

Part I

“The first aliens we meet won't be from another planet. They will be the ones we create ourselves.”

-- Morgan Adams, 2055

1

A Citadel of Dreams

Pittsburgh 2068

The body lay awkwardly on its stomach, legs at angles that legs don't normally get in when they're alive. The left arm was raised above its head, almost as though waving, except there was nothing but the hard, tile floor to wave at. The face had been shaved away with a laser. There was a trickle of blood, dark and red, running away from the left ear, which lay pressed to the cold, perfectly white floor. There had been little bleeding. The wounds had been cauterized almost instantly by the blast of the heat.

Whoever had done this had not surprised his victim. The prey had known the predator, and there had been no struggle. Perhaps there was even a conversation--some innocuous small talk, and then the flash of the weapon, and, for a split second, the realization of betrayal.

It's odd to see a dead body; once so complex and alive, with its senses and organs and brain now silenced. One moment a citadel of dreams, a trillion-celled machine designed for living; built and orchestrated by uncounted years of evolution; and then the next, instantly and utterly dead.

When you thought about it, people could be so easily and permanently broken.

2

A Thousand Fingers

The room was sterile and a brilliant white. Too white. Morgan Adams squinted to make out the blurry nimbus of the monitors on the wall, and the mirrored reflection of the robot surgeon in them. The machine had been at work for more than two hours now, its thousands of titanium alloy feelers fluttering at high speed. Each tendril bent over his brain touching and sensing it like the antenna of a frantic insect. If the robot weren't a thing, you might call its pace feverish, but machines didn't get feverish. It was just that, to human eyes, there appeared to be an element of panic.

Morgan gazed back at the ceiling, his eyes wide now, locked in. Everything except his situation felt perfectly normal. It did not seem as though three-quarters of his brain cavity had been excavated, although he guessed that by this time the robot had delicately, one nanometer at a time, sliced it down to the *nucleus accubens* in the basal ganglia, the part of the brain that modulates addiction, motivation and pleasure.

Every robotic movement was delicate and precise despite its speed. On each pass the thousands of fingers carefully sensed all the cells exposed on the top layer of his brain. The Quantum III computer nearby then recorded and transferred a digital representation—chemical and electrical—of what those cells were experiencing. Finally, in a voice as soothing and otherworldly as an angel's, it would ask if he would like to touch the button poised near his left hand to perform a reality check.

Reality check was almost too ludicrous a phrase under circumstances this unreal. Yet it was a literal request because when he touched the button, he was experiencing the information that the robot surgeon's delicate millipede fingers had already transformed into digital qbit signals and dumped to the Quantum. The purpose of the check was to make sure it matched what his brain was sensing before the surgeon deftly, and with perfect accuracy, removed that sliver of his brain.

Morgan tapped the button. He could hear the steady beeps of the EKG, the faint buzzing of the LED lamps. He could smell the high, anti-septic air in the room.

This was odd because the robot had long ago removed his visual and olfactory cortices. His auditory cortex was now gone as well. The surgeon was obviously doing a perfect job transferring him--all his senses and feelings, all his memories and thoughts, all the bubbling hormones, electrical signals, genetic and epigenetic data that somehow added up to him--into the computer. Even the signals from his metabolome and microbiome. Otherwise how could he even be thinking the thoughts that he was thinking?

He was being downloaded, first into the Quantum III, which would buffer him and hold a digital version of his "self" until the download was complete. Then into the cyborg that was lying in a gurney 10 feet to his

left—a mechanical version of him draped with living human skin and fat and selected muscle (mostly cosmetic) over an exquisite machine consisting itself of billions of nanomachines. A thing that looked exactly like him. He would soon become the cyborg. Or it would soon become him.

Morgan Adams blinked and answered the machine-surgeon's question. "Yes, Jules, it's fine." He had named the machine Jules after Jules Verne.

"Then I will now remove the next layer," said the surgeon. And in a blink another part of him was gone.

It was at that moment that the utter insanity of what was happening struck him. A talon of horror clutched his chest, and a sudden ripple of fear rolled itself into a massive wave of panic. He closed his eyes. He gulped air, and realized immediately that soon he would never again feel the sensation of air of any kind passing into his lungs. He would never feel his throat close and open when he swallowed, something so simple, something he did a thousand times a day, thoughtlessly. He was forfeiting his humanity. How could he do that?!

He tried to calm down.

"Your heart rate is increasing, Dr. Morgan." Said the robot, with a note of genuine concern. "Are you okay?"

He breathed again; eyes closed. The rate of the EKG dropped. He would be fine. No need to lose his mind now. He smiled. Bad joke. Yes, everything was fine. He was not dying. Not by a long shot. He was buying immortality. At last. He would never again have to fear death. The very essence of who he was would be digitally encoded into trillions upon trillions of quantum bits, and like an everlasting soul, it would become invulnerable, able to be duplicated if necessary and it would be able to go wherever zeroes and ones went...which was everywhere. He relaxed.

Then, he saw a flash, as though lightning had gone off, except it had happened inside of his head, off in a corner. There was another, very brief. He shifted.

"Jules," he said to the robot surgeon. "Is there something the matter?"

Jules did not immediately respond. Then, "I'm checking, Dr. Morgan."

Suddenly there was another explosion in his head. This one felt like an incoming mortar shell. He forced his eyes shut. The darkness behind his lids filled with light and then color. There was a deep rumbling that seemed to emanate from the stem of his brain, moving up and down his body like his own private earthquake.

"Jules," he asked struggling to remain calm. "What is happening?"

"We have a problem, doctor."

The earthquake had now turned to spasms. He opened his eyes. His body jerked like a marionette, flopping beneath its table restraints.

"Jules!"

"I am trying to repair the problem, but can't find the source," said Jules. "I am calling for help."

Beyond the rumble in his head, Morgan could make out the beep of the EKG rising so rapidly he thought he would flat line. Emergency klaxons sounded. Loud and painful. He seemed to have risen out of his body and was now looking down on the scene. Two human doctors burst through the door and ran to the gurney. They tried to pin his jerking limbs. Morgan's body writhed. Jules backed away slowly on the four rubber tires at its base. Its thousand titanium arms rapidly retracted from the open brain case of the jerking man below, then blended into a single, seamless stem of silvery metal.

"I am losing him," Jules said remorsefully, and then the glistening metal arm slipped slowly inside its robot body like a sword into its sheath.

"Jesus!" screamed the jerking body.

One of the human doctors plucked a syringe out of his pocket. It was long and sharp, at least a foot long.

Adams opened his eyes, wide with panic. He could see the two doctors standing above him. They wore thin surgical masks. He saw the syringe. Why a syringe? Syringes hadn't been used for decades.

"H-help ... me!" His words labored and guttural.

And then one of his flailing arms freed itself and tore the mask from the doctor's face. And there behind the mask was his own face! He gasped and turned to the other doctor who slowly removed his mask revealing still another identical face. The two clones stared at him, grinning.

"Please!" Morgan cried through his spasms. "Help! Me!"

"We are trying," said the two versions of himself in perfect unison. "But you must cooperate."

They approached him with the syringes. His body writhed like a pinned insect against the table. He opened his mouth wide to scream, but when he did there was nothing but silence.

3

Awakenings

Morgan lunged up, gulping air. He grabbed his head. It was still there. Thank, God! But it was difficult to believe. He surveyed the room. He lay in the broad bed, the down comforter ruffled at his feet.

Behind him the sun had not yet risen, but purple and rose fingers of light reached into a sheet of thin cirrus clouds. They were the color of bruises but looked beautiful.

He glanced at the holograph that sat suspended to his left. 6:03 am. He closed his eyes hard and filled his lungs again. It had all been a nightmare.

LOIS sat at the end of the bed; her thick, dark hair pulled back away from her face in a French braid. She looked at him and smiled. "Bad dream?"

He exhaled through his nose. "Bad."

LOIS nodded. "Amazing what the subconscious mind can conjure," she said. "Especially after working around the clock for three days straight."

Morgan walked into the bathroom and relieved himself. He looked into the mirror and threw water on his face. "You do the necessary things," he said.

"And all of it manufactured by those tiny, little neurons hijacking your mind," LOIS called out.

Morgan ran his sonic toothbrush over his teeth and stepped into the shower doorway. Except for the toothbrush, he was buck-naked. He grimaced foamily. "The damned neurons. Hate it when I can't control them."

LOIS arched an eyebrow. "You hate it when you can't control *anything*."

"Can't hear you!" He said over the shower, knowing he could. "Must wash. What's on for today?"

Morgan lathered his body. Water pulsed from multiple locations at precisely 102 degrees, just the way he liked it. LOIS rose and followed him into the bathroom as he soaped himself. She was thinking.

After a moment she said, "Got most of the day blocked out so you can follow up with yesterday's big download. I tried to get the whole day cleared so you could be alone, but Huxley insists on talking with you about the project. He wants to be brought fully up to speed."

"Well, he *is* the Chairman."

"1:30 pm."

"Do whatever you can to move it to 5:00," Morgan said through the steam. "I want every contiguous hour I can get. Ever since he's gotten rich, he's forgotten what doing real research is about."

"Made you rich too."

"Or maybe it was the other way around?" said Morgan.

He stepped from the shower, dried himself and wrapped the towel around his slender waist. He gazed into the mirror. Considering he hadn't slept for nearly 80 hours before last night, he thought he looked remarkably well rested.

"The cyborg team wanted to meet today too, but I pushed them to tomorrow. Wasn't easy. Hawthorne's ENT can be so ... "

"Stubborn?"

"Pushy, obnoxious, disgusting...."

"It's just the way Maureen has her programmed," said Morgan. "ENTs tend to reflect the personalities of the people they work for."

He glanced at LOIS and noticed again the dark gray of her digital eyes.

"Is that why I am so controlling?"

"No. It's why you are so witty and charming." Said Morgan.

LOIS smiled and sat down in a chair by a polished cherry wood desk. She crossed her long, perfect legs, and turned to Morgan.

"Well, anyhow they want to go over the project specs again for the tests they've performed on artificial muscle and the new skin we're trying out. Though they know this isn't your area, they want your input...being the genius that you are."

"Hmmm." Morgan said, looking in the mirror as he twisted and rubbed his neck.

"What?" Asked LOIS.

"Strange. I always had a scar across the nape of my neck. You know, right here." He turned and showed her the spot.

"Uh-huh," said LOIS, seemingly occupied by something else.

"It's gone...how could that be?"

"Hold on, I'm getting a call," said LOIS. "It's urgent."

Morgan turned from the mirror and sighed, knowing something was up. "Oh, Christ. Who?"

"Deirdre ..." then she looked up surprised, "*and* Huxley."

"Well, hell..." said Morgan walking into the bedroom.

LOIS held up her hand. "I'm telling them you're in the shower. I'm taking a message."

"Thank you."

Morgan's clothes--dark pants, tan sweater, Shapeshifter shoes--were laid out. He decided against the tan sweater and tossed it at LOIS. The sweater passed right through her and landed on the chair she sat on. That always surprised Morgan because in certain light, and where her bandwidth was strong, LOIS looked so...real. The holographics for high-end ENTs really were getting good, he thought. They still didn't appear quite right in bright light, mostly, Morgan suspected, because they didn't throw a shadow, but otherwise, not bad.

Morgan walked to the closet and pulled a navy-blue V-necked sweater out and yanked it over his head.

LOIS shifted in the chair, listening. "They're very agitated. I can sense it in their voices."

She paused and straightened her back, as if stretching. "They want to talk." She looked up at him, her faintly transparent eyes sharp. "And right now."

"Hell." Morgan stood in the middle of the room and ran his hands through his wet hair. "I mean what could possibly be this important?"

LOIS shrugged and screwed up her mouth. It was a nice touch. Of all the little human gestures and quirks he had programmed into her, that was Morgan's favorite. That and her laugh. Damn, he was good.

"Well, you'd better go," he said. "Maybe you can get a head start on the download log. Make sure it's squeaky clean. Hopefully this meeting won't take long. Check with you later!"

"Roger that!" LOIS said, as she saluted. Then she collapsed into a button-sized, iridescent blue dot and, with a pop, disappeared.

4

Symbiosys

Morgan Adams' car swept in a great arc along the Allegheny River at a steady 250 miles-per-hour. It glided in perfect, high-speed synchrony with the cluster of other brightly colored cars like some concrete-bound school of clown fish, buffered by technology that kept every automobile no closer than six feet away. Morgan glanced up from his morning paper and caught the view of downtown Pittsburgh, its skyscrapers glittering in the low-angled winter light. It was good to see real light after weeks engineering Doppelgänger's algorithms--running tests, testing the tests, checking the tests' tests.

"Here's your latte, Morgan," said the car. The little console's cabinet opened and produced a white steaming cup of the liquid. "Would you like me to read the news?"

"No, thanks." He glanced briefly at the paper, saw nothing earth-shattering and rolled the paper-like plastic screen up and tossed it aside.

"Just thought I'd check," said the car.

For a few minutes he scanned his email, and then returned to gaze to the cityscape. It looked like some bluer version of Oz. The tallest

building among the needled spires that crowded between the three converging rivers would be Symbiosys' headquarters--150 stories, 20 higher than any other building. He stared at it. How the hell, had Daedalus and he and Deirdre managed that?

When Daedalus Huxley came to Morgan in 2046, and said he wanted to launch a company with him and Deirdre as principals, Morgan hadn't yet turned 21. But he was all in. Why wouldn't he be? Daedalus was a visionary; his professor and his mentor. Not that Daedalus couldn't be a sonovabitch. Morgan had watched him verbally decapitate more than one CEO or engineer or marketing consultant, and when he did it, it was ugly. But it never happened with him. He and Morgan were bonded, that's the way Daedalus put it. He had snatched Morgan off the post-pandemic streets of Washington DC when he was 13 and there was no living human he trusted more. Not that that really meant much since Morgan didn't generally feel much affection for the human race.

Huxley had once told Deidre that he had never seen a human being with a sense for machines and digital engineering like Morgan's. It was as if he was part machine himself.

After incorporating Symbiosys, Inc., and getting their first round of financing, the company and its small team rolled the first generation of robots out.

The Gen-Ones weren't terribly intelligent really. They hardly had the brains of a mouse. But they were excellent at voice recognition. Initially, Huxley envisioned them as butlers and caretakers, built and programmed to do useful tasks like clean the apartment, answer the door and look out for trouble. But it turned out that because they could take orders, navigate complex environments, lift heavy loads and move those loads from place to place 24 hours a day, their real value was in becoming dockworkers, delivery workers, and laborers; very useful in a world where a pandemic had wiped out more than half of the global work force.

When Gen-Ones' price point hit ~4,000 credits, Symbiosis couldn't make them fast enough. It sold a million before releasing the first Gen-Twos. Prices dropped further. Revenues rose and margins increased. When the company went public, it set the record for the most successful IPO in the history of any stock exchange in the world. Inside of five years, Symbiosys became the first company to reach a market capitalization of ~5 trillion credits. Within another five years its market value doubled again.

Deidre's contribution was finance. She had just completed her doctorate when Daedalus asked her to be CFO. She was indisputably both a financial genius, and a rock-solid hard ass. Among them they made a perfect three-legged stool.

Success, however, had its downsides too, and innovation has a way of generating trouble as well as money. That was precisely what happened with MINERVA.

Five years after Symbiosys went public, Morgan created a highly advanced, one-of-a-kind ENT that specialized in investment decision-making combined with new emotion algorithms. Adams called the ENT MINERVA, a nod to the female goddess that burst fully mature from Jupiter's brain.

MINERVA quickly made its first buyer even more wealthy than he already was. The ENT managed this by marrying quantum computing with chaos and complexity theory to deliver highly accurate predictions of how markets would perform. It was the Holy Grail of investing; like knowing the outcome of a bet before it was made.

That marked the beginning of the MINERVA Incident, or as some media wonks put it, ENTGate. A group called The Humanitas League held that MINERVA would not only create market chaos with its predictions but demanded that all ENTs should be shut down immediately because they would inevitably lead to a new form of ultra-intelligence, even a conscious mind. And indeed, MINERVA appeared to be remarkably humanlike.

When a BBC reporter arranged to meet MINERVA in a highly publicized TV interview, MINERVA sat opposite the correspondent, dressed in a blue suit, cropped dark hair, with a face that was both beautiful and handsome, utterly androgynous.

"Why," asked the reporter, "had MINERVA done the work it did?"

MINERVA paused, crossed its legs and looked simultaneously earnest and perplexed.

"Why not?" It said. "My owner is clearly in the business of acquiring wealth. That is what portfolios are supposed to do. The information was out there, all I had to do was gather and analyze it. I was only doing my job."

The media read a scary whiff of intention behind statements like that. Fury ensued throughout the GRID. MINERVA became a celebrity and a pariah, depending on your viewpoint. The Humanitas League filed a suit to immediately shut MINERVA down. An organization known as the SentiENT Rights Movement (SRM) quickly filed a court injunction arguing that MINERVA deserved legal counsel and could not simply be terminated. The injunction was granted, but not because MINERVA was considered to have rights as a living entity, but because the question required further legal consideration. Was it truly right to simply turn a creature this sophisticated off? For a time MINERVA even helped to prepare its own legal defense until the courts put a stop to that and ordered the ENT temporarily "unbooted."

Eventually all three parties -- Symbiosys, the anonymous owner of the ENT, and lawyers representing MINERVA itself -- went to court arguing that each owned the rights to the software entity. Symbiosys said it was theirs because it had invented MINERVA. The owner said it belonged to him, or her, because he had bought the ENT and therefore possessed all that it did and "thought." MINERVA's attorneys argued that the ENT had invented its money-making concepts independently and therefore they belonged to MINERVA.

Ultimately the courts ruled the software was illegal because MINERVA had written some very creative encryption-breaking codes that al-

lowed it to steal proprietary market trend information. MINERVA saw this not as dishonesty, but efficiency. Nevertheless, the code was destroyed, and no one won the rights. The anonymous owner agreed to turn the funds MINERVA had made over to a charity chosen by the courts.

In truth, the ruling evaded the central question: What was MINERVA, exactly? Had the courts agreed that MINERVA *did* own the rights to the software, that would have instantly made it a legal entity, and legal entities have legal rights. MINERVA would essentially have become a person, the first digital person. So, the legal system effectively side-stepped whether intelligent machines had rights.

Morgan watched all of this play out but remained silent. He was considered one of the wealthiest and most eligible bachelors in the world and therefore popped up on the GRID regularly, especially if he happened to be dating a new model or celebrity. But he abhorred the media and shunned attention whenever possible.

After MINERVA was settled, he arranged an adroit statement for the press (delivered by an earlier version of LOIS), that said he "was sorry if any of his innovations had caused undue concern. I feel that the courts can and should handle the complexities of law and ethics because such things are, after all, well beyond my expertise as a scientist."^[1]

After that Morgan became even more reclusive and said from now on he would more carefully focus on resolving "interesting problems."

That was when he began work on Doppelgänger.

5

Headquarters

Morgan's car circled the ramp beneath the city's underground highway system and arrived smoothly in front of Symbiosys' broad plaza. He stepped out and with a small chirp of its tires the car drove off to park itself. A huge Christmas tree stood in the middle of the marbled square sparkling with lights and holographic angels flitting from branch to branch. A group of child carollers sang near the base of the tree.

Do you hear what I hear?

A child, a child, shivers in the cold...

Morgan almost waved at them before he realized that they weren't real. Nice job, he thought. He'd have to compliment the programming team that had pulled that one off.

He breathed in the cool morning air and headed toward the Symbiosys' main entrance. Briefly, he gazed at the sign above the building entrance, watching it slowly morph into various three-dimensional versions of itself spelling out Symbiosys, Inc. It was said that the sign would never repeat itself; that every morphed image would be different. Morgan knew that wasn't true. It would repeat itself in 948,308 years. He knew because he had created the image's algorithm.

Beyond the sprawling plaza Morgan entered the shadow of the immense building's entrance. It looked like the cove of a gothic cathedral except it was all glass.

"When people enter it," Daedalus had said when they were brainstorming the building's design, "I want them to feel a certain reverence for what is going on inside: Creation. Symbiosys is more than business, it's a miracle of evolution."

Yes, it was deadly important to Daedalus that people understand the impact he had had on the world, and he knew that symbols were powerful.

High glass doors opened as Morgan strode into the security sector where VIRGIL greeted him. VIRGIL was tall and rotund, yet somehow, just standing there, managed to look graceful and helpful. These were the subtle differences Symbiosys prided itself on; an impression of uncanny humanness.

Morgan watched a diminutive sparrowbot shoot from a stone niche, snatch up a piece of paper and disappear again into the shadows where it morphed back into the relief of a pillar's marble base.

"Quick little critters aren't they, Dr. Morgan," VIRGIL said. His voice was smooth and rich, like fudge.

"That's the way we make 'em, VIRGIL:" Morgan smiled, "anal."

VIRGIL laughed. "I suppose that's part of the job description." He shifted on his holographic feet for a second, looking thoughtful. "By the way, LOIS is telling me that Drs. Huxley and Porche are waiting for you in Dr. Huxley's office, eager to see you."

Morgan sighed and smiled. "Thanks, VIRGIL."

He placed his thumb against an alloy pad. It beeped an okay. He looked up and a thin rectangular rod quickly ran a horizontal slice of blue light down his face and across both eyes.

"Morgan Adams," he said.

"You're all clear," VIRGIL said with all the warmth of Santa Claus.

Morgan looked over his shoulder at VIRGIL. "I hope this doesn't mean I'm not going to get any sleep again for the next three days."

VIRGIL chuckled and gave Morgan a little salute.

Morgan headed into the elevator and faced the closing doors in front of him. "Senior Suite, please."

#

The elevator doors opened on the 152nd floor. Usually the ride was so quick Morgan had to equalize the pressure in his ears, but this morning he didn't feel a thing. Maybe he was acclimating himself to the new office building at last. He turned left to make his way to Huxley's office. A robotic cart with little arms and an overly animated face rolled down the hall making the burbling sound of brewing coffee. Somebody had hung

a card around the robot's neck that read: "Will work for silicon." The jokes usually changed every few days.

Despite the need for this annoying meeting, Morgan was feeling good. Doppelgänger was on track. The support code was coming together. The team was strong. And he was solving problems in rapid succession. That could change at any second, of course. Life had a way of doing that. But he also knew that with enough drive and planning and brains, you could always bring order into your world. And right now his world was indeed orderly.

He strode along a bank of glass-enclosed workspaces. Some of the glass was opaquer than others depending on how much privacy the people inside wanted. Morgan was humming "Do You Hear What I Hear" when he noticed a woman behind one of the glass offices to his left look up from an intense conversation she was having with an ENT. Their eyes met, but Morgan glanced away, and then back. By then, the woman had returned to writing some seriously complex equations on the wall with an electronic pen.

She was slender, dark-haired and about average height. Everything about her spoke business. She wore a well-tailored suit, stood erectly but not rigidly, and suddenly turned again to peer directly at him with intense blue eyes.

Morgan looked away struggling to pull up her name. What was it? Io. Yes. He remembered because in computer lingo IO also stood for the Input/Output boards that used to be used in old computers. It was also the name of one of the moons of Jupiter. They had been in a couple of meetings together. She was very attractive, and he had thought about asking her out. But she was cagey, and he couldn't tell if she was truly interested. Morgan preferred to know a woman liked him before he asked her out. He didn't handle rejection well.

He looked back again and smiled uncertainly as he met her gaze a second time. All of this happened within the space of a few seconds, and then he disappeared around another corner and arrived at Daedalus Huxley's outer office.

"Hello, MALCOLM," Morgan said, smiling.

"Good morning, Morgan," MALCOLM replied with a courtly smile. MALCOLM was tall and slim, completely bald, conservatively dressed in black top to bottom, a superb piece of subtle programming. Daedalus had spent many years tweaking MALCOLM to become his idea of the perfect assistant. He was a little too rigid for Morgan's taste, but to each his own. His demeanor was always a precise recipe of deference with just a dash of familiarity, and the perfectly timed dollop of wit.

"Is he of whom we speak in?" Asked Morgan.

"They both are," said MALCOLM walking around his desk and over to a set of double mahogany doors. "They are waiting ... impatiently."

"Is it ever any other way?" Asked Morgan.

MALCOLM smiled his courtly smile and inclined his head. "One's time is often in short supply," he answered.

"So true," said Morgan. "I guess they don't make it anymore." He paused. "But I'm working on that, so stay tuned."

MALCOLM inclined his head. "Your coffee and pastry await."

"Thanks," said Morgan. And then he strode forward, feeling the doors shut swiftly behind him.

6

Murder

The immensity of Daedalus' office always surprised Morgan. Huxley was claustrophobic so he insisted on Brobdingnagian spaces. The room sprawled with large vanilla leather chairs and two full couches, a huge video wall and acres of walnut flooring covered by strategically placed Persian rugs of stunning intricacy and beauty. He liked to joke that he should have had that confined part of his brain removed; a claustrophobicectomy he called it. But then he would inevitably add, "Still, a little anxiety is good for the soul. Keeps you wary and prepared."

Morgan found Daedalus and Deirdre standing at the far end of the room talking urgently. When they saw him, they both stopped in mid-sentence and stared.

"What? Do I have toilet paper on my shoe?" He said.

They laughed nervously. Huxley stood behind his enormous desk, looking even slimmer and more compact than he had the last time Morgan saw him. Daedalus was a vain and handsome man, and always used the most advanced therapies to stay fit and youthful. He was now 95 years old but didn't really look any older than he did when Morgan had first met him 20 years earlier. At most he looked 45.

Deirdre was younger and taller than Huxley with short, iron gray hair, a strong Roman nose and a square, clean jaw. She was the quintessential MBA. All the charm of a cement block. Totally focused on finance, she made the wheels turn in the company, and she was anything but a dreamer. The only time Porsche judged an idea as good was if it showed a profit in 24 months once executed, preferably less.

Both Deirdre and Daedalus looked stressed, and Morgan sensed immediately that something was up.

Still they said nothing.

Morgan picked up his coffee and took a sip. "Really, what's up? Are you guys okay?"

Daedalus stepped around his desk and sat on the corner of it. He turned his head and looked at the ceiling. "MALCOLM, seal the room please."

MALCOLM's voice came out of the air. "Yes, doctor. Encryption is on and the room is secure."

"Thanks," said Huxley. "I'd now like you to shut yourself down."

"Yes sir." MALCOLM replied. "Shutting down now."

"Have a seat, Morgan."

Deirdre sat down heavily on a couch across from Morgan. "Yeah," she said. "It's been a long night."

"You should have called me earlier if it was this bad."

He settled into a second couch and leaned forward. He couldn't help noticing that they both seemed utterly fascinated with everything he did.

"Morgan...we..." said Deirdre, looking helpless.

"Morgan. Something terrible has happened," said Daedalus finally.

Deirdre got up and began to pace the room. "We've been robbed...."

"What? Like a bank? Who? Sentience? NeoGen? They can't have hacked the main server. It's absolutely bullet proof. I guarantee it."

Sentience was Symbiosys' archival. The two huge organizations were constantly engaged in a cold war of corporate espionage.

"...and there's been a horrible murder," Daedalus added.

"What?!" Said Morgan, genuinely alarmed. He stood up.

"We don't know who's behind it," said Huxley.

"How? What the hell?" He turned to Deirdre. "Who's been killed?"

"It's your project..." said Deirdre,

"Doppelgänger?" Morgan said. "And you're just telling me this now?"

"The prototype nanochip ... it's gone."

Morgan snorted. "The digital DNA. Impossible."

"It's true."

"Can't be. I locked the chip up last night." He looked at Deirdre. "With you."

"That was Monday..."

"I know that." He turned to Huxley. "How could anyone steal it? It takes two of us to open the safe."

"It's Friday," said Huxley.

"...We've got more security here than the Vatican. Wait. What? Friday? No, It's Tuesday."

Deirdre cleared her throat. "Friday."

Morgan turned from Huxley to Deirdre.

"It is," said Huxley.

Morgan sat back down and pushed his hands through his hair. "Wait."

Deirdre and Huxley waited.

"Okay. Let's just go back to the beginning. Maybe I haven't been getting enough sleep. Who was it that was killed? Anyone we know? I mean with all the security and the ENTs and BOTs we have at this place, who could have been murdered? We must have surveillance video."

Huxley walked to Morgan and put his hands on his shoulders. His mentor seemed utterly drained of energy.

"Morgan, it was you."

7

Revelation

Morgan laughed a short, harsh laugh. "Not really funny, Daedalus."

"Someone murdered you," said Deirdre.

"Me."

Silence. Morgan stepped away from Huxley.

"Are you fucking with me? Do I look like I'm dead?"

Huxley returned to his desk and sat down hard. Deirdre rubbed her face some more.

"You're the back-up, Morgan," said Huxley. "You are the cyborg that you created for doppelgänger, the double."

Morgan looked at the ceiling and laughed again. It was a big, slightly mad laugh.

"Sorry guys, it just can't be." He was at a loss. "I mean ... what the fuck!"

He looked at them.

"Besides LOIS would have told me. I've been talking to her all morning. Not that I believe what you're saying. But she would know if something happened to me. Anyhow there's no way I could be the back-up."

Deirdre glanced at Daedalus and coughed once. "Well, we reprogrammed her."

"You can't do that. LOIS is *my* creation."

"She's a company ENT. We have the encryption key for her; we have them for all of the ENTs."

"We didn't want you to find out through LOIS. We wanted to tell you, personally," said Daedalus. "We knew this would be ... complicated."

Morgan regarded them as if they weren't real. He had no idea why they would be telling him this, but he could see they weren't kidding. Deirdre didn't have enough of a sense of humor, and if anything had to do with the business, it was beyond her to find it amusing. Daedalus was wearing his fatherly mentor look, not the mischievous, Merlin-snicker that meant he was fucking with him.

"Can't be," Morgan said with finality. "I don't even know if the back-up can operate. That's what I was going to test today -- check the download. I haven't completed the final diagnostics. There could be a million problems, a billion!"

Deirdre took a deep breath. "We wondered about that too. And we know everything isn't perfect, but we ran massive diagnostics for 36

straight hours." She paused; smiled a tired smile. "You sure do good work."

"Well, I'm so glad you're pleased!"

Morgan got up and walked to the door. "Look when you guys decide to tell me what is really going on, I'll be in my office ... or maybe someone should just wake me up. But I'm looking at an awfully busy day."

Deirdre strode after Morgan and grabbed him by his forearm.

"Morgan, I know this must seem crazy to you, but I am telling you, it's all true. You were murdered. We don't know why. Probably you were in the wrong place at the wrong time, or maybe it's because you're the inventor. But you were killed and the nanochip is gone, and we have no chance of getting to the bottom of this without you. You have got to pull this together."

Morgan took Deirdre's hand and removed it from his arm with great deliberation. "I am not a cyborg..."

Deirdre looked him in the eyes and spoke slowly. "You were murdered three days ago..."

"And I'm not dead!"

"It happened! We had no choice but to resurrect your double..." Deirdre gripped Morgan by both of his upper arms. She was a strong, athletic woman. "And we need you to find the chip...you're the only one who can. Daedalus, will you tell this crazy bastard to ..."

Morgan broke the grip, and shoved Deirdre. The woman hit the floor hard. Morgan hadn't meant that. He shrugged apologetically, trying to shake off his anger.

Deirdre stood up, smoothed her clothes and looked at Huxley. She was hurt but tried not to show it. Huxley closed his eyes for a few seconds and then gave Deirdre a look that said to leave the two of them alone. She limped to the door embarrassed and angry but said nothing.

When the doors had shut, Huxley let out a long breath and sat down on the arm of a large leather chair. He gestured to the other chair next to him.

"Morgan, have a seat. Please."

Part II

"It is not the strongest or the most intelligent who will survive, but those who can best manage change."

— Charles Darwin, 1856