’t. There’s no way they could have built it. There’s no materials out here and if they did somehow get them shipped it would be recorded somewhere.”

“Well I guess they only way we’re going to find out what’s happened is if we getting going.” Egerton handed the screen back to Shanwei.

“Why doesn’t it match Simon? I don’t like it. Why did it grow?”

“I don’t know,” Egerton replied. “Let’s go find out.”

Hussmann—12999: Ingersoll-Rand Cargo Supply Unit

“The door should open easy. Give it a pull.” The packing up, launching and navigation of the Xtractor Search Pod had put Shanwei back into his usual efficient and arrogant self. Egerton was happy to have him back—especially now that Shanwei pretty much held Egerton’s life in his hands. “Just pull it Simon.”

Egerton opened the door to Hussmann and floated inside. Behind him, Jimmy was struggling with the lack of gravity. This was the little bots first time in weightlessness and it was taking a while for him to get used to it. He fought, thrashed and flailed while his sensors and systems adapted.

“I’m in,” Egerton reported back to the Falconbriar.

“Yeah I see,” Shanwei responded to the data feed. “Stay where you are. Just let Jimmy go to the data vault.”

“Can you see him?” Egerton laughed as the little bot fought to catch his bearings. “I’ll just do it. Doesn’t look like he’s up for it.”

Egerton hadn’t spent much time around the big commercial ships in the Ingersoll-Rand fleet. The utilitarian interior of the Hussmann was a let down.

“There’s nobody,” Egerton let his head lamp poke into the low ceilinged rooms as he floated down the hall.

“Yeah the scans and the search spiders they shot in there didn’t find anyone.” Shanwei’s voice was distracted. “There’s no one in the ship. It’s empty.”

The eight person crew of the Hussmann and all twenty-four residents of the New Lebanon had vanished. All searches up until now had provided no clue as to what had happened. Shanwei had been hired to retrieve the backup data from the local computer systems on the Hussmann and the New Lebanon in the hope that there might be some information there. Because there was a pretty strong artificial intelligence system on the New Lebanon Shanwei had picked up Egerton to help out. Neither had any idea what they were in for.

“Hey Simon, sit tight,” Shanwei said briskly.

“Okay. Why?” Egerton held onto the wall outside of what looked like the IT lab. He kicked his legs idly as we waited. Although Egerton had done a few salvage

jobs in the past, weightlessness was still a novelty—more amusement park stuff than any real danger. “Why am I waiting?” he asked.

“You’ll see,” Shanwei smiled into the phone. “He’s coming on your right.”

Jimmy shot past Egerton, pushing and tracking himself down the hall with furious speed and grace.

“Wow,” Egerton was impressed.

“I felt bad for him,” Shanwei replied. “I pushed some quick upgrades his way. He should be good now. He’s a little champ.”

“Yeah,” Egerton wondered if Jimmy liked weightlessness. He usually had trouble getting around normally. His rounded hip joints made him waddle and roll like a toddler just learning to walk.

“He’s at the main Comms link,” Shanwei reported.

Egerton scanned the cold dark hull of the Hussmann, trying to imagine the small crew going about their routines. *What happened to them?* He wondered. *Where did they go?*

“Uh Simon,” Shanwei chuckled. “Jimmy just asked me if I’ve read any good books lately. Did you teach him that?”

“No,” Egerton answered. “He’s been doing that recently. I don’t know why. He likes to read books whenever I can find him a new one.”

“That’s funny.”

“What did you tell him?” Egerton asked.

“I told him I don’t have time to read anymore...wait...hang on...he’s done and coming back your way.” Shanwei’s voice went back to ruthless efficiency. “Simon it’s time to head back to the door.”

“Alright,” Egerton spun around and glided silently through the Hussmann.

“When you get back here it shouldn’t take long for me to crack open data,” Shanwei chatted. “There’s a guy here who says he can have it done before you’re back from the New Lebanon.”

“So you want me to go there next?” Egerton asked hesitantly, trying to feel out Shanwei’s response. “Everything’s okay? You alright with me going now?”

“Yep,” Shanwei replied. “All good.”

“There’s one thing,” Egerton said once he got to the Hussmann’s door. Kicking his legs one last time he added, “I think I’m going to power up the New Lebanon.”

“What!”

“Yeah,” Egerton remained calm because he knew Shanwei would freak out. “I want to see what else I can get if I’m going to go all the way out there. I really won’t be able to get into the AI unless...”

“Simon you can’t. No! Don’t do it.” Concern surged back into Shanwei’s voice. “The only reason I agreed to let you go out there was because...”

“I know. I know,” Egerton was barely listening. “If I’m already there I might as well find out what is up with the New Lebanon’s AI. That’s why I’m here right? Don’t worry. It’ll be fine.”

New Lebanon Border Station—3899

The New Lebanon was a late model station modified only slightly from Ingersoll-Rand’s typical unit. Most of the changes had been aesthetic or cosmetic. The

station had been reconfigured, streamlined and simplified. Approaching the cold dead station Egerton thought it looked peaceful.

"Go in the door's open," Shanwei said as Egerton exited the eXtractor and glided into the New Lebanon. Jimmy floated fitfully behind him.

Once inside Egerton tapped into the network, found the barely breathing BIOS and brought it to life.

"Jimmy," Egerton waved at the little bot.

"Yes, Dr. Egerton?" He seemed joyful in the weightlessness.

"I'm going to bring up the station's system. Hold on to something while it stabilizes."

Jimmy nodded and pushed himself to the floor.

"I really don't want you to do this," Shanwei said.

"I know." Egerton brought up all the systems slowly, not knowing what to expect but excited to find out.

Slowly, gracefully and with a gentle hand the New Lebanon came alive.

"And we are live," Egerton stomped his feet, flexing his arm muscles, adjusting to the change in atmosphere. Jimmy pulled himself to his feet and his cute little half skull looked to Egerton for what he should do.

"Don't take your helmet off," Shanwei snapped. "The air won't be ready for days and you're not going to be there for an hour."

"Yes sir." Egerton switched off his head lamp and let his eyes adjust to the dim emergency lights. "Jimmy, how about you go find the IT room and grab the data backups?" Egerton pointed into the station.

"No problem," Jimmy replied and went trotting down the hall teetering on his round hips.

"Anything?" Egerton asked, knowing that he had sent Shanwei and the entire search team on the Falconbriar into a restrained panic by bringing the New Lebanon back to life.

After a silence Shanwei's voice popped in, "Give us a sec."

Egerton walked into the station. Where the Hussmann had been compact and rugged the New Lebanon was broad and beautiful. The main entry way was wider than any he'd ever seen on a space station. Most were more concerned with efficiency than appearances.

The doors and observation decks on either side of him were a mirror image. One set of doors read MEN and directly across was a copy that read WOMEN.

Egerton wanted to explore the immaculate station. The weight of the mystery seemed to push against the walls. It was as if he could feel its force through his suit, pressing against his fingertips.

At the center of the station lay a tremendous circular chamber with a daunting observation deck perched at the top.

"Everything is going nuts back here," Shanwei's voice blasted into Egerton's ear, startling him out of the serene silence. Nervous activity and warning chimes pulsed behind Shanwei's words.

"What do you mean?" Egerton craned his neck up to see out of the top of the chamber.

"I don't have time to..." Shanwei's mic went mute restoring the silence for a few seconds then came back. "Jimmy has the data. He's coming your way. We're going to have to shut the system down again. It's not safe."

“Ok.” Egerton noticed that the walls of the center chamber were covered with quite large paintings. The station appeared to be divided into four quadrants, four exact replicas laid out like a compass rose. Each of the quadrants has a painting. Below each painting was printed a name: Sabbathday Lake, Niskayuna, Pleasant Hill and Cane Ridge. The paintings were in a traditional American folk art style, depicting a little community with broad circular barns and windmills.

“Are you seeing this?” Egerton asked Shanwei, sure that he must be picking up the video from his helmet.

“What?” Shanwei’s voice snapped back.

“Are you picking this up? Can you see the painting? Did anyone know they were here? Who paints the inside of a space station with this? They’re...”

“God Simon no, I’m not watching. Do you have any idea what we’re dealing with over here?”

“What? What’s going on?” For the first time Egerton was worried.

“We’re killing the system in thirty seconds and I need you out of there.” Shanwei breathed heavily into the mic. “Can you see Jimmy?” he asked. “It looks like he’s right on top of you.”

“What?” Egerton searched the dimly lit chamber. “I don’t see him. Do you...”

And then Egerton saw the little bot walking toward him. He entered the chamber, waddling slowly with something in his hands.

“Oh, I see him,” Egerton was relieved. “He’s in the middle chamber with me.”

“Good. Head back to the boor,” Shanwei ordered. “We’re killing the system in ten seconds.”

“Are you seeing this?” Egerton asked once again.

“No Simon, I told you we’ve got too much...”

“No!” Egerton cut in, his voice was heavy with horror. “No! Can you see Jimmy? Can you see what he’s carrying?”

“No. I don’t have time. We’re killing it now.”

“It’s an arm Shanwei. Oh my God, it’s human.”

The little bot stood in front of Egerton holding a surgically severed human arm.

“Shanwei!” Egerton yelled. “Shanwei can you hear me?”

In an instant the station went dark and Egerton and Jimmy were weightless with the severed arm.

Centennial Station 8854 Ingersoll-Rand Corporation Headquarters

“Ms. Nakamura really doesn’t like you Shanwei,” Greer George smiled mischievously. She was a tall woman with a broad and approachable face and large strong hands.

“Ms. Nakamura seemed to forget why you hired me,” he replied. Shanwei and Egerton were both in Greer’s office.

“Well I don’t like Viki,” Greer waved away Shanwei’s words. “No one likes Viki but come to think of it that does kind of makes me like her a little. Does that make sense?”

“You’re crazy,” Shanwei shifted in the stiff office chair, throwing his left leg over the arm.

“No, I’m just complicated,” Greer fiddled with the screen on her desk. “What did you do with the arm?” she asked changing the subject erratically. Egerton had noticed that she liked doing it or it was a habit she couldn’t break.

“We gave it to Young whatever his name. He came running at me with an evidence bag before I could get poor Simon here out of his suit.”

“Where did you find it?” Greer asked Egerton.

“I didn’t,” Egerton answered. “My bot Jimmy did.”

“Why didn’t the spiders find it?” she asked Shanwei.

“Don’t know,” he answered quickly and casually as only old friends can. “We don’t know where it was exactly. Jimmy found it but he’s not telling us where he found it.”

“You can’t get your bot to tell you where it found a severed human arm?” Greer’s face wrinkled in disbelief.

“Jimmy’s not a normal bot. He’s...”

“That’s right. I read about him and you,” she said frankly but didn’t ask anything else.

“Yes well, you see,” Egerton didn’t know how to put it. “Well...you see Jimmy’s not been the same since we were on the New Lebanon. Something upset him.”

“Am I hearing this right?” Greer asked Shanwei.

Shanwei nodded.

“Your bot is *upset*?” she asked, playing with the word. “You bot can get *upset*?”

“Apparently so,” Egerton replied.

“What the hell happened to those thirty-two people?” she changed the subject swiftly again.

Egerton wondered what the inside of her brain looked like.

“Well, they didn’t all disappear or run away or desert or any of the other things you put in your press release.” Shanwei teased her a bit. “We know the whereabouts of at least three of the thirty-two.”

“Three?”

“Well, I guess we know the whereabouts of *parts* of the three of the thirty-two.” Shanwei cracked a grin.

“Those are real people you know,” Egerton reminded them. “We are talking about real people and I don’t think there’s anything funny about it.”

“Dr. Egerton please be assured this is a terrible tragedy. We are committed to finding each and every one of those people.”

“The arm belonged to Nassim Simon. He was the communications tech on the Hussmann.” Shanwei has just seen the morning update from the lab before coming into Greer’s office. “The leg and three fingers we found on the second search belonged to two from the New Lebanon. They were removed after they were dead. Clean cuts. Like a surgeons.”

“Are you going to give me my full daily briefing?” Greer started to get annoyed. It was obvious she wasn’t used to people not doing what she told them to do.

“Funny Ms. George.” It would take much more to ruffle Shanwei. “Look, are you going to give us access to your lab or not? That’s all we really need and we’ll leave you alone.”

“You know I can’t give you access to the lab. You don’t have the clearance and we don’t have time to go through the proper steps.” Greer straightened in her chair. “How about we...”

“Bah!” Shanwei stood up. “Look, Greer. You hired me. I got you your data, but you and I know we found out more than you and your boys expected. And I’m not just talking about the body parts. And I’m not talking about the illegal addition that someone made to the New Lebanon out there in the middle of nowhere.”

“Additions?”

“Simon found something. The system on the New Lebanon was crazy. It freaked out our scanners and did who-knows-what damage to the Falconbriar. We do know it completely disabled the Hussmann. So don’t give me that proper channel speech.”

“Shanwei, I was just...” Greer tried to interrupt.

“No,” Shanwei wouldn’t let her. “If you want us to help you find out what happened on the New Lebanon then give us access to the lab today. If not, fine! Pay me and we’ll go home.”

Greer George’s face was expressionless. Her eyes ate away at Shanwei’s face, dissecting intentions, working all the angles. “Ok,” she gave in finally. “I can’t give you access to the lab...”

“Forget it!” Shanwei started to leave.

“Stop!” she stood up. “Stop. Just stop it. I can’t get you in the lab but I can get you access to the guy who runs it.”

“That’ll work.”

“But you do it away from here and you don’t tell anyone.” Greer’s nostrils flared.

“Today,” Shanwei said flatly.

“Yeah, yeah, yeah...today,” she waved him away, her face returning to its original approachable friendliness. “Oh don’t look so happy. Good luck with him. You won’t get anything. He’s crazy.”

SandSurf Spa The Hotel Drexel

“My name is Shanwei,” Egerton said to the boy behind the small natural wood reception desk. “I’m here to see John Knight.”

The young man’s bright face smiled. He couldn’t have been more than 19 or 20. His name tag said his name was “Bo”. He was the picture of good health, clear skin, strong straight teeth and a lean muscular body.

“Oh yeah,” Bo replied. “Mr. Knight is waiting for you in the pool. Do you know where it is?”

“No. Can you...”

“It’s easy. It’s just down the elevator to level P for pool,” Bo pointed to the brushed silver elevator just behind Egerton. “You can change down there.” Bo searched behind the counter and offered Egerton a towel. “Do you need this Shanwei?”

Just as she had promised Greer set up the meeting. As she had said it wouldn’t be at the Ingersoll-Rand research lab. For some reason she picked the Sandsurf spa at the Hotel Drexel near the lab. Because of the Spa’s rules only one person could go. Greer said it had to be Shanwei. Shanwei insisted that Egerton go and that no one would know.

“You’re the only one who’ll understand what Knight’s saying,” Shanwei had said as he pushed Egerton toward the Sandsurf’s express elevator from the Hotel Drexel’s lobby. “It would be a waste of time for me to go. I’d just come back and ask you to explain. Plus I’ve got some other stuff to take care of.”

Egerton knew that meant that Shanwei was working on another job or contract for them.

“Don’t ask,” Shanwei said knowing Egerton was curious. “Just go talk to Knight I’ll meet you back here in the lobby.”

“Wait...” Egerton stopped. “I don’t have a swim suit.”

The elevator doors opened into a screened lounge willed with low backed chairs and finely woven hemp carpets. The room was empty but didn’t feel cold. At the back were the changing rooms. The MEN and WOMEN signs on the doors reminded Egerton of the New Lebanon. It haunted him.

Inside the changing room Egerton removed the swimsuit he had just bought at the hotel gift shop’s bag. It was bright red and one size too big. Slipping on the suit and stashing his clothes in a faux wooden locker, Egerton headed for the pool.

“How much do you know about the people that lived on the New Lebanon?” Knight asked floating in the warm calm water.

“Nothing at all really.” Egerton had spotted Knight easily. He was the only person on the pool. He floated gently in the deep end.

“They were a cult,” Knight began, keeping his eyes on the glowing panels that surrounded the pool. Each one was decorated with silhouettes of beach grasses. Even though the pool was located in a windowless room at a deep sublevel of the Hotel Drexel it did feel like the sun and beach were just on the other side of the panels. “They were a cult,” Knight repeated. “There’s no other way to put it. I guess...” HE sounded uncomfortable with the description. “It just sounds odd to say. They were good people. The ones I knew. They weren’t crazy at all.”

Knight was a wisp of a man. His close cropped silver hair and long thin nose made him look somehow ethereal in the low light of the pool. As he spoke he moved his hands through the water. His fingers were abnormally long and the easy motion made them look like enchanted sea creatures floating effortlessly in deep sea currents.

“I worked closely with Joe Elder. We worked on the New Lebanon’s system.” As Knight spoke his mind seemed far off in the past.

“Why did Ingersoll let them live on the New Lebanon? I mean...” Egerton stammered. He feared he wasn’t coming across quite right and Knight was hard to read, hard to understand what he was thinking. “I mean it just seems strange that Ingersoll would let a cult take over their space station.”

“Oh they were happy to have them,” Knight snapped out of his fog and looked directly at Egerton. “The New Lebanon is our furthest X class station. It’s way out there. Wait, you’ve been there yes?”

“Yes we were just there.”

“Yeah, so you know,” he said matter-of-factly. “They were the furthest out, a supply depot that we really needed but couldn’t get any civilians to take it on. Then

they showed up.” Knight dipped his head under the water. He was quick like a fish. One moment he was there and then he was gone. Egerton watched the steam rise from the water.

Then Knight was back. “Do you know anything about the Shakers?” he asked growing distant again.

“Not much,” Egerton replied. “Weren’t they...”

“Joe told me a little about what they believed, but he didn’t push too much of it on me. He wasn’t like that.”

“It sounds like you and Joe worked pretty close,” Egerton wasn’t sure how to break Knight’s fog.

“But Joe insisted he control the AI. I didn’t get it at the beginning. But that’s the only thing they asked for...*that* took some doing. They were a pain in Greer Geroge’s ass. They even took Ingersoll to court...sued them to get control of the New Lebanon’s system. All they cared about was the AI.”

“That’s strange.”

Knight dipped under the water then returned. “Yeah they were strange that way but the New Lebanon’s system was one of the best I’ve ever built.”

“That’s what I wanted to ask you about...” Egerton began.

“It was more grown than built,” Knight wasn’t listening to Egerton.

“What?”

“The New Lebanon, the system, it was more grown than built. Does that make sense? You’ll have to forgive me Dr. Egerton, I’ve never talked about the New Lebanon before. They never let me talk about it with the law suit and everything...”

“Oh...yes...I see...Did you hear what happened when we turned it on?” Egerton asked. The heat in the pool was beginning to get to him.

“I want to tell you about the New Lebanon Dr. Egerton,” Knight looked directly into Egerton’s face. Knight’s eyes were a nearly colorless blue.

“Alright,” Egerton stammered.

“But you have to listen to me. You have to really want to know about it. I’ve never...I’ve never been able to talk about it before.”

“That’s why I came here. I need to know why everything went crazy when we turned the New Lebanon back on. Did it infect the Hussmann?”

“You need to listen to me,” Knight was distant again. He dipped under the water and slowly rose back up, the water running off his silver hair and pale skin. “Joe knew what he was getting into. All the people on the New Lebanon knew. It’s really far out there. The station. The station is really far out and if something goes wrong...you know others died...”

“I didn’t know that.”

“We couldn’t get anyone to live out there. They knew that to survive they would have to give themselves over to the New Lebanon completely. It went way beyond trusting the AI to regulate the system and keep them safe. I built all that type of stuff into the X class stations. For them the New Lebanon was life. Does that make sense to you Dr. Egerton? It *was* life to them.”

“I...I think so.”

“To all of them the New Lebanon was a kind of...” he paused as if the next part was difficult for him to say out loud. “For them the New Lebanon was a manifestation of God.”

The two men floated silently in the water. Egerton was trying to get his head around Knight's bombshell. Knight seemed wrapped up once again in his memories. They seemed to haunt him with both menace and wonder.

"The New Lebanon was designed to be above all things humble," Knight continued abruptly. "It's primary function was to love all of the people."

"That's fascinating," Egerton was amazed.

"The entire system was a single system. Everything in the space station was part of the AI. Does that make sense?"

"I think so," Egerton struggled to keep up.

"All of it," Knight kept going. "The people, the robots, the computers, the network, all of it was one system, combined into a community. It was holistic really. I think that comes from the Shaker part of the religion."

"I've never heard of anything like that," Egerton breathed.

"I just thought of the New Lebanon as one massive robot with all the parts working together like a body..." Knight thought about this for a moment. "No wonder the system freaked out when you turned it on. There was no one in the station, there was nothing there right? There was no one in the station."

"Yes, it was cleared out," Egerton answered.

"Yeah. Of course the New Lebanon freaked out. Imagine waking up suddenly without your lungs or stomach." Knight slipped under the water and didn't return.

Egerton saw the station in a completely new light. He felt bad for the system, felt guilty for the violence he had inflicted upon it.

Knight slid up through the water.

"Why would they add on to the station?" Egerton asked.

"What? What do you mean?"

"The New Lebanon was expanded. They illegally added sections to the original design after it was sent out there. It doesn't match other x class stations."

Knight thought for a while about this, bobbing up and down in the water, allowing the waterline to sire above his nose. Finally he replied, "I have no idea."

The lights brightened in the pool area, making both men squint. Egerton had forgotten how dark it was. "What's..." he started then stopped when a group of boys and girls poured out of the locker rooms and flung themselves into the pool. It was impossible to count them all; they moved and splashed about with an insane and jubilant energy.

Two adults tried to keep them under control with no success.

"Do you have children Dr. Egerton?" Knight asked.

"No," Egerton answered. "I do have a robot."

"I have two kids...Will and Sarah. They would love it here but I think they wouldn't be nearly as well behaved as them." Knight smiled and nodded at a boy and a girl beating each other with water toys. "Does your robot misbehave?" Knight asked.

"Yes. Yes he does," Egerton replied.

"We have to go back to the New Lebanon," Egerton said to Shanwei the moment he found him waiting in the hotel lobby.

"Well, hello Simon," Shanwei glanced up from his crossword puzzle. "How was your swim?"

"Fine," Egerton grew impatient. "We have to go back to the New Lebanon and turn it on and live inside it. It needs people and bots to work properly. That's the only way to find out what happened to all those people."

"But we're not getting paid to find out what happened to all those people," Shanwei returned to his crossword puzzle.

"I don't care," Egerton snatched the puzzle from Shanwei's hands. "We can leave..."

"Hey hey hey," Shanwei tried to calm Egerton. "Just relax. Here," he handed him the pen. "Try sixteen down. The clue is "American Super Bowl winners?" with a question mark. I hate those."

Egerton relaxed and tried to focus on the puzzle but couldn't.

"What's got you all worked up?" Shanwei asked. "You don't usually care this much."

"I don't know," Egerton flopped into the empty chair next to Shanwei. From his seat he could see the bustle of the business people streaming through the lobby. "There's something about the New Lebanon. It's...it's...I don't know. It's different...the whole thing. We found an arm for heaven's sake."

"Yeah I know and now you want to go back there."

"It's not that. The New Lebanon couldn't have done that. It wasn't built that way. It was built to love all the people in the station. Does that make sense?"

"No."

"Knight told me all about the design and the New Lebanon wasn't capable of hurting those people."

"Maybe it's just a murder," Shanwei grabbed the puzzle from Egerton. "Maybe it was some crazy person on the Hussmann. Just a good old fashioned crazy person who killed everyone and ran away."

Egerton considered it and shook his head. "Where are all the bodies?"

"We found parts of them."

"Then where are the other parts?"

"Good point." Shanwei studied the puzzle, tracing the boxes with his finger.

"The New Lebanon was completely unique. There's nothing out there that's anything like it. It couldn't have done anything to those people."

"Wait a minute," Shanwei was suddenly serious. "You think it was the station? You mean...wait Simon...are you actually thinking that it was the AI? You're talking about the space station and it did something to all those people?"

"But it couldn't" Egerton shook his head.

"But you thought it did didn't you? You you're talking about the station killing all those people aren't you?" The worried look on Egerton's face answered Shanwei's question. "My God Simon," Shanwei slapped him on the arm with the puzzle. "You do. You think the station killed those people *and* you want to go back there *and* you want to turn it back on?"

"It's the only way we can find out," Egerton replied.

"Simon, you're the one's that's crazy," he poked Egerton in the shoulder with his two fingers.

"It doesn't matter," Egerton pushed his hand away. "Like you said, we're not getting paid to find out what happened to those people. I guess we could..." his voice trailed off.

"Oh my God," Shanwei exhaled. "I can't believe this."

"What's wrong?"

"I'm the crazy one, not you." Shanwei folded the crossword puzzle and put it in his coat pocket.

"What do you mean?"

"See Simon, I know you. I know you better than you know yourself." Shanwei stood and stretched his legs. "See when you were having your little pool party with Knight I went back and talked to Greer George."

"You what?"

"Yeah, I told Greer that you'd be able to fix Ingersoll's problem with the New Lebanon. That you'd figured out what was wrong with the system and could fix it. I knew that Greer's all freaked out that what happened on the New Lebanon is going to happen on all of the x class stations. So I told them you knew what was wrong."

"How did you know..."

"I got us two days on the New Lebanon and we're getting paid to do it. The Falconbriar and the lovely Ms. Nakamura are taking us there with an entire squad of security bots for protection."

"That's great!" Egerton stood up with a broad excited smile. He bounced on his toes.

"No it's not," Shanwei poked his shoulder again. "I didn't know that you actually thought the station had killed all those people. I thought I was being cute. I'd get us back there and we could make a little extra money..."

"But we're going right?" Egerton pointed to the exit.

"God help me," Shanwei rubbed his face and fussed with the mole on his chin. "Yes, Simon. Let's go."

New Lebanon Border Station—3899

"Ok Falconbriar we're in," Shanwei reported. The two men and Jimmy were now closed back inside the New Lebanon. "Flip the switch."

The tech team on the Falconbriar powered on the New Lebanon.

Dressed in the bulky search and rescue gear, Shanwei and Egerton waited. Jimmy stood close to Egerton's leg.

Gently all around them the New Lebanon came to life. The structure groaned faintly, sending thin bursts of shockwaves beneath their feet like phantoms chasing ghosts.

"Do you hear that?" Shanwei asked, placing the palm of his glove on the floor.

"Yes," Egerton replied, searching the walls of the chamber for more signs of life.

The environment system took quick hesitant breaths, almost fearfully mixing the air and pushing it around the system.

Egerton watched his enviro-sensors turn from red to yellow to green. "We can breathe now," he said removing his helmet.

"What? Wait! No!" Shanwei tried to stop him. "You don't know if it's really..."

But Egerton was right, the air mixture was perfect.

“See,” Egerton said smiling and taking deep breaths.

Still tense Shanwei removed his helmet. “I’ve never seen a station get the air ready that quickly.” He sniffed the air, still not totally believing his own lungs.

“This is no ordinary station,” Egerton replied searching the chamber. “We should go look around. The central chamber is this way.” He pointed down the abnormally wide entry hall. “You ready Jimmy?”

“Sure thing,” Jimmy replied cheerfully.

“I’m staying here,” Shanwei said. “Someone has to keep their finger on the panic button.”

“Sure. Sure. I get it,” Egerton set off down the hall.

“You have two days Simon,” Shanwei yelled. “Two days!”

“Yes,” Egerton waved with his left hand not turning around. He pushed eagerly forward; Jimmy casually held the index finger of his right hand.

“I found another hand,” Jimmy said hesitantly.

The pair was in the Northwest supply center. The large warehouse was neatly packed with spare parts for Ingersoll-Rand’s fleet.

“Bring it here Jimmy.”

The little bot delivered the hand with delicate concentration, careful to hold it gently as he waddled through the machinery.

“Where did you find it?” Egerton asked but the little bot just stared back holding the severed left hand of a woman. She wore a wedding ring. “Why won’t you tell me where you found these things Jimmy?”

Still the little bot just stared back.

“What if I promise not to tell anyone else? Not even Shanwei.”

Jimmy didn’t move. Egerton was about to give up when Jimmy said, “It would be rude.”

“Why rude? Rude to who?”

“I think the New Lebanon tried really hard to clean up,” Jimmy answered.

This astonished Egerton. “Jimmy,” he asked. “Can you hear the station?”

“They were builders,” Jimmy’s voice echoed softly in the vast empty chamber. “That’s what the people did. The people who lived here...the New Lebanon people. They worked so that they could get closer to God.”

Egerton and Jimmy were standing in the recent addition to the station. It was a circular chamber with an intricate and expertly constructed substructure. Egerton wondered what the chamber was for and marveled at the craftsmanship. He’s never seen something so massive and delicate and perfect. The only flaw he could see was at the very center of the chamber. It looked as though they had stopped building the structure just before completion. It was raw and jagged and stood out like a canker sore in the midst of the beauty.

“Why did they build it?” Egerton asked. “What’s it for?”

Jimmy was quiet for a time then replied, “They didn’t build it. Not the people. It was the New Lebanon, it was built after...” The little bot stopped. “After the people...”

“What’s wrong Jimmy? Can’t you find the record of when it was built? Where are you searching?”

“It’s not like that,” Jimmy replied. “The station isn’t talking to me. I’m not reading any files or searching...I just know.” He paused. “I can hear it but nobody is talking...you should be able to hear it too...Can’t you hear it?” Jimmy asked.

Simon concentrated but heard nothing. “What does it sound like?” he asked.

“No one’s talking,” the little bot struggled. “But I can hear it. I’m sorry Dr. Egerton.”

“No Jimmy, you’re doing great, just great. Now try to tell me what it sounds like so I can try and hear it.”

“It sounds like the voice of God,” Jimmy replied.

“So you mean the New Lebanon built this on its own?” Egerton asked.

Jimmy stared back, his little body slumping slightly.

“That’s amazing,” Egerton said, seeing the new construction with fresh eyes. “How did it do it? Jimmy do you know how it did it? Can you ask if...”

Jimmy turned and walked away from Egerton.

“Hey,” Egerton called to the little bot. “Jimmy, where are you going? What’s wrong?”

The bot continued to walk away slowing his teetering steps for a moment then picking up again.

“Jimmy!” Egerton yelled. “Jimmy! Come back here!”

The bot stopped but did not turn.

“Jimmy?” Egerton was worried. He’d never seen Jimmy act this way. Something was definitely wrong.

The silence of the room pushed down on them and suddenly the doctor felt very small.

“Wait a minute Jimmy,” Egerton said finally and approached the bot. “What’s wrong?”

Jimmy didn’t move, didn’t turn, only slumped a little to the left.

“Is everything alright?” Egerton asked coming around to the front of the bot. “Can you tell me what’s wrong?”

Jimmy stared back and Egerton was sure he could see the bot thinking.

“You can tell me Jimmy. I won’t tell anyone else.”

“It doesn’t want to be alive,” Jimmy said finally.

“You mean the New Lebanon?”

“Yes. It feels bad...” Jimmy paused. “That’s not it...it feels...”

“Guilty?” Egerton asked. “Does it feel guilty? Did it kill those people on the Hussmann and the people on the New Lebanon? Can you...”

Jimmy’s arms flew up in front of his half-skull. He stepped back writhing and fell on the floor.

Egerton lunged to catch him but the bot smashed to the floor and continued to twist and contort his body.

“Jimmy!” Egerton yelled but didn’t touch him for fear of doing more harm. “Are you alright? Jimmy, what’s wrong?” Tell me!”

The bot flipped over onto his stomach and continued to writhe, his body jerking in a painful seizure.

“Are you in pain?” shocked Egerton finally asked. Jimmy looked consumed by agonizing pain. But how was that possible? “Jimmy, can you tell me what hurts?”

The bot flipped back onto his back and curled up into a ball. He trembled as he forced his head to look at Egerton.

“What is it Jimmy? What can I do?”

“It’s shame...” Jimmy hissed.

“What?”

“That’s what it feels. That’s what the New Lebanon feels. It’s shame. It didn’t want to hurt anyone...It couldn’t stop it...It doesn’t want to be alive anymore.” The bot smashed his head against the floor as if to regain some control. “You have to shut it off Dr. Egerton. You have to kill it.”

“What the hell’s wrong with you?” Shanwei asked as Egerton approached.

“You’ll never guess what I just saw...I’m...You’ll never guess...”

“What’s wrong Simon? Jesus, you look awful. What happened? Where’s Jimmy?”

Egerton leaned against the wall and slid down to the floor.

“What?” Shanwei asked. “Are you hurt? What the hell is wrong?”

“I just watched my bot writhe around on the floor in pain just after he told me that the space station is the one that built that new construction after all the people on the New Lebanon were dead.”

“What?”

“Exactly! Nuts right? Even for us this is crazy. Jimmy’s back there,” Egerton pointed back down the hall. “The poor little guy is a mess. He says he can hear the station and that it doesn’t want to be alive and that we have to kill it.”

“Jesus,” Shanwei breathed.

“Yeah, I know,” Egerton replied. “At first it was interesting but now it’s too much. You should have seen him Shanwei. He was actually in pain. I think it was from talking with the New Lebanon. He says it feels shame and wants to die.”

Shanwei started to chuckle.

“What?” Egerton was impatient. He had had enough craziness for one day. “What’s so funny?”

Shanwei shook his head and chuckled again but this time it sounded forced.

“What?”

“Well you’ve got me beat,” Shanwei answered. “I thought I’d be able to surprise you but man you got me beat.”

“What are you talking about?” Egerton asked, feeling a little better.

“I thought for sure this time I’d be the one who surprised you. I’d be the one who figured the whole thing out but no...you had to...”

“What are you talking about?” Egerton interrupted. “Shanwei, really I can’t make any sense...”

“I know who killed all the people on the Hussmann and the New Lebanon.”

“What?”

“Right...see...I thought I’d get you...but no...”

“What are you talking about...”

“I know what happened to them,” Shanwei replied. “I know who killed them.”

“You remember before when I said it might have been a crazy person that killed everyone on the Hussmann and the New Lebanon?” Shanwei and Egerton walked back to the vast and empty new construction.

“Yeah,” Egerton answered, still worried about Jimmy.

“Well, my man, you should always trust your gut.” Shanwei slapped his small flat stomach twice for emphasis. “I knew it.”

“When what?”

“While I was waiting for you I had the lovely Ms. Nakamura check into the backgrounds of the crew on the Hussmann,” Shanwei was smug and pleased with himself.

“Didn’t they already do that?” Egerton asked.

“Yup,” Shanwei slapped his gut again. “But they checked the criminal records only.”

The two men walked through the dim central hall. The murals of Sabbathday Lake, Niskayuna, Pleasant Hill and Cane Ridge made Egerton nervous. They somehow seemed haunted to him. He looked for faces and dark figures in the windows of the simply painted houses. He felt self-conscious doing it but he did it anyway, still worried at what he might see.

“So where else did you look?” Egerton asked in the silence of the room. “The psych records?”

“Nah,” Shanwei replied. “They checked those as well. Ingersoll-Rand does a pretty good background check on any crew they are going to send all the way out here.”

“Did they check into you?” Egerton joked.

“Funny. Where are we going?” Shanwei asked as they exited the main chamber.

“It’s this way,” Egerton pointed. “I hope Jimmy is OK. I didn’t want to move him.”

“I’m sure he’s fine.”

“So where did you have them look?” Egerton asked.

“Prescription drug records,” Shanwei was smug again. “They never thought someone might be self-medicating.”

“Where they?”

“Her name was Alexandra Alder. Everyone called her Alex. It seems Alex was taking some pretty heavy doses of Narpradole. It’s an anti-psychotic they cleared for testing just a while ago. Alex got herself on the list as a tester.”

“Don’t you have to have some kind of...”

“Not anymore,” Shanwei interrupted. “It’s her body, she can do what she wants with it. That’s what the law says. It’s my guess that she’d been self-medicating on the black market for years and she saw an opportunity to go legit or at least get the drugs for free.”

“It’s over here,” Egerton led the way. “So how do you know she did it?”

“I had Nakamura check the dosage...the amount of pills the drug company gave her as a part of the drug trial. And poor Alex would have run out of her meds two weeks before the Hussmann docked with the New Lebanon. That’s four days since they left the last station. Just enough time for her to go good an crazy.”

Egerton stopped at the entrance to the new construction. “So that’s it?” Egerton said. “That’s what happened?”

“You got anything better? Greer George is already putting it through to her PR people.” Shanwei slapped his gut.

“Don’t you need more evidence?” Egerton asked.

“I guess not,” Shanwei replied. “Just a good old fashioned crazy person.”

“But if this woman did kill everyone on the Hussmann and the New Lebanon then where are all the bodies?”

“That’s what you’re supposed to tell me Simon,” Shanwei replied. “I think the station did something with them.”

“Where is he?” Shanwei asked.

“He was right here,” Egerton pointed.

“I guess he wasn’t too bad off,” Shanwei shrugged. “So he told you the New Lebanon built this on its own?”

“Yeah, that’s what he said,” Egerton searched for the bot.

“If a space station can build this then it sure as hell could get rid of all those bodies. Right?”

Egerton gave up searching and replied, “I’m not asking *how* the New Lebanon could have done it. I want to know *why*.”

“Sounds like you should just ask Jimmy.”

“I would if...”

A tremendous shock rocked the New Lebanon, knocking Egerton and Shanwei off balance.

“What the hell?” Shanwei steadied himself, then called into his phone. “Falconbriar. Falconbriar. What the hell are you...”

The lights flickered then went black.

The New Lebanon shuddered again.

“Falconbriar! Falconbriar! Can you hear me?” Shanwei sounded worried but mostly pissed off by the disturbance.

“What happened do you think?” Egerton asked calmly in the darkness.

Shanwei didn’t answer right away but stood silent and listened. The station groaned. In the distance it sounded like the bay doors were opening.

“Falconbriar?” Shanwei said playfully. “Do you want to tell me what’s going on?”

Nothing from the phone.

“Why would the power go?” Egerton asked himself out loud. “Do you think they shut down the system?”

“Falconbriar?” Shanwei gave it one last try.

The emergency lights faded softly up.

“They couldn’t shut down the system. How would we breathe?”

When the dim lights had cleared away the darkness Shanwei said, “That’s better. At least we can see...”

The north and south doors exploded. The blast pushed Egerton and Shanwei to their knees.

“Simon, you OK?” Shanwei reached out. “What the hell?”

The big military bots stormed through the destroyed doors. Their bulk pounded the floor. Egerton could see them through the haze and low light. They were bright red, easily seen and identifiable. It was the telltale color of all military security

bots. Their hulking bodies were covered in a soft protective gel. Their elbows, hips and knees were especially padded to ensure that no unintentional injuries occurred during close quartered crowd control. The excessive padding made the towering bots look like nimble children's toys, big red teddy bears with stun guns.

"What do we do?" Egerton asked.

"Hope they don't shoot us," Shanwei answered and flattened out on the floor. "Get low," he added.

Egerton obeyed.

By the sound of them there were at least thirty of the security bots. At first they moved quietly, fanning out around the vast room, surrounding Shanwei and Egerton.

"We're over here!" Shanwei yelled. "We're from the Hussmann. Don't shoot us." He chuckled to himself, "We're screwed."

"Really?" Egerton began to worry.

"No Simon we're fine. Just keep down. Stay low."

Egerton didn't believe him.

"We're over here!" Shanwei yelled again but the big red bots didn't close in. "What's wrong with them?"

"They may not be looking for us," Egerton replied and raised his head to see what the bots were doing. What he saw sent a shock of terror through his body like nothing he'd ever felt before but this was followed by an even deeper sense of wonder.

The big red bots stood in formation, each perfectly equidistant from the other. They had pulled up into a formation of two large rings that filled the circular room. They stood bolt still with their guns leveled at Egerton and Shanwei at the center of the room. Their warning lights flashed a frantic red, indicating they were primed to fire. But they didn't fire. They didn't move. They were frozen.

"Shanwei," Egerton whispered.

"What?" Shanwei lifted his head. "What are you doing? Are you crazy?"

"Look," Egerton pointed.

"What the..."

The bulbous bots were all looking up at the unfinished portion of the chamber's ceiling.

"What are they doing?" Shanwei asked.

"I don't know." Egerton got to his feet but didn't dare approach the bots.

"Flaconbriar, can you hear me?" Shanwei tried his phone again. "What are we supposed to do with these bots? Falconbriar? Come on...someone has to hear me."

"I wonder if it's the New Lebanon," Egerton said, watching the bots.

"What?"

"The New Lebanon. The station. Jimmy said he could hear it talking to him. He said it sounded like the voice of God."

"Your bot is a little weird," Shanwei replied.

"But look at them." Egerton fought the urge to approach the nearest looming security bot. The dimly lit room flashed incessantly with the bot's red warning lights.

"You think the New Lebanon is talking to them?" Shanwei asked.

"Maybe..."

Without warning the bots crouched. All thirty of them, crouched at the same time. Their red padding creaked with the motion

"Crap," Shanwei dropped to the floor.

The bots rushed into the center of the chamber, barking “Freeze! Don’t move! You are in violation...”

Falconbriar--2315: Ingersoll-Rand Search and Rescue Ship

“You could have killed us,” Shanwei growled. “Those bots...”

“Those bots were the least of your worried,” Viki Nakamura snapped back. “The entire station was melting down. I did what I needed to do.”

Egerton and Shanwei were back aboard the Falconbriar. The briefing room where Viki Nakamura was detaining them was cramped and not ventilated very well. It smelled of day-old orange juice.

“So you had to send thirty armed bots to get the two of us out of there?” Shanwei huffed. He didn’t like the interference and losing control of his job.

“Don’t flatter yourself. The bots weren’t for you,” she replied. “I was just doing my job. I flushed the whole station with bots. We’re shutting down the New Lebanon permanently. The bots were there to decommission it.

“You’re going to blow it up?” Egerton stood outraged.

“Well look who finally took an interest,” Nakamura scowled at Egerton.

“You can’t blow it up!”

“Yes we can. That thing is too dangerous to have around. It was starting to take over the Falconbriar’s navigation system.”

“How do you know that?” Egerton asked. “Why would it take over...”

“I don’t know,” Nakamura snapped. “Ask the Nav officer. They were freaked out and we started to drift.”

“But...”

“Dr. Egerton, you can question me all you want but I was just doing what we talked about. I saved your lives.”

“I guess we should say thank you,” Shanwei didn’t sound appreciative.

“So did you find out what happened to the bodies?” Nakamura asked. “At least we know that crazy woman killed all those people.”

“You’re welcome by the way,” Shanwei was still quite proud of himself for discovering Alexandra Alder’s history.

Nakamura ignored this and asked, “What happened to the bodies Dr. Egerton?”

“I think I know,” Egerton replied. “But I need to talk to Jimmy first.”

“Jimmy?”

“His bot,” Shanwei filled her in.

“Can I see him? Can I talk to him?” Egerton asked.

Nakamura looked at Egerton like he was a lunatic child. Pity and fear flickered in her eyes. “Sure, I’ll get them.”

“After she left Shanwei asked, “Do you really know or are you bluffing?” It seemed like he wanted Egerton to be bluffing.

“No I think I know.” He was distant. His mind had returned to the New Lebanon.

The door opened.

“Here they are,” Nakamura said following the two bots into the small room. It was getting crowded.

“Hello Dr. Egerton,” Jimmy said cheerfully as he entered the room.

A smaller bot followed Jimmy, sticking close to him. It was wisp thin with barely any body at all. Its fingers were needle thin and its head was small and flat. Its slender hand hesitantly reached for Jimmy's but then pulled away.

"You're lucky we found them both in the main chamber," Nakamura said impatiently. "I figured you'd want them back. Even though I wasn't supposed to get them. You're welcome."

"Thank you," Egerton replied, staring at the new bot. "I'm going to need a little time."

"Take all the time you want," Nakamura said moving to the door. "Just make sure you have your story straight by the time we get back to Ms. George. She's the one you have to worry about. Not me." And with that she left.

When the door was closed, Egerton kneeled down. "Jimmy who is this?"

Jimmy held out his finger and let the little bot hold it. "This is Paul," he replied brightly.

"Where did you find him?" Egerton asked.

Paul, the little bot, shifted and stood behind Jimmy a little as if he knew what was being discussed.

"The New Lebanon made him," Jimmy answered. "It made Paul before it killed itself."

Centennial Station 8854 Ingersoll-Rand Corporation Headquarters

"Before we begin I want you to know that the New Lebanon was officially decommissioned three hours ago," Greer George said flexing her large hands and smiling broadly. "Just about the time you were landing."

"You destroyed it," Egerton spat. He knew that they were going to destroy the station but he had hoped...

"Of course we destroyed it," Greer spat back. "From everything I heard about your return to the New Lebanon it was a danger to anyone who got near it. I'm glad that mistake in judgment is gone for good." She watched Egerton, waiting for him to react or argue but he didn't. He knew better.

"Ok. Ok. Both of you just relax," Shanwei tried to lighten the mood. "I swear the both of you can get so worked up."

Egerton looked away.

Greer smiled again, "The only thing you get worked up about is money."

"I can think of no better reason..." Shanwei held out his hand.

Greer sat back in her chair. "Did you two boys find out what happened up there?"

"Sure," Shanwei replied. "Alex Alder went crazy and killed your crew on the Hussmann then went to work on the New Lebanon. They wouldn't have been any match for her. We don't know the details but we don't need to know the details do we? You already put out your press release."

Greer tilted her head and nibbled on the end of her pen. "That explanation was good enough for my PR team and good enough for the media but it's not good enough for me. Or let me be more specific, it's not good enough for me to pay you."

"That's ridiculous!" Shanwei slammed his hand down on the expensive office chair.

"That was the deal," she shot back.

"I think I know what happened..." Egerton interrupted.

"What?"

"Your boy here says he thinks he knows what happened," Greer flipped the pen onto her desk.

"I heard him." Shanwei was tense. He and Egerton hadn't discussed the New Lebanon since they'd left. Egerton had spent most of the trip back on the Falconbriar by himself, with Jimmy and Paul.

"Ok Dr. Egerton," Greer leaned over the desk and flashed her smile. "Please tell us what happened."

"Well we're pretty sure Alex Alder had a psychotic incident and murdered the crew of the Hussmann," Egerton began.

"She went crazy..." Shanwei added color to ease his nerves.

"It seems Alex could have then turned her wrath on the people of the New Lebanon but there were a lot of people. She would have had to hunt them down. It's hard to imagine how she could have gotten to all thirty-two people without them trying to stop her."

"They were pacifists," Greer interrupted. They didn't have any weapons on the entire station. I told them it was stupid."

"Yeah, maybe," Egerton continued. "But still thirty-two people just allowing themselves to be..."

"So what do you think happened?" Greer stabbed.

"I don't know," Egerton replied.

"You don't know? But you said you..."

"I think I know the rest, but that part just seems odd to me," Egerton paused. Shanwei and Greer waited. "But we do know that everyone on the Hussmann and the New Lebanon were dead or killed or..."

"What happened to the bodies?" Greer interrupted. "Why did we keep finding hands and feet and fingers all over the place?"

"That was the station," Egerton answered. "That was the AI on the station. You see the station saw what was going on and it couldn't stop it. Couldn't stop the murder and the violence so it did the only thing that made sense for it to do after it was all over...care for the dead. It cleaned up the bodies and disposed of them. I'm thinking it probably gave them some kind of service but I still can't find out how the people on the station buried their dead."

"No one ever died on the New Lebanon," Greer was defensive.

"Yeah, sure, right," Egerton was skeptical but continued. "I think those body parts we found were someone lost or the New Lebanon couldn't get to them. But regardless it was the AI that got rid of the bodies."

"So you're telling me I have an AI that has no problem cutting dead bodies up and disposing of them?" Greer asked frankly.

"You *had* and AI," Egerton replied. "You destroyed it remember."

"Thank God for that."

"After the station was empty the AI tried to get back to normal but with no people it was lost. It even went so far as to start building an addition onto the station to be productive..."

"How the hell could it build anything out there?" Greer asked.

"They smuggled their own additive manufacturing system onto the station," Egerton answered.

"A what?"

"It's like a 3D printer," Shanwei added.

"With that they could make anything but it was no use. The New Lebanon was built as a complete system and with no people the AI was lost. I think that's when it killed itself the first time."

"I didn't know an AI could kill itself," Shanwei was thoughtful.

"Yeah..." was all Egerton could reply. "When we showed up and started up the system again we forced the New Lebanon back to life. It was like John Knight explained. Imagine being brought back to life missing your lungs and stomach. Without people the AI went berserk. When we came back a second time and spent more time there the shock subsided but it was no use without the original thirty-two, they were bonded. It even tried to manufacture a bot to talk to Jimmy. That's how I found out about the additive system they used for the addition. Jimmy told me where he found Paul."

"Paul?" Greer was lost.

"The new bot," Shanwei clarified.

"But the new bot wasn't enough and the AI moved to the Falconbriar looking for more people, a larger crew. That really freaked out their system," Egerton paused then turned to Shanwei. "I figured out why the security bots formed up like that. When Viki sent in the security bots they could hear the system just like my bot Jimmy. That explains why they were mesmerized in the chamber. They were listening to the New Lebanon. They thought they were hearing the voice of God."

"Ok enough," Greer stopped him. "You really want to believe this? I mean really...come on Dr. Egerton. An AI that loves people. Robots hearing the voice of God. Really?"

"It was your station," Egerton replied matter-of-factly. You let them create it."

"I didn't let them create a lovelorn AI..."

"Actually you did," Egerton interrupted. "You see the people of the New Lebanon had to put their faith in the station. They needed it to love them above all else. It was a genius way to program the system. They didn't need to constantly monitor or program the system, they just believed in it. They had to believe all the way out there. It was the only way they survived. To them the AI was a manifestation of God. It needed to be. It had to be.

"But when Alex killed all those people the system didn't know what to do. There was no way to save them and then it happened. This took me a while to figure out."

"What's that?" Shanwei asked.

"Shame," Egerton replied. "The station felt shame. It tore the system apart. It felt like it had failed the people it loved so deeply."

"You know this is really messed up," Greer said finally. She turned to Shanwei, "This is really messed up right?"

"It was your station," Shanwei replied.

"Fine," Greer threw up her hands. "Let's say I do believe this, which I don't. Let's be clear. I think this is all just stupid. But let's just say I believe you. Let me ask you this. Will it happen again?"

"You destroyed the system," Egerton replied.

"I know I blew the damn thing up. Stop saying that. I know. Ok. I know. That's not what I'm asking you. I have a lot more stations all over and I want to know is if this could happen again."

Egerton thought for a moment then said, "Yes."

“Oh God.” Shanwei stood up, he knew it was time to go.

“Yes?”

“Yes,” Egerton repeated. “Love is a powerful and complicated thing. It could really help with your border stations and your AIs and help to keep your people safe but it’s also complicated. Love is complicated and dangerous.”

Lobby of The Hotel Drexel

“Seriously I didn’t think she was going to pay us,” Shanwei shook his head in relief. “Love is complicated and dangerous...what kind of answer is that!”

“The truth.”

Shanwei and Egerton strolled through the lobby, stopping at the bell stand.

“You have my bots,” Egerton handed the baggage ticket to the thin Asian kid with thin arms.

“Ah yes,” the kid smiled. “They have been very quiet. They sat in the corner the whole time.”

“They’re well behaved,” Egerton smiled. “Can I have them now?”

“Oh yes. One second.” The kid disappeared.

“I can’t believe she actually paid us,” Shanwei sighed with theatrical relief. “I think you must have just worn her down.”

“There’s one thing I didn’t tell her,” Egerton said solemnly.

“Oh God. What’s that?”

“I’m not sure Alex killed all the people on the New Lebanon.”

“You said that...”

“Yeah, I think maybe the New Lebanon did it after she killed a couple of people. I think the people on the station stopped her and the station...well...”

“Well what?” Shanwei pushed Egerton’s shoulder. “What? What do you think happened?”

“It’s shame again,” Egerton said. “There’s a chance that the AI was so shamed and guilty that it couldn’t bear to face the people on the New Lebanon. There’s a chance it killed them to try and free itself from its guilt and shame. But it didn’t work...it...but really we’ll never know.

“Do you really want to know?” Shanwei asked gravely.

“Yeah,” Egerton replied. “Yeah I do.”

“You’re always taking in strays,” Shanwei said playing with Paul. He poked the bot on its whisper-thin foot and Paul would lift its leg and try to step on Shanwei’s finger. Then Shanwei would touch the other foot and the same thing would happen. This was repeated several times, faster and faster until Paul did a little dance of delight. It was overwhelmingly cute. Paul couldn’t talk but he had a knack for getting across his point.

“How could you not take him in?” Egerton replied. “I mean look at him.”

The foursome was waiting at the back of the hotel, scattered across a plush rug ringed by deeply cushioned lounge chairs.

“What do you think of him Jimmy?” Shanwei asked.

Jimmy was standing near Egerton watching over Paul.
“I worry about it,” Jimmy replied.
“Worry? What do you mean worry?” Shanwei was taken aback.
“He’s...” Jimmy started and stopped. “It’s just that he is very small and sometimes the things he says don’t make any sense.”
“What?” Egerton touched Jimmy’s shoulder.
Jimmy turned away from Paul to face Egerton. “Yes, Dr. Egerton?”
“Jimmy can you hear Paul talk? Does he speak to you?”
“Yes, Dr. Egerton,” the little bot replied.
“Is it like the New Lebanon? Is it the same voice?” Egerton asked.
“No, Dr. Egerton. It’s not the voice of God,” Jimmy replied. “It’s different. It’s hard to explain.”

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References

- [1] R. Panek, *The Invisible Century*, Penguin, New York, 2004.
- [2] IBID
- [3] V. Callaghan, G. Clarke, A Pounds-Cornish, S Sharples, *Buildings as Intelligent Autonomous Systems: A Model for Integrating Personal and Building Agents, Presented at the 6th International Conference on Intelligent Autonomous Systems (July 25-27 2000)*.
- [4] G. Bell. *No More SMS from Jesus: Ubicomp, Religion and Techno-spiritual Practices*. Ubicomp 2006, LNCS 4206, (2006) p141–158.
- [5] IBID
- [6] V. Callaghan, G Clarke, J Chin, *Some Socio-Technical Aspects of Intelligent Buildings and Pervasive Computing Research*. Intelligent Buildings International Journal Vol1. (2008)
- [7] IBID
- [8] IBID