

## INCARNATION DAY, by Walter Jon Williams

It's your understanding and wisdom that makes me want to talk to you, Doctor Sam. About how Fritz met the Blue Lady, and what happened with Janis, and why her mother decided to kill her, and what became of all that. I need to get it sorted out, and for that I need a real friend. Which is you.

Janis is always making fun of me because I talk to an imaginary person. She makes even more fun of me because my imaginary friend is an English guy who died hundreds of years ago.

"You're wrong," I pointed out to her, "Doctor Samuel Johnson was a real person, so he's not imaginary. It's just my *conversations* with him that are imaginary."

I don't think Janis understands the distinction I'm trying to make.

But I know that *you* understand, Doctor Sam. You've understood me ever since we met in that Age of Reason class, and I realized that you not only said and did things that made you immortal, but that you said and did them while you were hanging around in taverns with actors and poets.

Which is about the perfect life, if you ask me.

In my opinion Janis could do with a Doctor Sam to talk to. She might be a lot less frustrated as an individual.

I mean, when I am totally stressed trying to comprehend the equations for electron paramagnetic resonance or something, so I just can't stand cramming another ounce of knowledge into my brain, I can always imagine my doctor Sam—a big fat man (though I think the word they used back then was "corpulent")—a fat man with a silly wig on his head, who makes a magnificent gesture with one hand and says, with perfect wisdom and gravity, *All intellectual improvement, Miss Alison, arises from leisure.*

Who could put it better than that? Who else could be as sensible and wise? Who could understand me as well?

Certainly nobody *I* know.

(And have I mentioned how much I like the way you call me *Miss Alison*?)

We might as well begin with Fahd's Incarnation Day on Titan. It was the first incarnation among the Cadre of Glorious Destiny, so of course we were all present.

The celebration had been carefully planned to showcase the delights of Saturn's largest moon. First we were to be downloaded onto *Cassini Ranger*, the ship parked in Saturn orbit to service all the settlements on the various moons. Then we would be packed into individual descent pods and dropped into Titan's thick atmosphere. We'd be able to stunt through the air, dodging in and out of methane clouds as we chased each other across Titan's cloudy, photochemical sky. After that would be skiing on the Tomasko glacier, Fahd's dinner, and then skating on frozen methane ice.

We would all be wearing bodies suitable for Titan's low gravity and high-pressure atmosphere—sturdy, low to the ground, and furry, with six legs and a domelike head stuck onto the front between a pair of arms.

But my body would be one borrowed for the occasion, a body the resort kept for tourists. For Fahd it would be different. He would spend the next five or six years in orbit around Saturn, after which he would have the opportunity to move on to something else.

The six-legged body he inhabited would be his own, his first. He would be incarnated—a legal adult, and

legally human despite his six legs and furry body. He would have his own money and possessions, a job, and a full set of human rights.

Unlike the rest of us.

After the dinner, where Fahd would be formally invested with adulthood and his citizenship, we would all go out for skating on the methane lake below the glacier. Then we'd be uploaded and head for home.

All of us but Fahd, who would begin his new life. The Cadre of Glorious Destiny would have given its first member to interplanetary civilization.

I envied Fahd his incarnation—his furry six-legged body, his independence, and even his job, which wasn't all that stellar if you ask me. After fourteen years of being a bunch of electrons buzzing around in a quantum matrix, I wanted a real life even if it meant having twelve dozen legs.

I suppose I should explain, because you were born in an era when electricity came from kites, that at the time of Fahd's Incarnation Day party I was not exactly a human being. Not legally, and especially not physically.

Back in the old days—back when people were establishing the first settlements beyond Mars, in the asteroid belt and on the moons of Jupiter and then Saturn—resources were scarce. Basics such as water and air had to be shipped in from other places, and that was very expensive. And of course the environment was extremely hazardous—the death rate in those early years was phenomenal.

It's lucky that people are basically stupid, otherwise no one would have gone.

Yet the settlements had to grow. They had to achieve self-sufficiency from the home worlds of Earth and Luna and Mars, which sooner or later were going to get tired of shipping resources to them, not to mention shipping replacements for all the people who died in stupid accidents. And a part of independence involved establishing growing, or at least stable, populations, and that meant having children.

But children suck up a lot of resources, which like I said were scarce. So the early settlers had to make do with virtual children.

It was probably hard in the beginning. If you were a parent you had to put on a headset and gloves and a body suit in order to cuddle your infant, whose objective existence consisted of about a skazillion lines of computer code anyway ... well, let's just say you had to want that kid *really badly*.

Especially since you couldn't touch him in the flesh till he was grown up, when he would be downloaded into a body grown in a vat just for him. The theory being that there was no point in having anyone on your settlement who couldn't contribute to the economy and help pay for those scarce resources, so you'd only incarnate your offspring when he was already grown up and could get a job and help to pay for all that oxygen.

You might figure from this that it was a hard life, out there on the frontier.

Now it's a lot easier. People can move in and out of virtual worlds with nothing more than a click of a mental switch. You get detailed sensory input through various nanoscale computers implanted in your brain, so you don't have to put on oven mitts to feel your kid. You can dandle your offspring, and play with him, and teach him to talk, and feed him even. Life in the virtual realms claims to be 100% realistic, though in my opinion it's more like 95%, and only in the realms that *intend* to mimic reality, since some of them don't.

Certain elements of reality were left out, and there are advantages—at least if you're a parent. No drool, no messy diapers, no vomit. When the child trips and falls down, he'll feel pain—you *do* want to teach him not to fall down, or to bang his head on things—but on the other hand there won't be any concussions or broken bones. There won't be any fatal accidents involving fuel spills or vacuum.

There are other accidents that the parents have made certain we won't have to deal with. Accidental pregnancy, accidental drunkenness, accidental drug use.

Accidental gambling. Accidental vandalism. Accidental suicide. Accidentally acquiring someone else's property. Accidentally stealing someone's extra-vehicular unit and going for a joy ride among the asteroids.

Accidentally having fun. Because believe me, the way the adults arrange it here, all the fun is *planned ahead of time*.

Yep, Doctor Sam, life is pretty good if you're a grownup. Your kids are healthy and smart and extremely well educated. They live in a safe, organized world filled with exciting educational opportunities, healthy team sports, family entertainment, and games that reward group effort, cooperation, and good citizenship.

It all makes me want to puke. If I *could* puke, that is, because I can't. (Did I mention there was no accidental bulimia, either?)

Thy body is all vice, Miss Alison, and thy mind all virtue.

Exactly, Doctor Sam. And it's the vice I'm hoping to find out about. Once I get a body, that is.

We knew that we weren't going to enjoy much vice on Fahd's Incarnation Day, but still everyone in the Cadre of Glorious Destiny was excited, and maybe a little jealous, about his finally getting to be an adult, and incarnating into the real world and having some real world fun for a change. Never mind that he'd got stuck in a dismal job as an electrical engineer on a frozen moon.

All jobs are pretty dismal from what I can tell, so he isn't any worse off than anyone else really.

For days before the party I had been sort of avoiding Fritz. Since we're electronic we can avoid each other easily, simply by not letting yourself be visible to the other person, and not answering any queries he sends to you, but I didn't want to be rude.

Fritz was cadre, after all.

So I tried to make sure I was too busy to deal with Fritz—too busy at school, or with my job for Dane, or working with one of the other cadre members on a project. But a few hours before our departure for Titan, when I was in a conference room with Bartolomeo and Parminder working on an assignment for our Artificial Intelligence class, Fritz knocked on our door, and Bartolomeo granted him access before Parminder and I could signal him not to.

So in comes Fritz. Since we're electronic we can appear to one another as whatever we like, for instance Mary Queen of Scots or a bunch of snowflakes or even *you*, Doctor Sam. We all experiment with what we look like. Right now I mostly use an avatar of a sort-of Picasso woman—he used to distort people in his paintings so that you had a kind of 360-degree view of them, or parts of them, and I think that's kind of interesting, because my whole aspect changes depending on what angle of me you're viewing.

For an avatar Fritz's used the image of a second-rate action star named Norman Isfahan. Who looks okay, at least if you can forget his lame videos, except that Fritz added an individual touch in the form of a balloon-shaped red hat. Which he thought made him look cool, but which only seemed ludicrous and a

little sad.

Fritz stared at me for a moment, with a big goofy grin on his face, and Parminder sends me a little private electronic note of sympathy. In the last few months Fritz has become my pet, and he followed me around whenever he gets the chance. Sometimes he'd be with me for hours without saying a word, sometimes he'd talk the entire time and not let me get a single word in.

I did my best with him, but I had a life to lead, too. And friends. And family. And I didn't want this person with me every minute, because even though I was sorry for him he was also very frustrating to be around.

Friendship is not always the sequel of obligation.

Alas, Doctor J., too true.

Fritz was the one member of our cadre who came out, well, wrong. They build us—us software—by reasoning backwards from reality, from our parents' DNA. They find a good mix of our parents' genes, and that implies certain things about *us*, and the sociologists get their say about what sort of person might be needful in the next generation, and everything's thrown together by a really smart artificial intelligence, and in the end you get a virtual child.

But sometimes despite all the intelligence of everyone and everything involved, mistakes are made. Fritz was one of these. He wasn't stupid exactly—he was as smart as anyone—but his mental reflexes just weren't in the right plane. When he was very young he would spend hours without talking or interacting with any of us. Fritz's parents, Jack and Hans, were both software engineers, and they were convinced the problem was fixable. So they complained and they or the AIs or somebody came up with a software patch, one that was supposed to fix his problem—and suddenly Fritz was active and angry, and he'd get into fights with people and sometimes he'd just scream for no reason at all and go on screaming for hours.

So Hans and Jack went to work with the code again, and there was a new software patch, and now Fritz was stealing things, except you can't really steal anything in sims, because the owner can find any virtual object just by sending it a little electronic ping.

That ended with Fritz getting fixed yet *again*, and this went on for years. So while it was true that none of us were exactly a person, Fritz was less a person than any of us.

We all did our best to help. We were cadre, after all, and cadres look after their own. But there was a limit to what any of us could do. We heard about unanticipated feedback loops and subsystem crashes and weird quantum transfers leading to fugue states. I think that the experts had no real idea what was going on. Neither did we.

There was a lot of question as to what would happen when Fritz incarnated. If his problems were all software glitches, would they disappear once he was meat and no longer software? Or would they short-circuit his brain?

A check on the histories of those with similar problems did not produce encouraging answers to these questions.

And then Fritz became *my* problem because he got really attached to me, and he followed me around.

"Hi, Alison," he said.

"Hi, Fritz."

I tried to look very busy with what I was doing, which is difficult to do if you're being Picasso Woman and rather abstract-looking to begin with.

"We're going to Titan in a little while," Fritz said.

"Uh-huh," I said.

"Would you like to play the shadowing game with me?" he asked.

Right then I was glad I was Picasso Woman and not incarnated, because I knew that if I had a real body I'd be blushing.

"Sure," I said. "If our capsules are anywhere near each other when we hit the atmosphere. We might be separated, though."

"I've been practicing in the simulations," Fritz said. "And I'm getting pretty good at the shadowing game."

"Fritz," Parminder said. "We're working on our AI project now, okay? Can we talk to you later, on Titan?"

"Sure."

And I sent a note of gratitude to Parminder, who was in on the scheme with me and Janis, and who knew that Fritz couldn't be a part of it.

Shortly thereafter my electronic being was transmitted from Ceres by high-powered communications lasers and downloaded into an actual body, even if it was a body that had six legs and that didn't belong to me. The body was already in its vacuum suit, which was packed into the descent capsule—I mean nobody wanted us floating around in the *Cassini Ranger* in zero gravity in bodies we weren't used to—so there wasn't a lot I could do for entertainment.

Which was fine. It was the first time I'd been in a body, and I was absorbed in trying to work out all the little differences between reality and the sims I'd grown up in.

In reality, I thought, things seem a little quieter. In simulations there are always things competing for your attention, but right now there was nothing to do but listen to myself breathe.

And then there was a bang and a big shove, easily absorbed by foam padding, and I was launched into space, aimed at the orange ball that was Titan, and behind it the giant pale sphere of Saturn.

The view was sort of disappointing. Normally you see Saturn as an image with the colors electronically altered so as to heighten the subtle differences in detail. The reality of Saturn was more of a pasty blob, with faint brown stripes and a little red jagged scrawl of a storm in the southern hemisphere.

Unfortunately I couldn't get a very good view of the rings, because they were edge-on, like a straight silver knife-slash right across a painted canvas.

Besides Titan I could see at least a couple dozen moons. I could recognize Dione and Rhea, and Enceladus because it was so bright. Iapetus was obvious because it was half light and half dark. There were a lot of tiny lights that could have been Atlas or Pan or Prometheus or Pandora or maybe a score of others.

I didn't have enough time to puzzle out the identity of the other moons, because Titan kept getting bigger and bigger. It was a dull orange color, except on the very edge where the haze scatters blue light. Other

than that arc of blue, Titan is orange the same way Mars is red, which is to say that it's orange all the way down, and when you get to the bottom there's still more orange.

It seemed like a pretty boring place for Fahd to spend his first years of adulthood.

I realized that if I were doing this trip in a sim, I'd fast-forward through this part. It would be just my luck if all reality turned out to be this dull.

Things livened up in a hurry when the capsule hit the atmosphere. There was a lot of noise, and the capsule rattled and jounced, and bright flames of ionizing radiation shot up past the view port. I could feel my heart speeding up, and my breath going fast. It was *my* body that was being bounced around, with *my* nerve impulses running along *my* spine. *This* was much more interesting. *This* was the difference between reality and a sim, even though I couldn't explain exactly what the difference was.

It is the distinction, Miss Alison, between the undomesticated awe which one might feel at the sight of a noble wild prospect discovered in nature; and that which is produced by a vain tragedian on the stage, puffing and blowing in a transport of dismal fury as he tries to describe the same vision.

Thank you, Doctor Sam.

We that live to please must please to live.

I could see nothing but fire for a while, and then there was a jolt and a *CrashBang* as the braking chute deployed, and I was left swaying frantically in the sudden silence, my heart beating fast as high-atmosphere winds fought for possession of the capsule. Far above I could just see the ionized streaks of some of the other cadre members heading my way.

It was then, after all I could see was the orange fog, that I remembered that I'd been so overwhelmed by the awe of what I'd been seeing that I forgot to *observe*. So I began to kick myself over that.

It isn't enough to stare when you want to be a visual artist, which is what I want more than anything. A noble wild prospect (as you'd call it, Doctor Sam) isn't simply a gorgeous scene, it's also a series of technical problems. Ratios, colors, textures. Media. Ideas. Frames. *Decisions*. I hadn't thought about any of that when I had the chance, and now it was too late.

I decided to start paying better attention, but there was nothing happening outside but acetylene sleet cooking off the hot exterior of the capsule. I checked my tracking display and my onboard map of Titan's surface. So I was prepared when a private message came from Janis.

"Alison. You ready to roll?"

"Sure. You bet."

"This is going to be *brilliant*."

I hoped so. But somewhere in my mind I kept hearing Doctor Sam's voice:

Remember that all tricks are either knavish or childish.

The trick I played on Fritz was both.

I had been doing some outside work for Dane, who was a communications tech, because outside work paid in real money, not the Citizenship Points we get paid in the sims. And Dane let me do some of the work on Fahd's Incarnation Day, so I was able to arrange which capsules everyone was going to be put

into.

I put Fritz into the last capsule to be fired at Titan. And those of us involved in Janis' scheme—Janis, Parminder, Andy, and I—were fired first.

This basically meant that we were going to be on Titan five or six minutes ahead of Fritz, which meant it was unlikely that he'd be able to catch up to us. He would be someone else's problem for a while.

I promised myself that I'd be extra nice to him later, but it didn't stop me from feeling knavish and childish.

After we crashed into Titan's atmosphere, and after a certain amount of spinning and swaying we came to a break in the cloud, and I could finally look down at Titan's broken surface. Stark mountains, drifts of methane snow, shiny orange ethane lakes, the occasional crater. In the far distance, in the valley between a pair of lumpy mountains, was the smooth toboggan slide of the Tomasko Glacier. And over to one side, on a plateau, were the blinking lights that marked our landing area.

And directly below was an ethane cloud, into which the capsule soon vanished. It was there that the chute let go, and there was a stomach-lurching drop before the airfoils deployed. I was not used to having my stomach lurch—recall if you will my earlier remarks on puking—so it was a few seconds before I was able to recover and take control of what was now a large and agile glider.

No, I hadn't piloted a glider before. But I'd spent the last several weeks working with simulations, and the technology was fail-safed anyway. Both I and the onboard computer would have to screw up royally before I could damage myself or anyone else. I took command of the pod and headed for Janis' secret rendezvous.

There are various sorts of games you can play with the pods as they're dropping through the atmosphere. You can stack your airfoils in appealing and intricate formations. (I think this one's really stupid if you're trying to do it in the middle of thick clouds.) There's the game called "shadowing," the one that Fritz wanted to play with me, where you try to get right on top of another pod, above the airfoils where they can't see you, and you have to match every maneuver of the pod that's below you, which is both trying to evade you and to maneuver so as to get above you. There are races, where you try to reach some theoretical point in the sky ahead of the other person. And there's just swooping and dashing around the sky, which is probably as fun as anything.

But Janis had other plans. And Parminder and Andy and I, who were Janis' usual companions in her adventures, had elected to be a part of her scheme, as was our wont. (Do you like my use of the word "wont," Doctor Sam?) And a couple other members of the cadre, Mei and Bartolomeo, joined our group without knowing our secret purpose.

We disguised our plan as a game of shadowing, which I turned out to be very good at. It's not simply a game of flying, it's a game of spacial relationships, and that's what visual artists have to be good at understanding. I spent more time on top of one or more of the players than anyone else.

Though perhaps the others weren't concentrating on the game. Because although we were performing the intricate spiraling maneuvers of shadowing as a part of our cover, we were also paying very close attention to the way the winds were blowing at different altitudes—we had cloud-penetrating lasers for that, in addition a constant meteorological data from the ground—and we were using available winds as well as our maneuvers to slowly edge away from our assigned landing field, and toward our destined target.

I kept expecting to hear from Fritz, wanting to join our game. But I didn't. I supposed he had found his

fun somewhere else.

All the while we were stunting around Janis was sending us course and altitude corrections, and thanks to her navigation we caught the edge of a low pressure area that boosted us toward our objective at nearly two hundred kilometers per hour. It was then that Mei swung her capsule around and began a descent toward the landing field.

"I just got the warning that we're on the edge of our flight zone," she reported.

"Roger," I said.

"Yeah," said Janis. "We know."

Mei swooped away, followed by Bartolomeo. The rest of us continued soaring along in the furious wind. We made little pretense by this point that we were still playing shadow, but instead tried for distance.

Ground Control on the landing area took longer to try to contact us than we'd expected.

"Capsules six, twenty-one, thirty," said a ground controller. She had one of those smooth, controlled voices that people use when trying to coax small children away from the candy and toward the spinach.

"You have exceeded the safe range from the landing zone. Turn at once to follow the landing beacon."

I waited for Janis to answer.

"It's easier to reach Tomasko from where we are," she said. "We'll just head for the glacier and meet the rest of you there."

"The flight plan prescribes a landing on Lake Southwood," the voice said. "Please lock on the landing beacon at once and engage your autopilots."

Janis' voice rose with impatience. "Check the flight plan I'm sending you! It's easier and quicker to reach Tomasko! We've got a wind shoving us along at a hundred eighty clicks!"

There was another two or three minutes of silence. When the voice came back, it was grudging.

"Permission granted to change flight plan."

I sagged with relief in my vac suit, because now I was spared a moral crisis. We had all sworn that we'd follow Janis' flight plan whether or not we got permission from Ground Control, but that didn't necessarily mean that we would have. Janis would have gone, of course, but I for one might have had second thoughts. I would have had an excuse if Fritz had been along, because I could have taken him to the assigned landing field—we didn't want him with us, because he might not have been able to handle the landing if it wasn't on an absolutely flat area.

I'd like to think I would have followed Janis, though. It isn't as if I hadn't before.

And honestly, that was about it. If this had been one of the adult-approved video dramas we grew up watching, something would have gone terribly wrong and there would have been a horrible crash. Parminder would have died, and Andy and I would have been trapped in a crevasse or buried under tons of methane ice, and Janis would have had to go to incredible, heroic efforts in order to rescue us. At the end Janis would have Learned an Important Life Lesson, about how following the Guidance of our Wise, Experienced Elders is preferable to staging wild, disobedient stunts.

By comparison what actually happened was fairly uneventful. We let the front push us along till we were



nearly at the glacier, and then we dove down into calmer weather. We spiraled to a soft landing in clean snow at the top of Tomasko Glader. The airfoils neatly folded themselves, atmospheric pressure inside the capsules equalized with that of the moon, and the hatches opened so we could walk in our vac suits onto the top of Titan.

I was flushed with joy. I had never set an actual foot on an actual world before, and as I bounded in sheer delight through the snow I rejoiced in all the little details I felt all around me.

The crunch of the frozen methane under my boots. The way the wind picked up long streamers of snow that made little spattering noises when they hit my windscreen. The suit heaters that failed to heat my body evenly, so that some parts were cool and others uncomfortably warm.

None of it had the immediacy of the simulations, but I didn't remember this level of detail either. Even the polyamide scent of the suit seals was sharper than the generic stuffy suit smell they put in the sim.

This was all real, and it was wonderful, and even if my body was borrowed I was already having the best time I'd ever had in my life.

I scuttled over to Janis on my six legs and crashed into her with affectionate joy. (Hugging wasn't easy with the vac suits on.) Then Parminder ran over and crashed into her from the other side.

"We're finally out of Plato's Cave!" she said, which is the sort of obscure reference you always get out of Parminder. (I looked it up, though, and she had a good point.)

The outfitters at the top of the glacier hadn't been expecting us for some time, so we had some free time to indulge in a snowball fight. I suppose snowball fights aren't that exciting if you're wearing full-body pressure suits, but this was the first real snowball fight any of us had ever had, so it was fun on that account anyway.

By the time we got our skis on, the shuttle holding the rest of the cadre and their pods was just arriving. We could see them looking at us from the yellow windows of the shuttle, and we just gave them a wave and zoomed off down the glacier, along with a grownup who decided to accompany us in case we tried anything else that wasn't in the regulation playbook.

Skiing isn't a terribly hazardous sport if you've got six legs on a body slung low to the ground. The skis are short, not much longer than skates, so they don't get tangled; and it's really hard to fall over—the worst that happens is that you go into a spin that might take some time to get out of. And we'd all been practicing on the simulators and nothing bad happened.

The most interesting part was the jumps that had been molded at intervals onto the glacier. Titan's low gravity meant that when you went off a jump, you went very high and you stayed in the air for a long time. And Titan's heavy atmosphere meant that if you spread your limbs apart like a skydiver, you could catch enough of that thick air almost to hover, particularly if the wind was cooperating and blowing uphill. That was wild and thrilling, hanging in the air with the wind whistling around the joints of your suit, the glossy orange snow coming up to meet you, and the sound of your own joyful whoops echoing in your ears.

I am a great friend to public amusements, because they keep people from vice.

Well. Maybe. We'll see.

The best part of the skiing was that this time I didn't get so carried away that I'd forgot to *observe*. I thought about ways to render the dull orange sheen of the glacier, the wild scrawls made in the snow by six skis spinning out of control beneath a single squat body, the little crusty waves on the surface

generated by the constant wind.

Neither the glacier nor the lake is always solid. Sometimes Titan generates a warm front that liquifies the topmost layer of the glacier, and the liquid methane pours down the mountain to form the lake. When that happens, the modular resort breaks apart and creeps away on its treads. But sooner or later everything freezes over again, and the resort returns.

We were able to ski through a broad orange glassy chute right onto the lake, and from there we could see the lights of the resort in the distance. We skied into a big ballooning pressurized hangar made out of some kind of durable fabric, where the crew removed our pressure suits and gave us little felt booties to wear. I'd had an exhilarating time, but hours had passed and I was tired. The Incarnation Day banquet was just what I needed.

Babbling and laughing, we clustered around the snack tables, tasting a good many things I'd never got in a simulation. (They make us eat in the sims, to get us used to the idea so we don't accidentally starve ourselves once we're incarnated, and to teach us table manners, but the tastes tend to be a bit monotonous.)

"Great stuff!" Janis said, gobbling some kind of crunchy vat-grown treat that I'd sampled earlier and found disgusting. She held the bowl out to the rest of us. "Try this! You'll like it!"

I declined.

"Well," Janis said, "If you're afraid of new things..."

That was Janis for you—she insisted on sharing her existence with everyone around her, and got angry if you didn't find her life as exciting as she did.

About that time Andy and Parminder began to gag on the stuff Janis had made them eat, and Janis laughed again.

The other members of the cadre trailed in about an hour later, and the feast proper began. I looked around the long table—the forty-odd members of the Cadre of Glorious Destiny, all with their little heads on their furry multipede bodies, all crowded around the table cramming in the first real food they've tasted in their lives. In the old days, this would have been a scene from some kind of horror movie. Now it's just a slice of posthumanity, Earth's descendants partying on some frozen rock far from home.

But since all but Fahd were in borrowed bodies I'd never seen before, I couldn't tell one from the other. I had to ping a query off their implant communications units just to find out who I was talking to.

Fahd sat at the place of honor at the head of the table. The hair on his furry body was ash-blond, and he had a sort of widow's peak that gave his head a kind of geometrical look.

I liked Fahd. He was the one I had sex with, that time that Janis persuaded me to steal a sex sim from Dane, the guy I do outside programming for. (I should point out, Doctor Sam, that our simulated bodies have all the appropriate organs, it's just that the adults have made sure we can't actually use them for sex.)

I think there was something wrong with the simulation. What Fahd and I did wasn't wonderful, it wasn't ecstatic, it was just ... strange. After a while we gave up and found something else to do.

Janis, of course, insisted she'd had a glorious time. She was our leader, and everything she did had to be totally fabulous. It was just like that horrid vat-grown snack food product she'd tried—not only was it the best food she'd ever tasted, it was the best food *ever*, and we all had to share it with her.

I hope Janis actually *did* enjoy the sex sim, because she was the one caught with the program in her buffer—and after I *told* her to erase it. Sometimes I think she just wants to be found out.

During dinner those whose parents permitted it were allowed two measured doses of liquor to toast Fahd—something called Ring Ice, brewed locally. I think it gave my esophagus blisters.

After the Ring Ice things got louder and more lively. There was a lot more noise and hilarity when the resort crew discovered that several of the cadre had slipped off to a back room to find out what sex was like, now they had real bodies. It was when I was laughing over this that I looked at Janis and saw that she was quiet, her body motionless. She's normally louder and more demonstrative than anyone else, so I knew something was badly wrong. I sent her a private query through my implant. She sent a single-word reply.

*Mom...*

I sent her a glyph of sympathy while I wondered how had Janis' mom had found out about our little adventure so quickly. There was barely time for a lightspeed signal to bounce to Ceres and back.

Ground Control must have really been annoyed. Or maybe she and Janis' mom were Constant Soldiers in the Five Principles Movement and were busy spying on everyone else—all for the greater good, of course.

Whatever the message was, Janis bounced back pretty quickly. Next thing I knew she was sidling up to me saying, "Look, you can loan me your vac suit, right?"

Something about the glint in her huge platter eyes made me cautious.

"Why would I want to do that?" I asked.

"Mom says I'm grounded. I'm not allowed to go skating with the rest of you. But nobody can tell these bodies apart—I figured if we switched places we could show her who's boss."

"And leave me stuck here by myself?"

"You'll be with the waiters—and some of them are kinda cute, if you like them hairy." Her tone turned serious. "It's solidarity time, Alison. We can't let Mom win this one."

I thought about it for a moment, then said, "Maybe you'd better ask someone else."

Anger flashed in her huge eyes. "I knew you'd say that! You've always been afraid to stand up to the growups!"

"Janis," I sighed. "Think about it. Do you think your mom was the only one that got a signal from Ground Control? My parents are going to be looking into the records of this event *very closely*. So I think you should talk someone else into your scheme—and not Parminder or Andy, either."

Her whole hairy body sulked. I almost laughed.

"I guess you're right," she conceded.

"You know your mom is going to give you a big lecture when we get back."

"Oh yeah. I'm sure she's writing her speech right now, making sure she doesn't miss a single point."

"Maybe you'd better let me eavesdrop," I said. "Make sure you don't lose your cool."

She looked even more sulky. "Maybe you'd better."

We do this because we're cadre. Back in the old days, when the first poor kids were being raised in virtual, a lot of them cracked up once they got incarnated. They went crazy, or developed a lot of weird obsessions, or tried to kill themselves, or turned out to have a kind of autism where they could only relate to things through a computer interface.

So now parents don't raise their children by themselves. Most kids still have two parents, because it takes two to pay the citizenship points and taxes it takes to raise a kid, and sometimes if there aren't enough points to go around there are three parents, or four or five. Once the points are paid the poor moms and dads have to wait until there are enough applicants to fill a cadre. A whole bunch of virtual children are raised in one group, sharing their upbringing with their parents and creche staff. Older cadres often join their juniors and take part in their education, also.

The main point of the cadre is for us all to keep an eye on each other. Nobody's allowed to withdraw into their own little world. If anyone shows sign of going around the bend, we unite in our efforts to retrieve them.

Our parents created the little hell that we live in. It's our job to help each other survive it.

A person used to vicissitudes is not easily dejected.

Certainly Janis isn't, though despite cadre solidarity she never managed to talk anyone else into changing places with her. I felt only moderately sorry for her—she'd already had her triumph, after all—and I forgot all about her problems once I got back into my pressure suit and out onto the ice.

Skating isn't as thrilling as skiing, I suppose, but we still had fun. Playing crack-the-whip in the light gravity, the person on the end of the line could be fired a couple kilometers over the smooth methane ice.

After which it was time to return to the resort. We all showered while the resort crew cleaned and did maintenance on our suits, and then we got back in the suits so that the next set of tourists would find their rental bodies already armored up and ready for sport.

We popped open our helmets so that the scanners could be put on our heads. Quantum superconducting devices tickled our brain cells and recovered everything they found, and then our brains—our essences—were dumped into a buffer, then fired by communication laser back to Ceres and the sim in which we all lived.

The simulation seemed inadequate compared to the reality of Titan. But I didn't have time to work out the degree of difference, because I had to save Janis' butt.

That's us. That's the cadre. All for one and one for all.

And besides, Janis has been my best friend for practically ever.

Anna-Lee, Janis' mom, was of course waiting for her, sitting in the little common room outside Janis' bedroom. (Did I mention that we sleep, Doctor Sam? We don't sleep as long as incarnated people do, just a few hours, but our parents want us to get used to the idea so that when we're incarnated we know to sleep when we get tired instead of ignoring it and then passing out while doing something dangerous or important.

(The only difference between our dreams and yours is that we don't dream. I mean, what's the point, we're stuck in our parents' dream anyway.)

So I'm no sooner arrived in my own simulated body in my own simulated bedroom when Janis is screaming on the private channel.

"Mom is here! I need you *now*!"

So I press a few switches in my brain and there I am, right in Janis' head, getting much of the same sensor feed that she's receiving herself. And I looked at her and I say, "Hey, you can't talk to Anna-Lee looking like *this*."

Janis is wearing her current avatar, which is something like a crazy person might draw with crayons. Stick-figure body, huge yellow shoes, round bobble head with crinkly red hair like wires.

"Get your quadbod on!" I tell her. "Now!"

So she switches, and now her avatar has four arms, two in the shoulders, two in the hip sockets. The hair is still bright red. Whatever her avatar looks like, Janis always keeps the red hair.

"Good," I say. "That's normal."

Which it is, for Ceres. Which is an asteroid without much gravity, so there really isn't a lot of point in having legs. In microgravity legs just drag around behind you and bump into things and get bruises and cuts. Whereas everyone can use an extra pair of arms, right? So most people who live in low- or zero-gravity environments use quadbods, which are much practical than the two-legged model.

So Janis pushes off with her left set of arms and floats through the door into the lounge where her mom awaits. Anna-Lee wears a quadbod, too, except that hers isn't an avatar, but a three-dimensional holographic scan of her real body. And you can tell that she's really pissed—she's got tight lips and tight eyelids and a tight face, and both sets of arms are folded across her midsection with her fingers digging into her forearms as if she's repressing the urge to grab Janis and shake her.

"Hi, mom," Janis said.

"You not only endangered yourself," Anna-Lee said, "but you chose to endanger others, too."

"Sit down before you answer," I murmured in Janis' inward ear. "Take your time."

I was faintly surprised that Janis actually followed my advice. She drifted into a chair, used her lower limbs to settle herself into it, and then spoke.

"Nobody was endangered," she said, quite reasonably.

Anna-Lee's nostrils narrowed.

"You diverted from the flight plan that was devised for your safety," she said.

"I made a new flight plan," Janis pointed out. "Ground Control accepted it. If it was dangerous, she wouldn't have done that."

Anna-Lee's voice got that flat quality that it gets when she's following her own internal logic. Sometimes I think she's the program, not us.

"You are not authorized to file flight plans!" she snapped.

"Ground Control accepted it," Janis repeated. Her voice had grown a little sharp, and I whispered at her to keep cool.

"And Ground Control immediately informed *me*! They were right on the edge of calling out a rescue shuttle!"

"But they didn't, because there was no problem!" Janis snapped out, and then there was a pause while I told her to lower her voice.

"Ground Control accepted my revised plan," she said. "I landed according to the plan, and nobody was hurt."

"You planned this from the beginning!" All in that flat voice of hers. "This was a deliberate act of defiance!"

Which was true, of course.

"What harm did I do?" Janis asked.

("Look," I told Janis. "Just tell her that she's right and you were wrong and you'll never do it again.")

("I'm not going to lie!" Janis sent back on our private channel. "Whatever mom does, she's never going to make me lie!")

All this while Anna-Lee was saying, "We must all work together for the greater good! Your act of defiance did nothing but divert people from their proper tasks! Titan Ground Control has better things to do than worry about you!"

There was no holding Janis back now. "You *wanted* me to learn navigation! So I learned it—because *you* wanted it! And now that I've proved that I can use it, and you're angry about it!" She was waving her arms so furiously that she bounced up from her chair and began to sort of jerk around the room.

"And do you know why that is, mom?" she demanded.

"*For God's sake shut up!*" I shouted at her. I knew where this was leading, but Janis was too far gone in her rage to listen to me now.

"It's because you're second-rate!" Janis shouted at her mother. "Dad went off to Barnard's Star, but *you* didn't make the cut! And I can do all the things you wanted to do, and do them better, and *you can't stand it!*"

"*Will you be quiet!*" I tell Janis. "Remember that *she owns you!*"

"I accepted the decision of the committee!" Anna-Lee was shouting. "I am a Constant Soldier and I live a productive life, and I will *not* be responsible for producing a child who is a *burden* and a *drain on resources!*"

"Who says I'm going to be a burden?" Janis demanded. "*You're* the only person who says that! If I incarnated tomorrow I could get a good job in ten minutes!"

"Not if you get a reputation for disobedience and anarchy!"

By this point it was clear that since Janis wasn't listening to me, and Anna-Lee *couldn't* listen, so there was no longer any point in my involving myself in what had become a very predictable argument. So I closed the link and prepared my own excuses for my own inevitable meeting with my parents.

I changed from Picasso Woman to my own quadbod, which is what I use when I talk to my parents, at least when I want something from them. My quadbod avatar is a girl just a couple years younger than my

actual age, wearing a school uniform with a Peter Pan collar and a white bow in her—my—hair. And my beautiful brown eyes are just slightly larger than eyes are in reality, because that's something called "neotony," which means you look more like a baby and babies are designed to be irresistible to grownups.

Let me tell you that it works. Sometimes I can blink those big eyes and get away with anything.

And at that point my father called, and told me that he and my mom wanted to talk to me about my adventures on Titan, so I popped over to my parents' place, where I appeared in holographic form in their living room.

My parents are pretty reasonable people. Of course I take care to *keep* them reasonable, insofar as I can. *Let me smile with the wise*, as Doctor Sam says, *and feed with the rich*. I will keep my opinions to myself, and try my best to avoid upsetting the people who have power over me.

Why did I soar off with Janis on her flight plan? my father wanted to know.

"Because I didn't think she should go alone," I said.

Didn't you try to talk her out of it? my mother asked.

"You can't talk Janis out of anything," I replied. Which, my parents knowing Janis, was an answer they understood.

So my parents told me to be careful, and that was more or less the whole conversation.

Which shows you that not all parents up here are crazy.

Mine are more sensible than most. I don't think many parents would think much of my ambition to get involved in the fine arts. That's just not *done* up here, let alone the sort of thing *I* want to do, which is to incarnate on Earth and apprentice myself to an actual painter, or maybe a sculptor. Up here they just use cameras, and their idea of original art is to take camera pictures or alter camera pictures or combine camera pictures with one another or process the camera pictures in some way.

I want to do it from scratch, with paint on canvas. And not with a computer-programmed spray gun either, but with a real brush and blobs of paint. Because if you ask me the *texture* of the thing is important, which is why I like oils. Or rather the *idea* of oils, because I've never actually had a chance to work with the real thing.

And besides, as Doctor Sam says, A man who has not been in Italy, is always conscious of an inferiority, from his not having seen what is expected a man should see. The grand object of traveling is to see the shores of the Mediterranean.

So when I told my parents what I wanted to do, they just sort of shrugged and made me promise to learn another skill as well, one just a little bit more practical. So while I minor in art I'm majoring in computer design and function and programming, which is pretty interesting because all our really complex programs are written by artificial intelligences who are smarter than we are, so getting them to do what you want is as much like voodoo as science.

So my parents and I worked out a compromise that suited everybody, which is why I think my parents are pretty neat actually.

About twenty minutes after my talk with my parents, Janis knocked on my door, and I made the door go away, and she walked in, and then I put the door back. (Handy things, sims.)

"Guess that didn't work out so good, huh?" she said.

"On your family's civility scale," I said, "I think that was about average."

Her eyes narrowed (she was so upset that she's forgot to change out of her quadbod, which is why she had the sort of eyes that could narrow).

"I'm going to get her," she said.

"I don't think that's very smart," I said.

Janis was smacking her fists into my walls, floor, and ceiling and shooting around the room, which was annoying even though the walls were virtual and she couldn't damage them or get fingerprints on them.

"Listen," I said. "All you have to do is keep the peace with your mom until you've finished your thesis, and then you'll be incarnated and she can't touch you. It's just *months*, Janis."

"My *thesis*!" A glorious grin of discovery spread across Janis' face. "I'm going to use my *thesis*! I'm going to stick it to mom right where it hurts!"

I reached out and grabbed her and steadied her in front of me with all four arms.

"Look," I said. "You can't keep calling her bluff."

Her voice rang with triumph "Just watch me."

"Please," I said. "I'm begging you. Don't do anything till you're incarnated!"

I could see the visions of glory dancing before her eyes. She wasn't seeing or hearing me at all.

"She's going to have to admit that I am right and that she is wrong," she said. "I'm going to nail my thesis to her forehead like Karl Marx on the church door."

"That was Martin Luther actually." (Sometimes I can't help these things.)

She snorted. "Who cares?"

"I do." Changing the subject. "*Because I don't want you to die.*"

Janis snorted. "I'm not going to bow to her. I'm going to *crush her*. I'm going to show her how stupid and futile and second-rate she is."

And at that moment there was a signal at my door. I ignored it.

"The power of punishment is to silence, not to confute," I said.

Her face wrinkled as if she'd bit into something sour. "I can't *believe* you're quoting that old dead guy again."

I have found you an argument, I wanted to say with Doctor Sam, but I am not obliged to find you an understanding.

The signal at my door repeated, and this time it was attached to an electronic signal that meant *Emergency*! Out of sheer surprise I dissolved the door.

Mei was there in her quadbod, an expression of anger on her face.



"If you two are finished congratulating each other on your brilliant little prank," she said, "you might take time to notice that Fritz is missing."

"Missing?" I didn't understand how someone could be missing. "Didn't his program come back from Titan?"

If something happened to the transmission, they could reload Fritz from a backup.

Mei's expression was unreadable. "He never went. He met the Blue Lady."

And then she pushed off with two of her hands and drifted away, leaving us in a sudden, vast, terrible silence.

We didn't speak, but followed Mei into the common room. The other cadre members were all there, and they all watched us as we floated in.

When you're little, you first hear about the Blue Lady from the other kids in your cadre. Nobody knows for sure how we *all* find out about the Blue—not just the cadres on Ceres, but the ones on Vesta, and Ganymede, and *everywhere*.

And we all know that sometimes you might see her, a kind smiling woman in a blue robe, and she'll reach out to you, and she seems so nice you'll let her take your hand.

Only then, when it's too late, you'll see that she has no eyes, but only an empty blackness filled with stars.

She'll take you away and your friends will never see you again.

And of course it's your parents who send the Blue Lady to find you when you're bad.

We all know that the Blue Lady doesn't truly exist, it's ordinary techs in ordinary rooms who give the orders to zero out your program along with all its backups, but we all believe in the Blue Lady really, and not just when we're little.

Which brings me to the point I made about incarnation earlier. Once you're incarnated, you are considered a human being, and you have human rights.

But *not until then*. Until you're incarnated, you're just a computer program that belongs to your parents, and if your parents think the program is flawed or corrupted and simply too awkward to deal with, they can have you zeroed.

Zeroed. Not killed. The grownups insist that there's a difference, but I don't see it myself.

Because the Blue Lady really comes for some people, as she came for Fritz when Jack and Hans finally gave up trying to fix him. Most cadres get by without a visit. Some have more than one. There was a cadre on Vesta who lost eight, and then there were suicides among the survivors once they incarnated, and it was a big scandal that all the grownups agreed never to talk about.

I have never for an instant believed that my parents would ever send the Blue Lady after me, but still it's always there in the back of my mind, which is why I think that the current situation is so horrible. It gives parents a power they should never have, and it breeds a fundamental distrust between kids and their parents.

The grownups' chief complaint about the cadre system is that their children bond with their peers and not their parents. Maybe it's because their peers can't kill them.

Everyone in the cadre got the official message about Fritz, that he was basically irreparable and that the chance of his making a successful incarnation was essentially zero. The message said that none of us were at fault for what had happened, and that everyone knew that we'd done our best for him.

This was in the same message queue as a message to me from Fritz, made just before he got zeroed out. There he was with his stupid hat, smiling at me.

"Thank you for saying you'd play the shadowing game with me," he said. "I really think you're wonderful." He laughed. "See you soon, on Titan!"

So then I cried a lot, and I erased the message so that I'd never be tempted to look at it again.

We all felt failure. It was our job to make Fritz right, and we hadn't done it. We had all grown up with him, and even though he was a trial he was a part of our world. I had spent the last few days avoiding him, and I felt horrible about it; but everyone else had done the same thing at one time or another.

We all missed him.

The cadre decided to wear mourning, and we got stuck in a stupid argument about whether to wear white, which is the traditional mourning color in Asia, or black, which is the color in old Europe.

"Wear blue," Janis said. So we did. Whatever avatars we wore from that point on had blue clothing, or used blue as a principal color somewhere in their composition.

If any of the parents noticed, or talked about it, or complained, I never heard it.

I started thinking a lot about how I related to incarnated people, and I thought that maybe I'm just a little more compliant and adorable and sweet-natured than I'd otherwise be, because I want to avoid the consequences of being otherwise. And Janis is perhaps more defiant than she'd be under other circumstances, because she wants to show she's not afraid. *Go ahead, mom, she says, pull the trigger. I dare you.*

Underestimating Anna-Lee all the way. Because Anna-Lee is a Constant Soldier of the Five Principles Movement, and that means *serious*.

The First Principle of the Five Principles Movement states that *Humanity is a pattern of thought, not a side effect of taxonomy*, which means that you're human if you *think* like a human, whether you've got six legs or four arms or two legs like the folks on Earth and Mars.

And then so on to the Fifth Principle, we come to the statement that humanity in all its various forms is intended to occupy every possible ecosystem throughout the entire universe, or at least as much of it as we can reach. Which is why the Five Principles Movement has always been very big on genetic experimentation, and the various expeditions to nearby stars.

I have no problem with the Five Principles Movement, myself. It's rational compared with groups like the Children of Venus or the God's Menu people.

Besides, if there isn't something to the Five Principles, what are we doing out here in the first place?

My problem lies with the sort of people the Movement attracts, which is to say people like Anna-Lee. People who are obsessive, and humorless, and completely unable to see any other point of view. Nor only do they dedicate themselves heart and soul to whatever group they join, they insist everyone else has to join as well, and that anyone who isn't a part of it is a Bad Person.

So even though I pretty much agree with the Five Principles I don't think I'm going to join the movement. I'm going to keep in mind the wisdom of my good Doctor Sam: *Most schemes of political improvement are very laughable things.*

But to get back to Anna-Lee. Back in the day she married Carlos, who was also in the Movement, and together they worked for years to qualify for the expedition to Barnard's Star on the *True Destiny*. They created Janis together, because having children is all a part of occupying the universe and so on.

But Carlos got the offer to crew the ship, and Anna-Lee didn't. Carlos chose Barnard's Star over Anna-Lee, and now he's a couple light-months away. He and the rest of the settlers are in electronic form—no sense in spending the resources to ship a whole body to another star system when you can just ship the data and build the body once you arrive—and for the most part they're dormant, because there's nothing to do until they near their destination. But every week or so Carlos has himself awakened so that he can send an electronic postcard to his daughter.

The messages are all really boring, as you might expect from someone out in deep space where there's nothing to look at and nothing to do, and everyone's asleep anyway.

Janis sends him longer messages, mostly about her fights with Anna-Lee. Anna-Lee likewise sends Carlos long messages about Janis' transgressions. At two light-months out Carlos declines to mediate between them, which makes them both mad.

So Anna-Lee is mad because her husband left her, and she's mad at Janis for not being a perfect Five Principles Constant Soldier. Janis is mad at Carlos for not figuring out a way to take her along, and she's mad at Anna-Lee for not making the crew on the *True Destiny*, and failing that not having the savvy to keep her husband in the picture.

And she's also mad at Anna-Lee for getting married again, this time to Rhee, a rich Movement guy who was able to swing the taxes to create *two new daughters*, both of whom are the stars of their particular cadres and are going to grow up to be perfect Five Principles Kids, destined to carry on the work of humanity in new habitats among distant stars.

Or so Anna-Lee claims, anyway.

Which is why I think that Janis underestimates her mother. I think the way Anna-Lee looks at it, she's got two new kids, who are everything she wants. And one older kid who gives her trouble, and who she can give to the Blue Lady without really losing anything, since she's lost Janis anyway. She's already given a husband to the stars, after all.

And all this is another reason why I want to incarnate on Earth, where a lot of people still have children the old-fashioned way. The parents make an embryo in a gene-splicer, and then the embryo is put in a vat, and nine months later you crack the vat open and you've got an actual baby, not a computer program. And even if the procedure is a lot more time-consuming and messy I still think it's superior.

So I was applying for work on Earth, both for jobs that could use computer skills, and also for apprenticeship programs in the fine arts. But there's a waiting list for pretty much any job you want on Earth, and also there's a big entry tax unless they *really* want you, so I wasn't holding my breath; and besides, I hadn't finished my thesis.

I figured on graduating from college along with most of my cadre, at the age of fourteen. I understand that in your day, Doctor Sam, people graduated from college a lot later. I figure there are several important reasons for the change: (1) we virtual kids don't sleep as much as you do, so we have more time for study; (2) there isn't that much else to do here anyway; and (3) we're really, really, *really* smart. Because

if you were a parent, and you had a say in the makeup of your kid (along with the doctors and the sociologists and the hoodoo machines), would you say, *No thanks, I want mine stupid?*

No, I don't think so.

And the meat-brains that we incarnate into are pretty smart, too. Just in case you were wondering.

We could grow up faster, if we wanted. The computers we live in are so fast that we could go from inception to maturity in just two or three months. But we wouldn't get to interact with our parents, who being meat would be much slower, or with anyone else. So in order to have any kind of relationship with our elders, or any kind of socialization at all, we have to slow down to our parents' pace. I have to say that I agree with that.

In order to graduate I needed to do a thesis, and unfortunately I couldn't do the one I wanted, which was the way the paintings of Breughel, etc., reflected the theology of the period. All the training with computers and systems, along with art and art history, had given me an idea of how abstract systems such as theology work, and how you can visually represent fairly abstract concepts on a flat canvas.

But I'd have to save that for maybe a postgraduate degree, because my major was still in the computer sciences, so I wrote a fairly boring thesis on systems interoperability—which, if you care, is the art of getting different machines and highly specialized operating systems to talk to each other, a job that is made more difficult if the machines in question happen to be a lot smarter than you are.

Actually it's a fairly interesting subject. It just wasn't interesting in my thesis.

While I was doing that I was also working outside contracts for Dane, who was from a cadre that had incarnated a few years ahead of us, and who I got to know when his group met with ours to help with our lessons and with our socialization skills (because they wanted us to be able to talk to people outside the cadre and our families, something we might not do if we didn't have practice).

Anyway, Dane had got a programming job in Ceres' communications center, and he was willing to pass on the more boring parts of his work to me in exchange for money. So I was getting a head start on paying that big Earth entry tax, or if I could evade the tax maybe living on Earth a while and learning to paint.

"You're just going to end up being Ceres' first interior decorator," Janis scoffed.

"And that would be a *bad* thing?" I asked. "Just *look* at this place!" Because it's all so functional and boring and you'd think they could find a more interesting color of paint than *grey*, for God's sake.

That was one of the few times I'd got to talk to Janis since our adventure on Titan. We were both working on our theses, and still going to school, and I had my outside contracts, and I think she was trying to avoid me, because she didn't want to tell me what she was doing because she didn't want me to tell her not to do it.

Which hurt, by the way. Since we'd been such loyal friends up to the point where I told her not to get killed, and then because I wanted to save her life she didn't want to talk to me anymore.

The times I mostly got to see Janis were Incarnation Day parties for other members of our cadre. So we got to see Ganymede, and Iapetus, and Titan again, and Rhea, and Pluto, Callisto, and Io, and the antimatter generation ring between Venus and Mercury, and Titan again, and then Titan a fourth time.

Our cadre must have this weird affinity for orange, I don't know.

We went to Pallas, Juno, and Vesta. Though if you ask me, one asteroid settlement is pretty much like the next.

We went to Third Heaven, which is a habitat the God's Menu people built at L2. And they can *keep* a lot of the items on the menu, if you ask me.

We visited Luna (which you would call the Moon, Doctor Sam. As if there was only one). And we got to view *Everlasting Dynasty*, the starship being constructed in lunar orbit for the expedition to Tau Ceti, the settlement that Anna-Lee was trying her best to get Janis aboard.

We also got to visit Mars three times. So among other entertainments I looked down at the planet from the top of Olympus Mons, the largest mountain in the solar system, and I looked down from the edge of the solar system's largest canyon, and then I looked *up* from the bottom of the same canyon.

We all tried to wear blue if we could, in memory of the one of us who couldn't be present.

Aside from the sights, the Incarnation Day parties were great because all our incarnated cadre members turned up, in bodies they'd borrowed for the occasion. We were all still close, of course, and kept continually in touch, but our communication was limited by the speed of light and it wasn't anything like having Fahd and Chandra and Solange there in person, to pummel and to hug.

We didn't go to Earth. I was the only one of our cadre who had applied there, and I hadn't got an answer yet. I couldn't help fantasizing about what my Incarnation Day party would be like if I held it on Earth—where would I go? What would we look at? Rome? Mount Everest? The ocean habitats? The plans of Africa, where the human race began?

It was painful to think that the odds were high that I'd never see any of these places.

Janis never tried to organize any of her little rebellions on these trips. For one thing word had got out, and we were all pretty closely supervised. Her behavior was never less than what Anna-Lee would desire. But under it all I could tell she was planning something drastic.

I tried to talk to her about it. I talked about my thesis, and hoped it would lead to a discussion of *her* thesis. But no luck. She evaded the topic completely.

She was pretty busy with her project, though, whatever it was. Because she was always buzzing around the cadre asking people where to look for odd bits of knowledge.

I couldn't make sense of her questions, though. They seemed to cover too many fields. Sociology, statistics, minerology, criminology, economics, astronomy, spaceship design ... The project seemed too huge.

The only thing I knew about Janis' thesis was that it was *supposed* to be about resource management. It was the field that Anna-Lee forced her into, because it was full of skills that would be useful on the Tau Ceti expedition. And if that didn't work, Anna-Lee made sure Janis minored in spaceship and shuttle piloting and navigation.

I finally finished my thesis, and then I sat back and waited for the job offers to roll in. The only offer I got came from someone who wanted me to run the garbage cyclers on Iapetus, which the guy should have known I wouldn't accept if he had bothered to read my application.

Maybe he was just neck-deep in garbage and desperate, I don't know.

And then the most astounding thing happened. Instead of a job in the computer field, I got an offer to

study at the Pisan Academy.

Which is an art school. Which is in Italy, which is where the paintings come from mostly.

The acceptance committee said that my work showed a “naive but highly original fusion of social criticism with the formalities of the geometric order.” I don't even *pretend* to know what they meant by that, but I suspect they just weren't used to the perspective of a student who had spent practically her entire life in a computer on Ceres.

I broadcast my shrieks of joy to everyone in the cadre, even those who had left Ceres and were probably wincing at their work stations when my screams reached them.

I bounced around the common room and everyone came out to congratulate me. Even Janis, who had taken to wearing an avatar that wasn't even remotely human, just a graphic of a big sledgehammer smashing a rock, over and over.

Subtlety had never been her strong point.

"Congratulations," she said. "You got what you wanted."

And then she broadcast something on a private channel. *You're going to be famous*, she said. *But I'm going to be a legend*.

I looked at her. And then I sent back, *Can we talk about this?*

In a few days. When I deliver my thesis.

*Don't*, I pleaded.

Too late.

The hammer hit its rock, and the shards flew out into the room and vanished.

I spent the next few days planning my Incarnation Day party, but my heart wasn't in it. I kept wondering if Janis was going to be alive to enjoy it.

I finally decided to have my party in Thailand because there were so many interesting environments in one place, as well as the Great Buddha. And I found a caterer that was supposed to be really good.

I decided what sort of body I wanted, and the incarnation specialists on Earth started cooking it up in one of their vats. Not the body of an Earth-born fourteen-year old, but older, more like eighteen. Brown eyes, brown hair, and those big eyes that had always been so useful.

And two legs, of course. Which is what they all have down there.

I set the date. The cadre were alerted. We all practiced in the simulations and tried to get used to making do with only two arms. Everyone was prepared.

And then Janis finished her thesis. I downloaded a copy the second it was submitted to her committee and read it in one long sitting, and my sense of horror grew with every line.

What Janis had done was publish a comprehensive critique *of our entire society!* It was a piece of brilliance, and at the same time it was utter poison.

Posthuman society wrecks its children, Janis said, and this can be demonstrated by the percentage of

neurotic and dysfunctional adults. The problems encountered by the first generation of children who spent their formative years as programs—the autism, the obsessions and compulsions, the addictions to electronic environments—hadn't gone away, they'd just been reduced to the point where they'd become a part of the background clutter, a part of our civilization so everyday that we never quite noticed it.

Janis had the data, too. The number of people who were under treatment for one thing or another. The percentage who had difficulty adjusting to their incarnations, or who didn't want to communicate with anyone outside their cadre, or who couldn't sleep unless they were immersed in a simulation. Or who committed suicide. Or who died in accidents—Janis questioned whether all those accidents were really the results of our harsh environments. Our machines and our settlements were much safer than they had been in the early days, but the rates of accidental death were still high. How many accidents were caused by distracted or unhappy operators, or for that matter were deliberate “suicide by machine”?

Janis went on to describe one of the victims of this ruthless type of upbringing. “Flat of emotional affect, offended by disorder and incapable of coping with obstruction, unable to function without adherence to a belief system as rigid as the artificial and constricted environments in which she was raised.”

When I realized Janis was describing Anna-Lee I almost de-rezzed.

Janis offered a scheme to cure the problem, which was to get rid of the virtual environments and start out with real incarnated babies. She pulled out vast numbers of statistics demonstrating that places that did this—chiefly Earth—seemed to raise more successful adults. She also pointed out that the initial shortage of resources that had prompted the creation of virtual children in the first place had long since passed—plenty of water-ice coming in from the Kuyper Belt these days, and we were sitting on all the minerals we could want. The only reason the system continued was for the convenience of the adults. But genuine babies, as opposed to abstract computer programs, would help the adults, too. They would no longer be tempted to become little dictators with absolute power over their offspring. Janis said the chance would turn the grownups into better human beings.

All this was buttressed by colossal numbers of statistics, graphs, and other data. I realized when I'd finished it that the Cadre of Glorious Destiny had produced one true genius, and that this genius was Janis.

The true genius is a mind of large general powers, accidentally determined to some particular direction.

Anna-Lee determined her, all right, and the problem was that Janis probably didn't have that long to live. Aside from the fact that Janis had ruthlessly caricatured her, Anna-Lee couldn't help but notice that the whole work went smack up against the Five Principles Movement. According to the Movement people, all available resources had to be devoted to the expansion of the human race out of the solar system and into new environments. It didn't matter how many more resources were available now than in the past, it was clear against their principles to devote a greater share to the raising of children when it could be used to blast off into the universe.

And though the Five Principles people acknowledged our rather high death rate, they put it down to our settlements' hazardous environments. All we had to do was genetically modify people to better suit the environments and the problem would be solved.

I skipped the appendices and zoomed from my room across the common room to Janis' door, and hit the button to alert her to a visitor. The door vanished, and there was Janis—for the first time since her fight with Anna-Lee, she was using her quadbod avatar. She gave me a wicked grin.

"Great, isn't it?"

"It's *brilliant!* But you can't let Anna-Lee see it."

"Don't be silly. I sent mom the file myself."

I was horrified. She had to have seen the way my Picasso-face gaped, and it made her laugh.

"She'll have you erased!" I said.

"If she does," Janis said. "She'll only prove my point." She put a consoling hand on my shoulder. "Sorry if it means missing your incarnation."

When Anna-Lee came storming in—which wasn't long after—Janis broadcast the whole confrontation on a one-way link to the whole cadre. We got to watch, but not to participate. She didn't want our advice any more than she wanted her mother's.

"You are unnatural!" Anna-Lee stormed. "You spread slanders! You have betrayed the highest truth!"

"I *told* the truth!" Janis said. "And you *know* it's the truth, otherwise you wouldn't be so insane right now."

Anna-Lee stiffened. "I am a Five Principles Constant Soldier. I know the truth, and I know my duty."

"Every time you say that, you prove my point."

"You will retract this thesis, and apologize to your committee for giving them such a vicious document."

Anna-Lee hadn't realized that the document was irretrievable, that Janis had given it to everyone she knew.

Janis laughed. "No way, mom," she said.

Anna-Lee lost it. She waved her fists and screamed. "I know my duty! I will not allow such a slander to be seen by anyone!" She pointed at Janis. "You have three days to retract!"

Janis gave a snort of contempt.

"Or what?"

"Or I will decide that you're incorrigible and terminate your program."

Janis laughed. "Go right ahead, mom. Do it *now*. Nothing spreads a new idea better than martyrdom." She spread her four arms. "Do it, mom. I *hate* life in this hell. I'm ready."

I will be conquered; I will not capitulate.

Yes, Doctor Sam. That's it exactly.

"You have three days," Anna-Lee said, her voice all flat and menacing, and then her virtual image de-rezzed.

Janis looked at the space where her mom had been, and then a goofy grin spread across her face. She switched to the red-headed, stick-figure avatar, and began to do a little dance as she hovered in the air, moving like a badly animated cartoon.

"Hey!" she sang. "I get to go to Alison's party after all!"



I had been so caught up in the drama that I had forgot my incarnation was going to happen in two days.

But it wasn't going to be a party now. It was going to be a wake.

"Doctor Sam," I said, "I've got to save Janis."

The triumph of hope over experience.

"Hope is what I've got," I said, and then I thought about it. "And maybe a little experience, too."

\* \* \* \*

My Incarnation Day went well. We came down by glider, as we had that first time on Titan, except that this time I told Ground Control to let my friends land wherever the hell they wanted. That gave us time to inspect the Great Buddha, a slim man with a knowing smile sitting crosslegged with knobs on his head. He's two and a half kilometers tall and packed with massively parallel quantum processors, all crunching vast amounts of data, thinking whatever profound thoughts are appropriate to an artificial intelligence built on such a scale, and repeating millions of sutras, which are scriptures for Buddhists, all at the speed of light.

It creeps along at two or three centimeters per day, and will enter the strait at the end of the Kra Peninsula many thousands of years from now.

After viewing the Buddha's serene expression from as many angles as suited us, we soared and swooped over many kilometers of brilliant green jungle and landed on the beach. And we all *did* land on the beach, which sort of surprised me. And then we all did our best to learn how to surf—and let me tell you from the start, the surfing simulators are *totally* inadequate. The longest I managed to stand my board was maybe twenty seconds.

I was amazed at all the sensations that crowded all around me. The breeze on my skin, the scents of the sea and the vegetation and the coal on which our banquet was being cooked. The hot sand under my bare feet. The salt taste of the ocean on my lips. The sting of the little jellyfish on my legs and arms, and the iodine smell of the thick strand of seaweed that got wrapped in my hair.

I mean, I had no *idea*. The simulators were totally inadequate to the Earth experience.

And this was just a *part* of the Earth, a small fraction of the environments available. I think I convinced a lot of the cadre that maybe they'd want to move to Earth as soon as they could raise the money and find a job.

After swimming and beach games we had my Incarnation Day dinner. The sensations provided by the food were really too intense—I couldn't eat much of it. If I was going to eat Earth food, I was going to have to start with something a lot more bland.

And there was my brown-eyed body at the head of the table, looking down at the members of the Cadre of Glorious Destiny who were toasting me with tropical drinks, the kind that have parasols in them.

Tears came to my eyes, and they were a lot wetter and hotter than tears in the sims. For some reason that fact made me cry even more.

My parents came to the dinner, because this was the first time they could actually hug me—hug me for real, that is, and not in a sim. They had downloaded into bodies that didn't look much like the four-armed quadbods they used back on Ceres, but that didn't matter. When my arms went around them, I began to cry again.

After the tears were wiped away we put on underwater gear and went for a swim on the reef, which is just amazing. More colors and shapes and textures than I could ever imagine—or imagine putting in a work of art.

A work of art that embodies all but selects none is not art, but mere cant and recitation.

Oh, wow. You're right. Thank you, Doctor Sam.

After the reef trip we paid a visit to one of the underwater settlements, one inhabited by people adapted to breathe water. The problems were that we had to keep our underwater gear on, and that none of us were any good at the fluid sign language they all used as their preferred means of communication.

Then we rose from the ocean, dried out, and had a last round of hugs before being uploaded to our normal habitations. I gave Janis a particularly strong hug, and I whispered in her ear.

"Take care of yourself."

"Who?" she grinned. "*Me?*"

And then the little brown-haired body was left behind, looking very lonely, as everyone else put on the electrodes and uploaded back to their normal and very distant worlds.

As soon as I arrived on Ceres, I zapped an avatar of myself into my parents' quarters. They looked at me as if I were a ghost.

"What are *you* doing here?" my mother managed.

"I hate to tell you this," I said, "but I think you're going to have to hire a lawyer."

\* \* \* \*

It was surprisingly easy to do, really. Remember that I was assisting Dane, who was a communications tech, and in charge of uploading all of our little artificial brains to Earth. And also remember that I am a specialist in systems interoperability, which implies that I am also a specialist in systems *un*operability.

It was very easy to set a couple of artificial intelligences running amok in Dane's system just as he was working on our upload. And that so distracted him that he said yes when I said that I'd do the job for him.

And once I had access, it was the work of a moment to swap a couple of serial numbers.

The end result of which was that it was Janis who uploaded into my brown-haired body, and received all the toasts, and who hugged my parents with *my* arms. And who is now on Earth, incarnated, with a full set of human rights and safe from Anna-Lee.

I wish I could say the same for myself.

Anna-Lee couldn't have me killed, of course, since I don't belong to her. But she could sue my parents, who from her point of view permitted a piece of software belonging to *them* to prevent her from wreaking vengeance on some software that belonged to *her*.

And of course Anna-Lee went berserk the second she found out—which was more or less immediately, since Janis sent her a little radio taunt as soon as she downed her fourth or fifth celebratory umbrella drink.

Janis sent me a message, too.

"The least you could have done was make my hair red."

*My hair.* Sometimes I wonder why I bothered.

An unexpected side effect of this was that we all got famous. It turns out that this was an unprecedented legal situation, with lots of human interest and a colorful cast of characters. Janis became a media celebrity, and so did I, and so did Anna-Lee.

Celebrity didn't do Anna-Lee's cause any good. Her whole mental outlook was too rigid to stand the kind of scrutiny and questioning that any public figure has to put up with. As soon as she was challenged she lost control. She called one of the leading media interviewers a name that you, Doctor Sam, would not wish me to repeat.

Whatever the actual merits of her legal case, the sight of Anna-Lee screaming that I had deprived her of the inalienable right to kill her daughter failed to win her a lot of friends. Eventually the Five Principles people realized she wasn't doing their cause any good, and she was replaced by a Movement spokesperson who said as little as possible.

Janis did some talking, too, but not nearly as much as she would have liked, because she was under house arrest for coming to Earth without a visa and without paying the immigration tax. The cops showed up when she was sleeping off her hangover from all the umbrella drinks. It's probably lucky that she wasn't given the opportunity to talk much, because if she started on her rants she would have worn out her celebrity as quickly as Anna-Lee did.

Janis was scheduled to be deported back to Ceres, but shipping an actual incarnated human being is much more difficult than zapping a simulation by laser, and she had to wait for a ship that could carry passengers, and that would be months.

She offered to navigate the ship herself, since she had the training, but the offer was declined.

Lots of people read her thesis who wouldn't otherwise have heard of it. And millions discussed it whether they'd read it or not. There were those who said that Janis was right, and those that said that Janis was mostly right but that she exaggerated. There were those who said that the problem didn't really exist, except in the statistics.

There were those who thought the problem existed entirely in the software, that the system would work if the simulations were only made more like reality. I had to disagree, because I think the simulations *were* like reality, but only for certain people.

The problem is that human beings perceive reality in slightly different ways, even if they happen to be programs. A programmer could do his best to create an artificial reality that exactly mimicked the way he perceived reality, except that it wouldn't be as exact for another person, it would only be an approximation. It would be like fitting everyone's hand into the same-sized glove.

Eventually someone at the University of Adelaide read it and offered Janis a professorship in their sociology department. She accepted and was freed from house arrest.

Poor Australia, I thought.

I was on video quite a lot. I used my little-girl avatar, and I batted my big eyes a lot. I still wore blue, mourning for Fritz.

Why, I was asked, did I act to save Janis?

"Because we're cadre, and we're supposed to look after one another."

What did I think of Anna-Lee?

"I don't see why she's complaining. I've seen to it that Janis *just isn't her problem any more.*"

Wasn't what I did stealing?

"It's not stealing to free a slave."

And so on. It was the same sort of routine I'd been practicing on my parents all these years, and the practice paid off. Entire cadres—hundreds of them—signed petitions asking that the case be dismissed. Lots of adults did the same.

I hope that it helps, but the judge that hears the case isn't supposed to be swayed by public opinion, but only by the law.

And everyone forgets that it's my parents that will be on trial, not me, accused of letting their software steal Anna-Lee's software. And of course I, and therefore they, am completely guilty, so my parents are almost certainly going to be fined, and lose both money and Citizenship Points.

I'm sorry about that, but my parents seem not to be.

How the judge will put a value on a piece of stolen software that its owner fully intended to destroy is going to make an interesting ruling, however it turns out.

I don't know whether I'll ever set foot on Earth again. I can't take my place in Pisa because I'm not incarnated, and I don't know if they'll offer again.

And however things turn out, Fritz is still zeroed. And I still wear blue.

I don't have my outside job any longer. Dane won't speak to me, because his supervisor reprimanded him, and he's under suspicion for being my accomplice. And even those who are sympathetic to me aren't about to let me loose with their computers.

And even if I get a job somewhere, I can't be incarnated until the court case is over.

It seems to me that the only person who got away scot-free was Janis. Which is normal.

So right now my chief problem is boredom. I spent fourteen years in a rigid program intended to fill my hours with wholesome and intellectually useful activity, and now that's over.

And I can't get properly started on the non-wholesome thing until I get an incarnation somewhere.

Everyone is, or hopes to be, an idler.

Thank you, Doctor Sam.

I'm choosing to idle away my time making pictures. Maybe I can sell them and help pay the Earth tax.

I call them my "Doctor Johnson" series. Sam. Johnson on Mars. Sam. Johnson Visits Neptune. Sam. Johnson Quizzing the Tomasko Glacier. Sam. Johnson Among the Asteroids.

I have many more ideas along this line.

Doctor Sam, I trust you will approve.

