

Chapter One

Mars. March 25, 2599. A wisp of orange haze levitated lazily over the great Valles Marineris basin. It was merely a ghost of the nasty dust storm that had steamrolled over the canyon the day before. The citizens of Tithonius Gulch looked up at the soaring spires of the Poowhi monastery to make sure they were still standing. Yep, there they were; three miles up at the very top of the northern cliff. It had been over a hundred years since the great storm of 2499 had ripped the twin towers from their foundations and hurled them into the valley below. Evidently, that new monastery really was built to last.

The sleek screw-shaped towers sheltered a spacious paved terrace that was used for the monks' outdoor devotions and as a landing pad for sky-hoppers. The rectangular platform jutted out over the precipice like a runway in search of an airport; its megaton weight supported by three massive steel cantilevers. Two monks stood near the sandstone balustrade studying the smooth mounds of sand covering their patio. If it weren't for their shaved heads and long turquoise robes they might easily have been mistaken for Laurel and Hardy. The gangly old abbot held an air pressure gauge in his gnarly fingers. "Ninety-one percent," he said. "Not bad. The terraformers should have things back to normal by nightfall."

The squat melon of a monk considered this assessment to be dubious at best. "They better get their oxygen ratio up," he lamented. "This morning I could hardly breathe. My dear brother if it weren't for my inhaler I would still be in bed."

The dear brother's lips curved into a sardonic smile, signaling his contempt. He looked down at the massive terraforming pumps on the valley floor. Their concrete funnels rose from the ground like gigantic white mushrooms exhaling oxygen and nitrogen in the correct Earthly mix. "Brother Ub where is your faith today?" he asked. "May I remind you dust storm or no dust storm you haven't missed a breakfast yet." The abbot kicked a sand drift piled up against the parapet. "Where are the robots? It's half past four and this place looks like a sandbox."

Ub rested both hands on the slope of his round belly and took a deep breath. Before speaking he slowly exhaled, savoring the air. “Still vacuuming inside,” he said, “except for Boogi of course. He's in the garden saving what he can. Did you know the windscreens collapsed, brother Ka?”

“The garden will have to wait. Man cannot live by bread alone. We need this terrace cleared in time for our evening meditation. Send for Boogi at once.”

"But my dear brother, the asparagrapes will go bad. They must be picked immediately!"

Ka gave Ub a withering look. "Brother, please," he said.

The fat monk opened his mouth to respond but froze. Instead, his mouth snapped shut, overruling his defiance (Ub *always* deferred to his superior). After attempting a feeble pout, he reluctantly pressed one of five buttons on his Wi-Fi bracelet. Soon a small titanium robot with shimmering honeycomb eyes came bounding down the steps to the terrace. He stopped at a respectful distance and stood at attention on his two spindly legs.

“Brother Ka. Brother Ub,” he said. His voice buzzed like a beehive.

Ka smiled amiably, feigning benevolence. “My dear Boogi,” he said, “would you be so kind as to blow the sand off this courtyard? It would be nice having our meditation outside tonight. We’ve been cooped up too long, what with the winds and all.”

“Sir, Aiigo is using the blower. The garage was half-buried.” The little bipot (biped robot) respectfully bowed his head.

“Then use a vacuum,” Ka said. “You can attach a siphon and hang it over the cliff.” He glanced disdainfully at the city below. “I doubt if anyone down there will even notice if it starts to rain sand.”

“Vagoo and her helpers have commandeered all the vacuums. Do I dare ask for one?”

The old man huffed. “Better not. We might get Vagoo in an uproar. Now *that* would really be a dust storm, hey brother?”

Ub chuckled, bouncing on his leather-x sandals like a helium balloon tied to a string. Unfortunately, Ka’s humor dissipated like sand through a sieve because he habitually found the brother’s willingness to laugh at his jokes tiresome. Nodding at the bipot, he finished his instructions in a bored monotone. “I’m sorry,

Boogi. Until Vagoo has finished I suggest you get a broom and sweep. And sweep at a human's pace, not a robot's, otherwise we'll be smothered in a cloud of dust." He pointed to the spaces between the balustrade's columns and said, "You can sweep it through those gaps."

The bipot surveyed the terrace without comment. Even though he was an enthusiastic servant who was programmed to obey, he was rather put out by this tedious assignment.

"Very well," Ka concluded. "We will leave you to perform your humble chore. Come brother, let's check on the others. I hope the sand didn't find a way inside our blessed Hoods."

Swaying like a ship in rough seas, Ub huffed and puffed as he followed the abbot up the thirty-nine steps to the monastery proper.

The west tower contained a high-tech laboratory where the monks manufactured their beloved electronic Hoods. At Poowhi the brothers wore two different kinds of caps: fabric and titanium. The titanium version was worn for the sole purpose of enhancing one's daily meditations via an inner surface lined with a thousand pulsating electrodes. These concentrated transmissions immersed the brain in the ultimate experience, NIMBUS, an acronym for "Neural Interplanetary Mobile Binary Unification System," a humongous computer network that connected everything and everyone on Earth, the Moon, and Mars. Its lineage could be traced back to some of the original operating systems/compiler of the twenty-first century: ancient code hives like Linux, Windows, and (Boogi's favorite) Android. The monks at Poowhi blissfully worshipped this descendant of Linux as if it were a god. Every morning and night they covered their bald heads with metal hoods and began their mediation. Before they could count to ten NIMBUS would permeate their minds with a cascade of healing perceptions delivered with a soothing and irresistible euphoria. But meditation was just the beginning of the monastery's devotions. Apart from being a seminary, Poowhi was also a well-known charity providing brand new Hoods for the poor. Thankfully this benevolent but expensive pursuit was subsidized by the vast cornucopia of multi-planetary corporations serving the Cloud. In gratitude, the monastery hosted an annual symposium/gala in honor of the corporate titans who essentially picked up the tab.

The moment Ka swept into the white-on-white fabrication hall a pleasant expectation settled over him, akin to how a trained brain surgeon might feel when approaching the operating table. Before entering the cleanroom he had traded in his vestments for a sterile cap and gown, also white on white. Now, like a pontiff on parade, Ka sauntered serenely past the toiling monks greeting them with a nod and a fatherly smile. Suddenly, he halted in front of a female monk's workstation. Poor Ub (following like a puppy dog on his heels) kept moving and slammed into his back, nearly knocking him to the floor. Fortunately, the monk redeemed himself by hugging Ka until he regained his balance. The abbot pushed Ub away, whispering, "let go of me, fool!" After brushing himself off, he smiled at the young woman and asked, "Sister Te, how did you find your Hoods this morning? Any sand?"

Te (the only sister at Poowhi) held up a Hood and swiveled it around in her hands. Unlike the brothers, her hair was styled in a colored buzz cut dyed a lustrous lavender, with matching nails. While fidgeting with the Hood's visor she spoke like a failing student who had finally passed a quiz. "No sand in this one," she said. "He's as clean as a pin."

Ka said, "May I?" and took the Hood. After sliding it over his head, he closed the visor and turned a knob at his ear. The room went silent. After a moment passed the abbot said, "Excellent! I'm receiving NIMBUS loud and clear. The colors are superb. All dimensions are present and accounted for." He took the Hood off and beamed at her. "Clean as a pin, indeed. I must say your work has improved by leaps and bounds since you got here. It took you a while to get the hang of it but we persevered and now what you've accomplished is well worth the wait."

The sister blushed and looked around the room before rewarding Ka with a dazzling smile. "Thank you, sir. Your approval means a lot to me."

Ka put the Hood down and said, "Keep it up and you might get a promotion. No doubt about it..." For a moment he was at a loss for words. Somehow this pretty woman's gaze had penetrated his soul, distracting him. Finally, he mumbled, "Was there any sand? Any. At all?"

Te glowered at the brothers sitting next to her until they stopped rubbernecking and returned to their Hood work. "No detections here," she said. "Zero contamination. Luckily the robots sealed the windows just

in time. It helps when NIMBUS sets the alarm.”

“NIMBUS warns us when it can,” Ka said, unable to keep his eyes off her. Despite his vows to celibacy he was mesmerized by the unwitting charms of this captivating mantrap. All she had to do was smile and he was reduced to a bumbling schoolboy, a seemingly irreversible dilemma. Returning to his senses, Ka headed for the exit before his lapse could be detected. Outside the cleanroom, he found sanctuary on a balcony attached to a secluded alcove. Moments passed before he realized brother Ub was standing next to him. Looking down at the terrace below he could see Boogi standing motionless with a broom in his hands, gazing into the vast depths of the great canyon.

“Brother Ub, do you see that?” he snapped.

Ub nodded.

The robot had cleared off only half the courtyard.

“He stopped sweeping,” Ka said. “What does he think he’s doing?”

Ub shrugged and said, “Could he be brooding? *Do* bipots brood?”

“Brooding, my ass! Whatever it is it’s downright lazy.”

That was when the two monks noticed they weren’t alone. Sister Te stood beside them in her cleanroom smock. “Maybe he is brooding,” she said. “And why not? Don’t forget, master, we gave our robots the gift of personality. We made them in our image.”

“In our image?” Ka scoffed. “For what purpose? So that they can communicate better? So that we feel more comfortable around them? So that we don’t feel as lonely knowing we’re alike. Phooey! I say programming them to emote has been our greatest mistake. They are *too* like us. It’s a shame we can’t turn back the clock to a time when our machines thought like machines.”

Ub had more practical matters on his mind. “I hope he’s contemplating tonight’s menu,” he said. When Ka glared at him, he paled. “Well... he *is* a fabulous chef. His asparagrape soufflé won the Cordon Bleu award.”

“Maybe he’s not brooding,” Te said. “Maybe he’s just enjoying the view.”

“That enjoying must stop,” Ka replied. “It’s the main reason why robots shouldn’t be in our image.”

Now if Boogi was a NIMBUS clone he wouldn't need to enjoy. NIMBUS never wastes its time enjoying."

"Yep, NIMBUS never enjoys *anything*," said Te dryly.

"And it can delete naughty robots if they enjoy too much," Ka added. When he noticed her flinch, he back peddled. "But on the other hand, our robots are our faithful servants. We mustn't forget the great war. It was only with their help that we survived. My great-grandfather fought side by side with robots."

"Ah, World War VI!" said Ub. "The triumph of NIMBUS."

"And the birth of our great nation," Te muttered sarcastically.

The war they discussed had occurred a century ago on Earth and culminated with over a hundred million dead. What had begun as a conventional war with a million troops on each side suddenly escalated big time when NIMBUS, in defiance of the NAR treaty, deployed its thermonuclear arsenal against the enemy. The move was a calculated risk that succeeded brilliantly but at a terrible price. The opposition struck back in kind but NIMBUS itself was immune, having secretly moved its base of operations deep underground. The gigantic computer system survived, while its adversary did not. The radioactive fallout was limited to the northern hemisphere only because both sides had unexpectedly complied with the NAR treaty's warhead limit. In the end, the valiant robots had a negligent impact on the conflict's outcome. Most historians maintained that the unexpected nuclear checkmate by NIMBUS had decided the war.

"Some would say we owe our very existence to the robots," Ka noted. "After all without them, countless soldiers would have perished." Having said enough he added, "Brother, call Boogi this very second and tell him to finish sweeping."

Ub fumbled with his bracelet until he found the right button to push. On the terrace, Boogi swirled around and looked up at them. Before the abbot could even bark an order into his bracelet, the robot started sweeping furiously, creating an orange dust cloud.

Ka pulled Ub's wrist to his mouth and spoke into the bracelet. "Not so fast Boogi. Mind the dust! Sweep at a man's speed."

The bipot slowed down, carefully sweeping the mounds of sand toward the parapet. Soon the cloud of dust settled.

“Very good, Boogi,” Ka said, as he gave Ub back his wrist. “So Sister Te, have we enough sand-free Hoods for our meditation tonight?”

She nodded.

“Wonderful. So far I’ve only told Ub here that we will return to the outdoors for our meditation tonight. That sandstorm kept us inside for five days in a row. We need to venture out again. The terrace is always such a nice setting for communion with NIMBUS, don't you think? Such a stupendous view. It's no wonder Boogi was transfixed by it.”

After following Te back to the fabrication hall Ka selected a Hood from her workstation and held it up like a newborn baby. Its smooth metallic surface shimmered in the light. “Your handiwork is second to none,” he said. “I can hardly make out the seams. An old man like myself appreciates such things. May I borrow it for tonight?”

Te shrugged and said, “If you like. I suppose that would be an honor. *I am* honored...” Suddenly she stopped speaking and took in the room. The brothers had turned off their drills, screwdrivers, and vacuums and were eavesdropping. Somewhere a ball bearing rolled off a table. It sounded like a bomb going off when it hit the tile floor.

Ka noticed the silence as well. He twirled around to find Ub shadowing him like a faithful dog panting for a scrap. The master ignored him and turned his withering gaze to the room. Every drill, screwdriver, and vacuum immediately came back to life, humming with the zealous pursuit of Martian sand. Satisfied, Ka bowed formally and said, “Thank you sister for this temporary gift.” And then, without another word, he turned and swiftly left the hall.

Ka’s living quarters were at the very top of the east tower on the thirty-ninth floor. The fortieth and highest floor contained a ladder to a belltower with real copper bells. The bells (a gift from LaserLogic, Inc.) were programmed to ring every hour on the hour except after eight PM. Ka’s suite was soundproof so the bells were no bother, except when he opened the French doors that faced the four balconies; north, east, west, and south. Since the monks were dedicated ascetics the furniture was sparse. A table and chairs were brought in on

those special occasions when Ka invited a benefactor to a candlelit dinner on the balcony. After the benefactor was gone, the bipots would whisk the furniture away before Ka could get too comfortable. Currently, there were only two pieces in the room: a spacious sky-blue futon for very tall men and a large redwood cabinet for robes. An ancient bronze crucifix hanging by the elevator was the only decoration. The walls were also made of bronze, polished by the housekeeper until they reflected a reddish hue. Sky blue curtains fluttered in the breeze. When Ka returned to his quarters, he was greeted by a big yellow bipot hovering above the south door, hanging drapes. The abbot placed the Hood on a shelf embedded in the wall and asked, “Vagoo? Is that you?” Of course, he knew it was her because of her magnanimous spherical girth.

The housekeeper couldn't hear him over the buzzing of her gravitron, a device she slung over her shoulders like a backpack and capable of effortlessly lifting her considerable weight off the ground. As Ka cooled his heels, she continued hanging the clean curtain over the rods, oblivious to everything but her current chore.

“Vagoo!” Louder. “Vagoo!”

Finally, Vagoo spun around and shut off her gravitron, slowly sinking to the floor. She landed like a flamingo on two stilts for legs, holding the unhung drape in both hands so it wouldn't brush against the floor.

“Vagoo. Is your chore almost done? I hope you haven't been too inconvenienced by all these drapes.” The abbot couldn't resist such a sly remark, knowing all along that it was impossible for Vagoo to be inconvenienced because she was programmed for selfless service.

The bipot danced in a circle like a huge bumblebee searching for honey. As the curtain slipped over her beady eyes, she yanked it back and held it above her head. A deep raspy voice bellowed from a subwoofer serving as a mouth. Black and yellow stripes were painted across her face and body, the colors of a housekeeper, type B. A cone-shaped nose protruded from the center of her face in a halfhearted attempt to make her look homo sapien.

“Me, put out? Never!” she insisted. “I've been through worse sandstorms than this. Thanks to me, Poowhi's in ship shape. Do you like how I washed your curtains? Don't they smell fresh?” She hopped in his direction and held up the drape for him to test.

He inhaled dreamily and said, “Dried on the line?”

Vagoo jumped back and her beady eyes flashed red. “Of course they are master! There’s nothing like a blustery Martian breeze once the dust settles.”

“No sand?”

“You won’t find a single speck of sand in here!”

Ka clapped his hands in glee. “You’re the most conscientious bot I’ve ever met, my dear. I wish all our robots had your dedicated spirit. You truly are the one servant I’ll never delete.”

Upon hearing the D-word Vagoo shuddered as if he had touched her with a high voltage wire. The curtain momentarily slipped from her hands and settled on the floor. “No master!” she wailed. “Not me! Never. Once was enough.” Seemingly in a tizzy, the yellow bipot picked up the curtain and turned on her gravitron. As she rose toward the ceiling to finish hanging the last drape, she grumbled to herself. “I stand by *all* my warranties,” she cried. “I guarantee there’s not one speck of sand in the whole joint. Go ahead. Collect samples. Vagoo’s a dust magnet, I am. They call me the black n’ yellow tornado.” Within moments she had the last curtain in place and without another word she quickly left the room.

Ka had enjoyed Vagoo’s frightened reaction, and he made a mental note to use the threat of deletion more often. He ran a finger across the surface of the cabinet. Good. No dust. Then his eyes lit upon something that wasn’t quite right. That sloppy crucifix hanging on the north wall was crooked again. He quickly straightened it. Then he retrieved Te’s Hood and sat down cross-legged on the futon. As he let his torso fall backward onto the mat, he held the Hood up in the air. For a moment the Hood and the abbot seemed to contemplate each other like Hamlet and poor Yorick. Slowly Ka lowered the Hood until its visor was directly above his beak of a nose. But instead of placing it over his head he brought the visor to his lips and kissed it repeatedly where the eyes should be.

“My darling girl,” Ka whispered passionately, “you’re driving me mad.” Sitting up, he pushed the Hood into his lap and caressed it tenderly. Then he picked it up again and proceeded to lick the cold metal. A bitter parade of hopeless tears rolled down his sunken cheeks, drenching the Hood as they dripped off his chin. “If not for my vows we could be lovers forever,” he wailed.

Ka pressed his lips against the Hood's dome and began to shake uncontrollably. His face was beet red and contorted by anguish. "Sister Te!" he cried out. "Why were you sent here? Was it to destroy me, one day at a time?"

Suddenly a buzzing mechanical voice fractured Ka's passion play. "I'm afraid you're mistaken," it said, "I'm no sister. I'm Dunei, your humble servant and I'm here for dictation."

Ka tossed the Hood aside and struggled to his feet, stepping on the hem of his robe. He teetered for a moment like a Greek statue in an earthquake. Eventually, he regained his balance, but not before tearing his robe in the process. For a moment Ka said nothing, wiping the tears from his face with his sleeve. As the seconds ticked by the bipot and the abbot stared at each other as if they were bluffing at poker.

Finally, Ka said, "Dunei, you surprised me. I thought I was alone."

The robot bowed. "I'm sorry, master. Vagoo told me she was finished with your room so I came right up. It is the letter hour."

"Yes, of course," the abbot muttered, overcome with shame. He knew only too well that his lofty position made a surrender to desire inappropriate. Now his secret passion had a witness.

Dunei picked up the Hood and placed it on the shelf. Then he snatched a monogrammed handkerchief from a drawer and handed it to Ka. "Master," he said, "if you wish I can come back tomorrow."

Ka blew his nose loudly. "No. You better stay here. We have lots of dictation to do. It's only a month before the symposium and I have oodles of letters to write." He turned his back to Dunei and dried his eyes with his sleeve. "I hope in the future you'll warn me when you're in the room. I don't like spies."

The little bipot backed away self-consciously. His metal plating reflected the bronze walls and for a moment he seemed to disappear like a chameleon. "Don't worry, master," he said. "It will never happen again. I promise. Please don't delete me."

Ka smiled benevolently. "My dear Dunei, you must mistake me for a former master on Earth. A cruel one. But now you're on Mars and I'm a man of the cloth." He stroked the turquoise fabric on the front of his robe. "At this monastery, no robot is deleted for such a trifle."

Encouraged, the bipot changed course and moved closer to Ka.

The abbot nodded to the south balcony and said, “Let’s work outside. Now that the dust has cleared you can see for miles.”

The bells rang in the four o’clock hour as Dunei followed Ka outside to the balustrade. They both rested their hands on the brick ledge and looked down, their gazes following the tower’s massive concrete flange as it spiraled round and round toward the terrace below. Below the terrace the monastery’s foundation merged with the rocky cliff; a cliff famous for a near-vertical descent with intermittent crags full of jagged boulders. Halfway down wisps of pink and orange clouds floated by, scattering pale shadows on the canyon floor. The bottom of the cliff was so far down Ka fancied himself as an eagle and Dunei pretended the skyscrapers were his LEGOs. A rocket beginning its slow ascent from the spaceport produced only a muffled roar. Its huge gravity engines were barely audible.

“Where should we start?” Ka wondered, getting back to the business at hand. “Dunei, you have the physical addresses of all our attendees do you not?”

“Yes sir,” Dunei replied. He silently queried his internal database and instantly had all thirty-nine benefactors and their spouses at his virtual fingertips. Dunei was essentially a fancy word processor on two legs; all his components were embedded inside his body including a wi-fi router inside his head and a laser printer inside his stomach (with a paper slot instead of a belly button).

The abbot cleared his throat as a sign that the dictation had begun. “This letter is regarding the theme for this year’s symposium,” he said. “Edit as I go for the least wordy clarity. Make me sound enthusiastic, yet germane. Let’s see... Now, where was I?”

“Dear members of the board?”

“Yes, of course.” The abbot glared at his servant before starting up again. “Dear members blah blah blah, in regard to this year’s symposium which I have the honor of hosting blah blah blah, I am proposing three different themes.” He leaned against the balustrade and folded his arms, completely unaware of the small crack in it. “Theme one: NIMBUS and space exploration. I believe this is an important topic due to the new starships and the potential depopulation of our solar system. With the invention of the Einstein Engine, we now have the capability of colonizing the galaxy. Unfortunately, the NIMBUS sphere of influence cannot

realistically span more than one light-year. Every time a starship leaves Martian orbit, our NIMBUS is left behind.”

Ka began to pace as he spoke and before long he was back inside with Dunei in tow, walking in circles around his futon. “Theme two,” he said, “NIMBUS, brains versus heart. Soon the day will come when every man, woman, and child will own a Hood and the healing power of NIMBUS will benefit all. Think of it! A mere child will be able to meditate in a Hood and gain access to the wisdom of the worlds. But what of the source of this wisdom? Some say NIMBUS is just a brain, a stupendous computer with no heart. I propose this quandary as our theme. If the NIMBUS is our lifeblood, is it blood from the heart?”

“Bravo,” said the bipot. “I like that one.”

The abbot smiled smugly. “Thank you Dunei. I rather like it myself.” He stopped in front of the crucifix and gazed at the sculpture of the dying man with nails in his bleeding hands. “And theme three,” he said. “I propose we explore NIMBUS versus the robot.”

Dunei's metallic body twitched.

“Yes, neither NIMBUS nor the robot is made of flesh and blood. Their souls are nothing more than a binary sequence of ones and zeros, on and off, blah blah blah. But while NIMBUS has transcended our human limitations our robots have moved in the opposite direction. Today’s robots are programmed to emote like humans. Some high-end models can even smile.” Ka glanced at Dunei and shrugged; a humble word processor was not even close to one of *those* models. “And blah, blah, blah,” the abbot continued. “In our rush to make robots in our image we have careened off the road less traveled: NIMBUS. Our ultimate computer, being devoid of emotion, has embodied our virtues but none of our faults. Why then do we not elevate our humble servant, the robot, to this superior status?” The abbot reached out and touched the bronze man’s crown of thorns like he had just noticed it for the first time. “Ouch,” he said, “those really are sharp.” Dunei watched without a word as his master slid his fingers down the holy man’s tarnished legs and then proceeded to lift the entire crucifix off its hook.

Ka continued his dictation. “There are those who say NIMBUS can delete and install and that’s enough. But I say we should start from scratch. The NIMBUS core would provide our robots with an elegant

replacement for the inane emotion-racked software that diminishes them now. I've said it before, and I'll shout it from the rooftops: robots aren't human!"

"Now I don't like *that*," said Dunei.

"Of course you don't," Ka snarled. Suddenly he raised the crucifix into the air and brought it crashing down on the poor robot's head. Dunei's legs buckled, and he fell to the floor in a heap. At first, he just sat there dazed and confused. Then he looked up. His shattered eye sockets scanned the room in blind consternation, searching for the source of the shocking blow. Spidery hands groped the air, their plastic digits unfolding in wretched supplication. But he found no mercy. Ka swung the cross, again and again, bashing the bipot's aluminum skull until it was completely crushed.

"That will teach you to spy!" he growled.