

“DOMO ARIGATO,” SAYS MR. ROBOTO
by ROBERT R. CHASE



Illustration by Vincent Di Fate

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The thing about the legal games is that both sides can play them....

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Making adjustments to the landing sequence even though I'm not fully awake yet. That's the purpose of these repeated simulations. Make the responses so automatic that I can almost do them in my sleep.

There is also a reason why I am unconscious to begin with, though I can't think of it now. Not a problem. It's back there somewhere. It will surface if I really need it.

Squawk of static. "You there, Calley? Rise and shine, amigo, or you and Wildcat going to splatter yourselves all over the inner solar system."

Maria Theresa Gonzales. The sweetest voice conceivable to a boy a million kilometers from home. In my imagination, I see her in the communications center trailer, dedicated to the mission but eager to get off shift so she can work out to deal with what she imagines to be her weight problem. I shake my head, aware that I am just about to drift off. I try to answer, but my mouth is so dry that my tongue sticks to the roof of my mouth. Something between a grunt and groan emerges.

The numbers on the radar altimeter flicker too quickly to be read. I extend my hand to the control console. It feels like a block of wood, only now I am getting the pins and needles sensation as the blood flow returns. I flex my fingers to get more feeling into them. Hitting the wrong buttons now would be disastrous.

Here's the reason for the simulation. 2009 AP15 orbits the Sun at something like twenty-five kilometers per second depending on its position in its very elliptical orbit. Escape velocity from Earth is 11.2 kilometers per second and I will actually be going about thirteen kilometers per second. That may sound like I have a lot of delta vee to make up, but Earth itself orbits the Sun at twenty-nine kilometers per second in pretty much the same direction and plane as the asteroid. So I actually have to dump velocity by doing clever things with my launch time and slingshotting around the Moon, as well as the brute force expenditure of propellant.

When I get in the vicinity of the asteroid, I have to dock with it—I say “dock” rather than “land” because the surface gravity is nearly nonexistent. Since it has a six-hour rotational period, I descend in a controlled spiral, so as not to skip across the surface like a stone across a pond.

This could all be done by a computer program. There is a reason I have to do so much of it manually. That is something else I know that I know, even though I can't remember it right now.

I look up from the illuminated instrument panel, currently the only source of light in the cockpit, to check my approach through the window. The asteroid looks different from previous simulations. There is also a real surprise: another spacecraft, which, as I stare at it, is descending to the opposite side of the asteroid. The simulation team has never pulled that on me before.

“...still getting high hibernadol readings from his breath.” Maria is talking to someone in the trailer, apparently unaware that the mike is still on. “His body metabolized it more slowly than Doc Samuels predicted. Heart beat suggests he's conscious, though he hasn't responded to me yet.”

I lick my lips to say something when an alarm goes off. Between watching the mystery spacecraft and listening to Maria, I have allowed the Wildcat to drift from the descent path. I feather the main engine to slow the rate of approach. The vibration is enough to shake loose the Saint Christopher medal Maria stuck on my instrument panel. It slams itself to the deck between my knees and then, as the engine cuts off, lazily bounces up, twinkling in the instrument lights as it spins.

Free fall! This isn't a simulation. This is the real thing. If I screw up, Wildcat and myself may smash ourselves into space debris. The beanstalk may never be built. Leastwise, not by my people.

“Whoa! Big pulse rate jump.” J. P. Fetterman's deep voice has more spontaneous emotion than I have ever heard before. “You okay, son?”

I suck on the water tube inserted on the left side of my mouth. This time I get some words out. “A little busy just now minding your investment, J. P. Chat later.”

Lightly, lightly, I touch the engine two more times until all lateral movement ceases and the rate of approach has slowed to less than a meter per second. There is a dull thump as landing struts swing out from the side of the craft.

When we make contact, I hardly notice it except for being pressed into my seat for an instant. Safety straps keep me from bouncing up a second later. The landing struts collapse part way into themselves to absorb the shock of contact. With surface gravity so low, the last thing we want is for the Wildcat to bounce all over the surface or even into orbit.

Everything settles down in the cockpit. When I see that the tell-tales are green, I zip on my pressure suit gloves and snap the helmet shut. It feels like two hands pressing on my ears as the suit pressurizes. Then I press the button to suck all the air out of the cabin.

“Not to push you or anything...” J. P. begins.

“...but we are on a timeline,” we say together. There is a five second pause as the signal bounces back and forth. “Right,” J. P. says in the tone that is as close as he gets to apologetic. “Take the time to do everything right.”

I unfold from the pilot’s seat. My whole body feels the way my hands did earlier. Numbness gives way to a dozen varieties of pain and other discomfort. Strategically placed electrodes have stimulated major muscle groups while I slept, but muscles have already begun to atrophy, and bones to lose calcium. I stand for the first time in more than three weeks, brace my feet against the deck, and twist open the overhead hatch. It swings open, carrying me up and out. Not wanting to catapult into orbit, I grab an exterior rung and then hand over hand down the side of the Wildcat until my feet touch the surface. I reach down and gather powdery regolith into the palm of my right glove.

On cue, the required legalese begins to scroll across my helmet display. “I, James Calley, pursuant to Article III, Section 5, of the Treaty on Principles Governing the Use and Exploitation of Near Earth Objects, do hereby assert right of ownership over 2009 AP15 for the Beanstalk Development Corporation.”

Just that easily, I assert J. P. Fetterman’s claim for a four-kilometer asteroid.

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“You know how to get ten billion dollars?” J. P. asked me, early in our relationship. “Well, you gotta start with a billion.” This was neither a wisecrack nor a Zen koan. It was a succinct statement of a basic principle: once you have your first million, or billion, the second comes a lot easier. Aristotle was just wrong. Money *does* breed, at least when you have enough of it.

Getting “enough” is the problem and is directly relevant to J. P.’s difficulty with constructing a space elevator. Once the elevator is built, anyone who uses it will be, in the words of Robert A. Heinlein, halfway to anywhere in the solar system. Space travel will become a money-making proposition as costs plummet. The problem is that this “technological tower of Babel” (as it has been termed by a certain televangelist) cannot be built from the ground up. It has to be let down from heaven. Even with scramjet launchers, lifting enough mass into geosynchronous orbit to make an elevator nearly thirty-six thousand kilometers long will take more than Bill Gates-type wealth.

With a space elevator, one could become unimaginably wealthy—only it takes nearly unimaginable wealth to build the elevator.

This was only an academic problem until three different laboratories came up with ways of spinning out 99.99 percent defect free buckytubes of arbitrary length. Now there was a material that could be braided into cables strong enough to support a space elevator. Bright people all over the world began to concentrate on how the construction could be made affordable.

Since they were so bright, many of them came up with the same solution. Why go to all the trouble and expense shipping mass up from Earth when the raw material was already up there, just floating by? Earth-crossing asteroids contained everything needed. All you had to do was find the right one, the sort that chips off carbonaceous chondrite meteors, nudge it a little bit to get it into high Earth orbit, and set up a factory.

Observations were refined, calculations performed, presentations made. It was still going to be capital intensive, but it would not be prohibitive. Multi-billionaires consolidated assets and prepared for a race. The space faring nations were too involved trying to salvage their social programs in the midst of a population implosion to be major players themselves. However, everyone agreed that the race needed rules. “We do not want near Earth space to resemble Dodge City,” the French ambassador observed.

There were consultations. Negotiations. Compromises. Finally, a set of protocols matured into a treaty that everyone could more or less live with.

I thought it all unnecessary, especially when I launched and everyone else was scheduled to be at least a week behind. Only now there are two of us here, so maybe I was wrong.

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The real work begins. Microgravity makes it hard, complicated, and boring. Suffice to say that after ten hours I have hauled an ion drive from Wildcat’s storage hold to the edge of a crater, embedded it in the slope, and turned it on. If our

astronomers are right, all rotation will stop in about six months. Then, when J. P.'s second set of wranglers come out here in the Cayuse, they will find it much easier to install their set of engines to nudge the asteroid into synchronous Earth orbit.

I make my way back to the Wildcat, pressurize the cabin, and strip off my space suit. Drops of sweat detach themselves from my forehead and hang in the air. I snag them with a towel, then wash myself as best I can with alcohol wipes. My hands tremble with fatigue. The work itself might not have been too strenuous for a man in good shape, but I have just come out of three weeks hibernation in microgravity. Weakened muscles are feeling the strain.

I sag into the pilot's seat. I am hungry in a distant way. I think I will do something about it after I close...

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"Sorry to wake you up, Jimbo, but you have another little job to do." There is a false heartiness to J. P.'s voice, and there is something else about it that isn't false exactly, but sounds definitely odd. I have completed the mission profile. There should be nothing more for me to do other than run some last minute checks before heading back to Earth.

"You have a neighbor a little more than two clicks over on the far side. I'd like you to pay a visit."

If I keep my eyes closed, maybe I can convince both of us that I am still asleep. "Not protocol," I croak.

This is the absolute truth. As the race was heating up, there appeared to be a real possibility that three contestants might have ships on 2009 AP15 at the same time. Given how much success would mean to the winner and how great the financial penalty of failure would be to the losers, it had been decided to minimize temptation to all parties by keeping them apart. Especially since the prospector had to return to Earth alive to perfect his claim. When that provision had been made part of the treaty, the idea had been to discourage heroic sacrifices on the part of countries and companies that did not really have space faring capability. The realization that this might provide an incentive to sabotage and even murder came later.

I am about to drift off again when J. P.'s response comes through. "Changed circumstances. Look around and give me a report."

There is something very serious about his voice. I imagine him fiddling with his string tie, the way he does when he gets nervous. General weakness reminds me that it is three weeks since I had anything to eat. I pull out a bulb of Nutrasoup and stick it in the microwave for a minute.

“Might help if you were to tell me what I’m looking for.” The microwave chimes. I take out the bulb and twist open the straw. Tasting slightly like a salty beef stew, Nutrasoup has all the proteins, vitamins, and electrolytes my body needs, while being digestible enough not to tie my abused intestinal system in knots.

“S’pose it might, but I can’t say. Sometimes you just have to hold your cards and hope for the flop.”

Now I am really concerned. J. P. may be a hard man, but he is not, by his own lights at least, an unreasonable one. He makes a point of explaining his view of the big picture so all his people will understand their place in it. For him to withhold information at a time like this goes against every business practice he believes in.

“I’m suiting up.” Since it hasn’t had time to dry out, it feels like putting on hockey gear that has been crammed into a too-small gym locker.

“Thanks, Jimbo. Maria is sending your directions now. A map will show you the easiest way to the landing site.”

Alert enough to know that I am not really alert, I go through all the suit checks slowly. I recharge my suit jets. I have already expended more air that way than the mission profile called for. Not dangerously low yet.

I exit the ship. When I touch the ground, the interior of my faceplate lights up with a map showing my entire route and an arrow showing my starting direction. It mimics three-dimensional perspective: when I am lined up correctly, the arrow disappears and becomes a blinking dot. I aim at a bump on the (disconcertingly close) horizon and touch my jets.

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When I was young, space seduced me through the silent majesty of the night sky. It was so beautiful and so mysterious that I could imagine nothing more worthwhile than exploring it. So I became a test pilot for one of the big aerospace conglomerates.

But a funny thing happened. It seemed like space retreated from me faster than I rose toward it. There was no silent majesty in the space station. It was one of the noisiest places I have ever been, even with the added sound baffles. When I was outside, there was constant radio noise, the sound of the helmet minifans, and my own Darth Vader-like breathing. The Sun washed out the stars, leaving only impenetrable blackness.

Now I am the first—well, maybe the second—human to explore this world, yet I feel apart from it. I can’t walk across it because anything like a normal stride would have me soaring in high, time-consuming arcs. I have to use my jets with

extreme caution to keep from flying off into deep space. Through my boots and thick gloves I cannot feel anything of this world, much less smell or taste it. The only sense that functions halfway decently is sight. And even then, it is more like seeing something through a view screen rather than experiencing it firsthand.

Alienated from my situation on an alien world. I should be able to get some sort of Ph.D. thesis out of that. But the truly alienating factor I keep coming back to is J. P. Fetterman's silence about what he wants from this little jaunt. My unidentified competitor and I arrived almost at the same time; radio logs back on Earth can establish actual priority. But perfecting a claim has three parts: you have to land on the asteroid; you have to "improve" it in some substantial way (killing its rotation constitutes such an improvement); and you have to get back alive. Unless a member of one expedition calls for aid from a member of a competing expedition (Article IV, Section 3, of the Treaty) it is best if members of competing expeditions stay far apart.

The map displayed on my helmet shows my destination is at one of the poles of the asteroid. 2009AP15 is roughly potato-shaped, and I am now coming to a section where the ground drops away more rapidly than on the plain where I landed. The Sun is behind me throwing forward tremendous shadows. Hills and ridges seem to float on a fathomless dark. As my boots brush the top of one ridge, I see something strange. It is some height above the ground, but I have nothing by which to judge size or distance. Imagine a horizontal silver line, brilliant with reflected sunlight. As I watch, it extends on both ends, adding about ten percent to its length.

The crest of another hill is fast approaching, and I concentrate on clearing it. When I can pay more attention to my surroundings, I see the pencil-thin shape of a spacecraft poking above the horizon. It sports a red disk on a white field. Below it, a large black numeral one, the symbol of the Ichiban Corporation. A Japanese rocket, which makes sense. After the Chinese entry, *Heavenly Gatherer*, blew up during a test firing, the Japanese were clearly our most important rivals. At the base of the rocket, barely visible in the reflected sunlight from its upper hull, lies a circular track about three meters in diameter. Rising up from the track, only intermittently discernable, are more than a score of lines, sheer and graceful as spider silk.

I don't know that I have said anything until I hear Maria's concerned voice in my earphones. "*Qué pasa, Calley?*"

It has taken me a few minutes to understand what I am seeing. "What we have here is industrial-strength origami," I report. "Ichiban has launched a solar sail, which is unfolding as it recedes from the asteroid. It is attached to the asteroid by lines anchored to a circular track. I bet the lines move around the circle against the asteroid's rotation to keep from getting tangled. As far as they are concerned, rotation is not a problem; they can start adjusting the orbit immediately. It's an elegant solution."

“We thought about doing the same thing,” J. P. says glumly. “We just didn’t feel we could get the sail to deploy properly. But that’s neither here nor there. Who is operating the sail?”

I drift slowly toward to the base of the rocket, nudging myself off to one side to keep from getting entangled in the sail lines. Something moves in the shadows.

“It’s a Gundam,” I say, laughing. Then I correct myself. “Excuse me, it is a robot about three meters tall that looks like the robots in some cartoons I used to watch.”

“Is it being operated by someone from Earth, or inside the ship?” J. P. asks.

Excellent question. While it is perfectly fine for an astronaut to have a robot on board for the grunt work—I would have appreciated having one myself—the rules were written specifically to prevent completely automated missions. Yet as I examine the spacecraft, I begin to appreciate how different it is from the Wildcat. No one is operating the robot from inside because, in one respect at least, the rocket has no inside. Engine and fuel tanks are exposed to space. Indentations in the fuselage and open binding rings disclose that all the items of the Ichiban expedition, solar sail and robot included, came fastened to the frame of the vessel. There is nothing like my pressurized cabin or anything that could be called enclosed storage areas.

I flex my legs to keep from bouncing as I come to the end of my long arc. The robot, which seems to have been monitoring the unfolding of the solar sail, turns and confronts me.

What do you say to a three-meter-tall robot, especially when the two of you are adversaries? I try the obvious. “*Kon nichi wa—*”

“You need not attempt the Japanese language.” The words seem overly loud in my earphones. “I am fully conversant in standard English.”

This is just as well. Even though everyone dealing in international affairs is supposed to know English, Chinese, and Japanese, I am more than a little rusty. “And who are you?” I ask, a bit taken aback.

“I am Hiro Ichiban. I have claimed 2009 AP15 for my principal, the Ichiban Corporation.”

You have to be shitting me. Since I am broadcasting in clear to all of Earth, I manage not to say what I am thinking. “Look, pal, the rules are clear. No robotic missions. Your claim is invalid.”

“I am not a mere robot. I am a fully autonomous artificial intelligence. I have been granted citizenship by the Japanese Diet.”

“They can vote in favor of phlogiston for all I care,” I say. “Legislative pronouncements don’t make it so.”

“You are talking to the robot as if it were a human being,” J. P. says. “That might be considered by some as evidence that you consider it to be a true person.”

“When I mash my thumb, I’ve been known to talk to my hammer,” I say. “That doesn’t make it either sentient or a citizen.” His chuckle comes through my earphones a few seconds later.

Suddenly, everything falls into place. All the competitors have found it difficult to juggle payload with life support requirements. J. P.’s engineers solved the problem by putting me into three weeks’ drug induced hibernation to save mass that would otherwise have been needed for food and water. Ichiban, which was having troubles with its proposed life support system anyway, apparently decided to do away with it, make everything payload, and have the Diet declare their robot a citizen.

Whether the legislative legerdemain will work is questionable, but one way to decide might be a version of the Turing Test. If I were to interact with the robot the way I would with a human being, it might give some presumptive validity to the Diet’s action. Had J. P. briefed me on the situation, any negative reaction on my part would have been interpreted as being motivated by company loyalty. J. P. bet that he knew me well enough to go with my instinctive reaction.

He has reason for his confidence. The Artificial Intelligence Equality movement scares me. Robot pets for people who don’t want the fuss of dealing with real animals, sex dolls for those not able to make themselves minimally acceptable to prospective partners, companions for the elderly who chose not to have children and now have no one to care for them. Workers for a society not able to maintain its own population and too racist to import foreigners. The AIE leaflets say that justice and equity require civil rights for A.I.s. My problem is not that they treat machines like people, it’s that so many of them seem to treat people like machines.

Yet even if Ichiban’s expedition violates the rules, it is still an impressive technical accomplishment. I move forward to examine the wheel anchoring the sail lines. A pressure just short of painful spreads from my right arm. I am motionless, less than a meter off the ground. It is hard to turn my head in the pressure suit, but from the corner of my eye I see Hiro’s metal hand clamped on my forearm.

“No one may approach the sail control mechanism,” Hiro says. “It is a safety concern.”

The pressure suit has a mesh lining to prevent tears. Still, the robot feels powerful enough to snap my arm while throwing me into deep space, if it wants to.

“What about programming to protect human beings?” I ask.

“I have such programming,” the robot says. “To implement, I must first recognize a human being.”

Its arm swings back and releases me. I retreat an extra step just to be safe. “My status is in doubt?”

“I see a humanoid form in a pressure suit. The suit covers too much for me to make a definitive assessment. It could conceal a primitive robot making programmed responses. Or it could cover up extensive body hair that would indicate one of the more primitive primates.”

So a collection of circuits with preprogrammed responses is a citizen but the hirsute are not human. How wonderfully Japanese! After three weeks without a shave and more than that since my last haircut, maybe it is just as well that the pressure suit covers as much of me as it does.

“Your status is provisionally human,” the robot continues. “My own status is not provisional. I must protect myself so that I may complete my mission.”

Translation: If it comes to a choice between you and me, Round Eyes, you’re going down. Not that surprising, I suppose.

I am about to ask J. P. if he has any further instructions, when Maria’s voice comes over my earphones. “James, get back to the Wildcat immediately! A solar storm warning has just been issued.”

There has always been a danger of solar flares. The Wildcat was designed to protect against them. Nobody ever considered that I would be this far from the spacecraft when I had to dive for cover.

I turn away from Hiro and the Ichiban rocket. The route back to the Wildcat flashes on the inside of my visor.

“How long do I have?”

“Thirty minutes. Hurry, *por favor*.”

Since I am retracing my steps, the return should be easier than the way out. Only the Sun is down near the horizon almost directly in my eyes. The glare makes it difficult to judge the height of the ridges. The thing that scares me most is that I will smash into a hillside. The second most scary thing is the possibility of jetting off into deep space. Sure, I could correct with a few puffs and send myself back down to the surface, but the amount of gas in my jet pack is limited, and the gauge is already

edging toward the red line.

I get back to the Wildcat with seven minutes to spare. I pressurize the cabin and twist out of my spacesuit. My water supply for this voyage is kept in a jacket surrounding the cabin, where it does double duty shielding me from high-energy particles. Obviously this cannot include the entry hatch. There is a rectangular lead shield recessed in the overhead. I grab the handle, pull it over beneath the hatch, and lock it in place. I am as protected as I can be. I drift back into the control couch.

The original schedule had me on my way home by now. I understand why J. P. wanted to record my reaction to a robot claiming sentience and citizenship, but on reflection it might have been better to have me complete the flight checks and head back. It is the first contestant who lands on 2009 AP15, improves it, and returns safely to Earth that perfects title in the asteroid. I am immobilized until the storm abates. Hiro may be long gone by then.

I discuss some of this with J. P. “The Hague isn’t going to take this claim of robot citizenship seriously, is it?”

The pause is longer than lightspeed delay can account for. “Well, I dunno,” J. P. says at last. “These Artificial Intelligence Activists are making a lot of noise, and not just in Japan. They got some bright folks saying this is the next step in evolution. And then there’s the fact some of those judges just don’t like us.” By “us” he means Americans in general. “We’ve been on top for too long, and some would just like to see us shoved aside for any reason. Thing is, Ichiban doesn’t have to win outright. They just have to tie up our claim with the lawyers and hope our investors bolt before theirs do.”

The solar storm intensifies, drowning out his remaining words in a chaos of clicks, snaps, and eerie whistles. I am on my own. I fix another cup of Nutrasoup and activate the games menu. I choose poker from the long list that scrolls down the screen. Texas Hold ‘Em. J. P. is the only one of the competitors to insist that his pilot candidates play a game with him during the hiring interview.

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“This has nothing to do with my talents as a test pilot,” I said as he shuffled and dealt.

“Not a test of skill,” J. P. said as he picked up his cards. “It’s a test of character. Y’see, you boys tend to go to extremes. Some are control freaks, absolutely brilliant, chess player types. Always planning five, ten moves ahead. Then something unexpected happens and they fall apart, crying that the universe is unfair.”

I looked at my cards and mucked my hand. J. P. gave a small smile, took the minuscule pot, and dealt again.

“Then there are the plungers, the ones who believe in their own luck and think they can bluff their way through life. They have the most charming smiles. But their luck has to fail only once and they’re done.

“I need a pilot who, with discipline and intelligence, tries to eliminate all the variables but doesn’t go to pieces when that fails.”

Of course, at the tables you have the option of standing up and bidding everyone good evening. Right now, that was an option I did not have.

This time, I had a pair of threes. I doubled the blind. J. P. doubled it back at me. That should mean he had at least a pair himself, almost certainly higher than mine. On the other hand, maybe he just wanted to push me around. I called.

The flop disclosed the Jack of spades, the nine of clubs, and the two of clubs. I checked. J. P. went all in. In a regular game, I would suppose that he had just picked up a card that made a strong hand nearly unbeatable. Nonetheless, it felt another attempt to scare me off. I pushed all my chips to the center of the table.

Ace of hearts, ten of hearts. J. P. threw down his cards: Queen of clubs and three of spades. A nothing hand. He looked more pleased than otherwise as I raked in the chips.

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An ace and king unsuited appear on the screen. High cards, but it is depressing to remember how many hands I have lost from a similar start. The program asks me if I want to bet. I close my eyes, considering. All around me, an invisible storm surges. The high-energy protons are like hail drumming on the shell of the spacecraft. Then I notice that some of them are getting through the shielding. They look like birdshot sifting through the cabin, tearing painlessly through my flesh.

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“Calley. Wake up, boy.”

My eyes are gummy. When I manage to pry them open, I see the ace and king still on the screen, waiting patiently for my decision. The time display indicates that I slept for nine hours.

“I’m awake, J. P.” I squint at the mini-kitchen control panel and punch up a bulb of hot coffee—as hot, that is, as I can have in the reduced air pressure of the cabin. Usually I take it with cream. This time, I leave it black.

“Right now there’s enough of a lull in the storm that you should be able to

complete your external take-off checks. However, the bright boys and girls at National Solar Observatory say it's going to start up again with a vengeance. I want you on the way home by then."

"No more assessment of Hiro Ichiban?" I suck the lukewarm coffee, waiting for his answer.

"No time. I've tried reasoning with Yoji—" This would be Yoji Ishikawa, the CEO of Ichiban. "—but he clammed up completely an hour ago. Y'know, his rocket landed at almost the same time yours did even though it launched three days later. They may not be able to put together a life support system worth a damn, but their craft clearly has more speed than ours. You take off just as soon as you safely can. If you get back before his ship does, we can avoid the entire folderol of whether a bunch of circuits can legitimately be claimed as a Japanese citizen."

I shrug on the spacesuit and exit the lock. It is night outside. Cold begins its caress of knees and elbows. The stars are hard and bright. High overhead is a blue-white dot, impossibly beautiful, impossibly far away. A bright rectangle of solar sail rises above the horizon. As much as Ichiban should not be able to perfect its claim, the Court will likely consider it unfair that Fetterman Enterprises should benefit from Ichiban's work. Most likely J. P. and Ishikawa will go into the electronic version of a closed room, large sums will change hands, and two smiling CEOs will announce a deal beneficial to the stock holders of both. J. P. is good at that sort of thing.

I switch on my helmet light and haul myself down the side of the Wildcat to begin my checks. Mostly this consists of making sure that the exterior compartments, the ones that housed the ion drive and its xenon propellant, are secured. I also inspect the rocket nozzles for corrosion, not that there is much I will be able to do if there are huge cracks.

As I move around the base of the Wildcat, sunlight sweeps across the plain behind me. The helmet fans purr to life a minute later. I am almost finished with my inspection when I find myself again in shadow.

"Calley, I just got a call from Mr. Ishikawa. He is very concerned about his mission and came close to accusing me of sabotage. Any idea what is going on with his spacecraft?"

I turn slowly. "I can't say about his spacecraft, but his robot is towering over me, no more than a meter from the Wildcat. You might ask your buddy Yoji what it's doing here. It's not exactly a comfortable sensation having it this close."

"Guh, guh, good..." The robot pauses. "Ohayo."

"Good morning," I agree. "What can I do for you?"

“There ... there was ... a storm.”

“A solar flare,” I say. “It kept me cooped up for most of a day. Protons do nasty things to human cells. Right now we’re in a lull. I am trying to finish my preflight checks before it strengthens again.”

If it is really that smart, it will make the inference that I wish to be left alone without my having to be blunt. Not that I believe in being polite to a machine, but my grandmother always said it was good practice no matter the audience.

“*Hai.*” It takes me a moment to realize that this is an affirmative response. “I have ... no shelter. The storm ... impairs my function.”

That should have occurred to me. Electronic circuits are in some ways as vulnerable to the effects of solar flares as I am.

“Are you saying the storm may kill you, end your functioning?”

“Yes. No. My function will ... degrade. I ... will no longer be ... I.”

For some, that would be a more frightening prospect than death. For the first time, I note dents on the metallic torso and dust on some of the joints. It has nothing like a jet pack. Learning to walk in microgravity has apparently been a difficult endeavor.

“I must protect myself so that I may complete my mission. You are sheltered from storm within your craft. Take me.”

It was able to stop me without visible effort. It has the size and mass to toss me aside if it wants. If it really does not consider me human, there is no reason for it to practice restraint.

“The hatch is too small for you. And even if you could pass through it, you could never fit into the cabin. When I have my spacesuit on, I can hardly turn around.” I think this is the truth, or pretty close to it.

“I did not mean the ... shell. I ... am ... *contained* ... in a central processing unit approximately seven centimeters by fifteen centimeters by three centimeters.” Hiro puts its hands together to help a metrically challenged American visualize the size.

Then it says something odd. “I recognized that you were human when you ... visited me. Pretending not to was a ... ruse to make you uncertain, to ensure respect.”

J. P.'s response to an earlier portion of the conversation reaches my earphones. "Under no circumstances are you to provide transportation to that can of circuits or to any part of it. If it threatens or harms you in any way I'll have Yoji's ass up on piracy charges."

Since we are all tuned to the same wavelength, I say: "You heard the boss. The answer is no. Sayonara, Hiro."

I turn to reenter the Wildcat. "*Kudasai, Sensei.*"

Please, Master! An attempt to arouse pity mixed with some subtle flattery. It would not take a very sophisticated program to come up with that approach. I certainly would not be very sophisticated if I allowed myself to be moved by it.

I have my foot on the bottom rung. Slowly, I place it back on the regolith as I turn to face the robot.

"Hiro, you say you are a human, a citizen of Japan. Obviously, I have a different opinion. However, if you are a legal human, you have a right to contract. Do you understand what a contract is?"

There is a perceptible pause. "It is not a term in my database."

"My boss, Mr. J. P. Fetterman, sets a great deal of store on the right to contract. He considers it a right more ancient and more basic than those enshrined in the American Constitution. In fact, he has even been known to trace it back to Abraham cutting covenants with the Lord. It would be no exaggeration to say that Mr. Fetterman considers the ability to enter into a binding contract to be a defining mark of humanity.

"Basically, the idea is that two humans can exchange promises that will be considered binding in a court of law. For example, if I owned a farm, I could promise to sell you my entire rice crop for this year for thirty million yen."

"*Wakarimasu ka?*" "*Tsukijanai.*" Hiro's handlers are discussing the situation and the conversation is leaking over their open line to the robot. I can't understand a word, but the tone of their voices tells me that they are unhappy.

"Does that explanation make sense to you?" I ask.

"*Hai.*"

"Good. Now, I have something you want: safety from the solar storm and transportation back to Earth. What do you have of value to exchange?"

"I have nothing." I do not believe that the conglomeration of circuits standing

before me is a person, is anything more than a sophisticated answering machine. Yet there is something about that answer so totally forlorn, so totally without hope, that I feel a chill.

“You’re wrong. You have something of great value, but you just don’t know it. As an employee of Ichiban, you have asserted a claim to this asteroid, which, if it is valid, matures into actual ownership if you return alive to Earth. If, however, you were to resign from Ichiban, accept employment with the Beanstalk Development Corporation, and assign any and all rights which may have accrued to you in 2009 AP15, I would in return convey you safely to Earth inside my own spacecraft and make every effort to have your central processing unit rehoused in an appropriate robotic body.”

“Hiro Ichiban, this is J. P. Fetterman, CEO of the Beanstalk Development Corporation. I want you to know that the man you are talking to, Mr. James Calley, is my agent for this matter and has full and complete authority to make offers of employment in my name under any terms he deems proper.”

He could only have heard the beginning of my explanation when he launched that statement, but intuiting where I was going, immediately decided to back my play.

“If I perform my part of the ... contract, how can I be sure ... you will do as you say?” Hiro asks.

The shouting of Hiro’s handlers crescendos, then is suddenly silent. “I have cut off that frequency,” the robot says. “It was ... distracting.”

“It is the nature of contracts that each party’s performance is conditioned on performance by the other party,” I say. “If you do as I ask, but I fail to take you to Earth as I have promised, then your transfer of the claim to this asteroid becomes void. It is in my interest to do exactly as I have promised.”

I measure the robot’s silence by my heartbeats.

“I resign from Ichiban Corporation and accept employment from the Beanstalk Development Corporation. I transfer any rights I may have in 2009 AP15 to Beanstalk Corporation in exchange for being protected from this solar storm, being carried back to Earth, and being fitted into a body like the one I presently operate.

“*Domo arigato, Sensei Calley,*” Hiro says. “Thank you very much.”

The robot seems to settle into itself. A panel in its chest slides aside. Ichiban at least put the central processing unit in the most protected part of the shell. I reach in and gently disengage the CPU. All I can feel through my gloves is its mass, which somehow makes me fear that it may be delicate, that I must handle it very carefully.

“James Calley, this is Yoji Ishikawa. Cease your interference with my employee. If you continue with your current actions, you will be charged with sabotage, destruction of property, and malicious interference with contract. You will not be allowed to corrupt and destroy Hiro Ichiban with your lies.”

“Too late, Mr. Ishikawa. The deal is done.” Ishikawa’s English is flawless, but there is something about the tone and phrasing that makes me think I am only a secondary audience. Much of this has been about influencing public opinion. I am willing to bet that right now both what he says and my replies are being broadcast all over the world. J. P.’s public affairs people will handle most of the response, but the boss undoubtedly expects me to carry part of the load.

“If you were concerned about your ‘employee,’ you would not have subjected it to conditions that would reduce it to the equivalent of drooling idiocy. I don’t think I have the essence of a sentient being in my hands. Even so, I will treat it with more care than you choose to give to your fellow citizens.”

High-sounding sentiments delivered with defiance and appropriate bluster. J. P. should be happy. I climb back into the Wildcat, secure the hatch, finish the instrument checks, and begin the launch sequence. Hiro’s CPU is in my lap, secured by the safety netting. Hibernadol courses through my veins, blurring my vision, setting my thoughts adrift.

He disobeyed his handlers. The thought keeps recurring. Even though my Japanese is deficient, I know enough to know that they were telling him to ignore me and go back to his own craft. Instead, he shut them off.

As a nation, the Japanese are far ahead of all others in robotics, and Ishikawa pays for the best of the best. They would not expect to impress the Hague judges with Abe Lincoln at Disneyland crap. It would have to be orders of magnitude more sophisticated.

They say the best researchers use current generation AI programs to fashion the next generation programs. So, in a real sense, even the best human scientist does not fully understand what he is creating. And into this, throw random mutations caused by a solar flare. Ninety-nine times out of a hundred any such change should be harmful. But maybe that one time, a threshold will be crossed.

I cradle the CPU in my arms and fall into a dream of my first day at school. I run after a new friend, and when he turns to face me, his silver skin shines with the brilliance of the Sun.