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THE HOMELESS MOON 4



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The Homeless Moon

4

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Preface

Centuries from now..

“Humanity has fled a war-ravaged Earth and reached the Gliese system by way of the generation ship *Hypatia*. Here we have come into contact with other sentient species, the greatest of which is the god-like Ix, a strange creature made more unsettling by its sense of humor..”

For the fourth chapbook we wanted to create a shared world, one that could contain any number of different stories. We decided upon a generation ship and came up with a few details: the Ix, mind-casting technology, a general timeline. We each took the premise and ran with it. As with all great adventures, we strayed off the map, but believe we found better stories because of it. We hope you agree.

Burning Bright

Scott H. Andrews

Alec had never seen so many important people all packed inside such a tiny space as the climber-car's cabin. The Infrastructure admin squirming, three chief engineers fidgeting, the sector sub-governor pacing—no, the sector *governor*. Plus twenty other mechanics—the ten best teams in the sector—and the cabin thick with the press of stuffy heat and rank stink and twitching anxiousness. It all had him itching with sweat, oozing up along his shoulders as the thinning G shrank away meter by meter under the cabin floor.

Nitsa slouched next to him, old radiation weals faint on her saggy cheeks, the back of her wild splay of wiry white hair compressed against the bulkhead. “Back in my granddad's gen, the sector governor never even dropped by the elevator foot. Ho, never-even.”

The orbital elevator—for some reason still called that, even though it went up to the central axis of the *Hypatia*, not outside into orbit. The briefing had been held onboard because there wasn't even an hour to spare. “No,” Alec said, “I can see how.”

Her atmo suit was lumped in a wad on the floor, helmet filter cartridges open and glinting wet. That way the algae bloomed and could filter more oxy, even though the helmet specs said blooming could make it overload. But on this walk, they'd need all the oxy they could get. Alec scooped up his helmet and popped the caps off his cartridges too, a thin flowery smell wisping through all the heat and sweat.

Nitsa leaned upright, a tiny incline to her head. The compressed slab of her hair as always swelled back out, expanding like biofoam.

Had he not done it right? Things that weren't in the specs were impossible to—

“Never dropped by the elevator?” the sector governor barked,

pushing past the engineers. “That’s what you’re worried over, *Mechanic?*”

Alec stood straight—not that she would. “Excuse me, governor, sir. I’m not sure that’s exactly what she meant. I don’t think so, at least.”

“I heard. I don’t think she realizes how many square-k’s of fields this sun shield being stuck is drying to dust!”

The Infrastructure admin wriggled to the governor’s side. “Not to mention all the crops across-axis rotting in condensate from three days in the dark.”

“That’s right. We’re facing severe shortages across the entire sector, even famine, if this isn’t—”

Nitsa’s face creased in a polite shrug. “I get you, governor.”

“You’ve done this before?” the admin asked.

“Ho, no,” Nitsa said. “This has never happened before.”

“But she’s done similar,” Alec said. “I mean, we have.” Sure.

If repairing weather collectors 40 k’s up was the same as fixing the sun, 400 k’s up.

Nitsa clapped the sector governor on the shoulder like he was just some uncle. “Don’t you have a care, ho. It’ll get our best.”

“Best? Your *best?*! I’ll have you scraping out reclamation tanks with your fingernails if this isn’t—”

“Sir.” Alec’s chest heaved with shrinking G, but it all just sprang right into his head. “Governor. Sir. Nitsa’s the best mechanic in the whole partition. Not just me—all the long-timers think so. The cleverest. Her foreborn have been orbit mechanics for forty or fifty gens—since the launch.”

The governor glanced her up and down. “Then this is your chance, *Mechanic*, to keep that intact. To keep your line eating, so they’ll still be alive to fix things.”

“Right. Ho.” Nitsa slouched back against the bulkhead, but Alec saw it—that look of floating, of drifting that hovered right behind her eyes anytime anyone mentioned *that*.

“Yes sir, of course sir,” Alec said. “If you’ll excuse us, we’ve got to suit up now, get set to board the pod. You can rest easy, sir.”

The governor shoved back into the crowd, hardly gone when Nitsa started shrugging into her atmo suit. “There we go,” she said, jabbing a nod at the porthole of warbly thick pressure glass. The conduit, a cylindrical shaft of sunlight, burned across the axis sky. Off to one side dangled the sunshield, knocked out of its daily rotation that made the sunlight pass in a swath across the cities and fields along the inside of the *Hypatia*’s endless hull. For three days now, there had been no

pass—only a swath of burning constant sun across half the sector and sub-freezing night across the other.

Alec hurried to tug on his own suit, composite-fiber drooping heavy with shielding, awkward leaden helmet, sluggish claw-soled boots. No ordinary gear, but this was no ordinary walk.

“All prepped?” Nitsa’s voice vibrated through the bioelectric comm.

“Check,” Alec said. “Prepped, here.”

The other twenty mechanics called in too—Jonas, Semon, Nerine—all from other sectors. Alec had never seen a repair that had taken more than four teams, five at the most.

The G was just low enough that the surfacers admins and engineers were starting to look queasy, the sector governor fighting to hide it, when the climber-car eased into the pod station. From here up, it was atmo suits, level 5 shielding, and a maintenance pod that would only hold ten at a time. Alec followed Nitsa through the hatch, across the corridors of engineers intently monitoring the conduit and the dangling shield, and to the pod dock. The head engineer offloaded the latest reports onto their onboards. Then it was into the pod, on another nervously rickety climber track, and up again, another two hours, more up.

The pressure glass in the pod was twice as thick, twice as warbly to look through, and the conduit twice as bright. He only remembered to rotate down his visor after she reached for hers—not in the regs to wear it inside, but those burns she’d gotten, years ago. At least the tint was so almost-black she probably hadn’t seen him forget.

“Wouldn’t you know,” her voice thudded through the comm’s biomembrane. “It’s slipped its gears.”

“You’re right,” one of the other mechanics said, before Alec could. The jittery holoivid popped up to float in front of his eyes. The mag-lev drive chain that rotated the sunshield—actually, that held it stationary while all the rest of the *Hypatia* rotated around it—dangled loose, weightless. At least, as weightless as 10-ton bioelectric magnet slabs could ever be.

“Something in the magnet wiring?” another one said.

“Got to be,” Nitsa said. “No prob. We’ll find it.”

“Okay,” Alec said. “But then how in the world will we get those slabs back into line?”

“They’re magnets, ho? At least after we regrow the wiring, they are. We switch them back on, but we shunt the repel cycle and leave them on attract for just a little while.”

Of course. “They’ll pull themselves right into line.” He should’ve realized sooner, much sooner.

“My five-grandmam did that on a weather-spire climber-car,” she said. “Won a bet—got to eat beefsteak a whole week.” He could almost hear the wink in her voice.

The steady dullness of another idle ride soon seeped across the pod. The others chatted in tense bursts, but Alec kept quiet, studying bio-wiring specs through his display. If he wasn’t saying anything, it was harder to look like he wasn’t on top of things.

She had ported over her plan—all ten of them down the service gantry along the back side of the shield, then in pairs on tethers up under the mag-lev sprocket to the magnet slabs, the links in the chain. Loose on tethers, floating, an entire atmo above the ground and only a 50m-thick ceramics shield from a shaft of fusion sun. No different from what they’d done before?

A jolt—the pod had reached the end of the track, on the back side of the jammed shield. The algae filters had to be working or he would’ve gone black by now, but the inside of his helmet smelled wet with his breath. The hiss of the hatch opening ahead, then hopping bulky and blind into the airlock, then fumbling dual tether latches onto the gantry lines that would follow them out and hold them safe above the sky.

“Ready? Ho?” Nitsa’s voice thumped, cheery as always even through the comm.

Another hiss, this the faint one of tiny air puffing into vast nothing, and Alec sailed out into the open. He could barely see the glint of her suit through his visor, but even against its almost-black, the beam of sunlight from on the other side of the shield glittered on suspended specs of dust and rock, burning the very air.

“Head cams,” her voice came again, “link by teams.”

The cam feed hazed across the inside arc of his visor, the bio-receptors reproducing the angular gantry frame in front of him in their pixilated green glow. Then the pane bisected, and the feed from Nitsa’s cam sprang up on the left. Alec held his head steady, so his cam’s view that she was seeing inside her helmet would look solid and calm.

They climbed onto the gantry in a narrow line and bounded along, all of them unlatching and relatching twice past each mismatched strut on the tether post. Dual tethers each, so even when they were passing around a strut, always one was latched. The gantry frame, lumpy with old rewelds and sloughing faint dust, trailed away in his cam view as skinny as a pale hair.

Nitsa in the lead pushed herself along backwards, watching over them. In the pane of her cam feed, Alec could see himself and the others hopping along like little silvery kids. Then an angular blot swung across her cam view, like a scrap of plastic stuck to the receptor plate—

No, the shield—the sunshield. Alec swung up onto his back, his cam view mirroring hers like an opposite twin. The shield, so huge that on the cam it looked like the feed had switched off. And behind the panes, through the visor’s almost-black, a gigantic slab of blacker-than-black, looming above him so eternally colossal he could feel its presence pulsing across his insignificant chest like a pressure wave.

Finally an edge to it, and an end. And then the magnet slabs of the drive chain, fiber casings warped from centuries of vacuum and heat, floating off their sprocket’s magnetic shoes like broken-loose climber-cars. Was he up to this?

“Semon, ho, and Nerine,” Nitsa called, and Alec saw through her cam the two of them unspool their tethers and take up the first position along the sprocket’s circumference. The other teams did the same, each farther out, then Alec and Nitsa swung over to the last one.

“Us on this one. You steady, Alec?”

“Yeah. I’m fine.” Inside his helmet smelled like sweat and wet breath. But the filters were pulling that all out, so it also smelled like nothing at all.

“No prob,” she said. “Simple as a wind beacon. You start at this end here, I’m on the other.”

The magnet slab, when he planted his hands against it to halt his glide, felt solid as a caterpillar-tread plough. His tethers tugged at his belt. Below his boots, through scraps of shaded cloud, the surface stretched across its earthly arc in night’s faint glow of reflected across-axis day—murky ovals of reservoir, black-green grids of ag, and glittering blocks of city, all freezing from three days of dark. And her so calm.

Alec popped open the first wiring conduit. The axons, mounted on their silica rods, all glistening peach and moist beneath the sealed fiberglass. The next one, and the next. Then one with the fiberglass crazed like a web and the axons smeared across the inside face like jelly.

“Here it is,” he keyed through his comm. “It’s burst pretty bad.” He could see her helmet, a tiny dot across the expanse of the magnet slab. And in the view from her cam, he could see himself, even tinier.

“No prob. Reseal it, and stretch the strands from the neighbor ones in for a splice.”

“Right. And the ionic solution will expand and fill the conduit back up.”

“Ho yes,” her voice rang through his helmet. “When we get back surface, you’ll have one to tell.”

“To my grandchil—”

Curse it—had he caught it in time? Maybe the comm had clipped it.

“To my grandmam. She loves to hear about the things we fix.”

The comm line hissed open again, but with no voice, only a puff of breath.

Alec unlimbered the tooling laser from its clip, carefully swept the nub across the field of jagged cracks then back again. The white lines melted clear as the fractures resealed. Now the electrostatic attractor, to slide open the tiny gate in each adjacent section of conduit and stretch their axons onto the damaged silica.

By the time he was done, an ache clenched inside his hand and sweat itched down his arms under the suit. This close to the shield, the heat off the back face rippled through even this empty air so dense he could feel a stir against his legs like a breeze.

“Nice touch, ho!” Nitsa’s voice called. “I sealed one here too. Give a hand, here, powering up.”

He was pretty sure she didn’t really need his help, but he reeled along his tether across the warped face of the magnet slab toward her anyway, watching himself coming larger in the view through her cam.

She charged the buffer relays with fresh ionic solution and shunted the axon connections together, and the slow glow of bioelectricity percolated across their fleshy surfaces. “Ho—your grandmam will ask twice for this one.”

“Yeah. She will, for sure.” Alec’s grandmam was dead, mangled by a harvester bot whose matrix had corrupted, but she sure would’ve asked twice for it if she were still around to ask.

Three of the other teams had already reported. Then the last came, and Alec followed Nitsa along the tether post to the center of the sprocket.

“Now we take it easy and they pull themselves home!” She slid the control door open and floated inside, silhouetted by readouts in bioluminescence. “Check your tethers, all.”

Alec tugged on both of his tether lines as she powered up the whole mag-lev grid, and kept his fingers away from the buckles even though they were completely fiber-polymer.

The magnet slabs began to slide through the air as if by some

huge unseen hand. Always strange how magnetic force could move massive tons but without any other sign it was—

A grinding screech rebounded somewhere behind the almost-black of his visor. Alec couldn't hold back a flinch, sending his cam view spinning wildly—curse it! In the pane of Nitsa's, steady, a magnet slab twisted to a halt uglily off-vector from the rest of the links.

That puff of breath over the comm again. Then silence.

How in the world could they straighten that link? It was a necklace of beads and they were ants—no, fleas. And all those people and farmers and kids in the dark a world below, or opposite in constant sun.

“Our splices must've frayed,” a reedy voice said—Semon.

“No,” Alec said. “It was probably something in that link. But I don't know what.”

“What can we do now?” Nerine asked.

“Who knows,” Jonas said. “Wait for the other teams? But unless the engineers have had some flash down there at their consoles—”

“Quiet,” Alec said. “Sorry, not me. For her.” Nitsa's helmet had hunched forward, just the way her shoulders curled over when she was parsing something, was tracing pathways in her head. Alec hung there beside the gantry, no sound inside his helmet besides his breath and the squish of the filters, watching the pane of her cam ease forward and back as she thought.

The pane swung up. “No prob,” Nitsa called. Her voice sounded odd now over the comm—the invisible hand of magnetics again, causing a warble in the transmission. “But I'll need to get to that link's top panel.”

That had been in the specs. “From the link's panels,” Alec said, the answer just popping right into his head, “you can boost the field on just that slab.”

“Nice catch!” Jonas practically shouted. “Better than anything they could've cooked up from down there.”

“The field,” Nitsa said, again with that odd wrinkle to her transmission. “I'll have to... to dial it in manually. Ho. Just enough. Could get tricky. The rest of you—I want you all back up the gantry.”

The other teams reeled in and relatched along the gantry. Alec checked his tether spools—a long reach all the way out to that link.

Nitsa still floated by the sprocket control door. “Alec. Stay here, while I go up. This could kick the chain turning, I'll be on that link, tether clear, but down here things could get moving. I want you safe, ho.”

Turning—those huge slabs above him swinging down with

invisible impossible force. “Right. I’ll reel around the side a bit, just for sure.”

“That’s good too. Ho, Alec. Save me teaching all my tricks over again, to somebody new.” This time, the wink in her voice came through loud and clear, even through the wrinkle.

“No prob. Glad to.” Although he’d only really understood half of her tricks, and only really learned half of those. Maybe in another ten years? No, not even then.

The other eight mechanics bounded across Alec’s cam view back down the gantry, looking a bit more glad than they should have. Didn’t they realize who she was?

The magnet slab blotted out all of the view through Nitsa’s cam now, except for flickers of her hands in and out of pane as she pawed herself along its warped worn face. To the rounded edge. Then along it and across.

“Alec,” her voice called. “The field inductance readings, on those sprocket shoes.”

He lunged over to the sprocket control door and halted inside. “All steady.”

“Call them out to me.”

The sprocket shoes attracted and repelled the links in mag-lev oscillations, pulling them close then pushing away. But raising the field strength on the slab shouldn’t change the inductances on the shoes, not to speak of. She’d figured a better way to boost the field. Another clever trick! That was her.

“7.3, and a touch lower. Are you looking for an oscillation, or some increase?”

“Just call them out!” her voice snapped through his helmet.

Should’ve known better than to interrupt. During this, no less. He would ask her back in the climber-car, or even back surface-side, sometime in the shade. Was she increasing the axon throughput? Her cam pane hovered at the base of the panel, conduits in ten rows back and forth to the top.

Ten rows—then she was on the underside, at the panel there. Plenty of ways to boost the field from there too. But why there and not—

Her cam view pixeled off.

“Nitsa! Your signal’s down. I’m roping over.”

“Alec! Those inductances!”

That wrinkle again, underneath her shout. But she was on the underside of the slab, away from the core of the field. So it wasn’t in

the transmission. The underside?? But her tethers were so taut they were trembling. How was she—

The off-vector slab swung home, faster than it should have with all that mass, snapping into line and halting with a quiver. The central axon coils—brilliant! Doubling the field strength with one quick splice. Her best, just like she said. That was why the underside panel. But how had she gotten all the way under—

The tethers crossing past the sprocket, ten meters in front of him, slackened, then spilled weightless across his view. Unbroken. End-clips still whole.

“Nitsa! NITSA!”

There she was, small pale hunched, floating in a gentle spin out from under the slab, out across the sky.

“Worker loose!” Alec shouted. “Jonah! Semine! Rocket lines. The nearest locker!”

But that was an age away. Alec ripped his first tether from the post and kicked off from the gantry. If he reeled out the second one all the way and clipped this one to the end—

A tooling-laser discharge, diffuse from such a long distance, swung past him and wafted over the tether post. Not severing it—no, the power setting had been dialed in perfectly. Just strong enough to crease the post, to make it shake, to weaken it so it would hold for now but not long after.

“Ho, can’t have you breaking regs, now. Going single-tether.”

“Huh? Now?! Okay. It’s okay. We’ll have rocket lines here soon.” They could fire up to two hundred meters out, and she was one-ten now, one-twenty.... “Jonas! Those lines?”

“Affirmative,” the comm thudded. “Worker loose. Pole 72. Rocket lines in route. Scramble floater net, too.”

“Hurry,” Alec breathed, flinching when it came out loud enough to get picked up over the comm. “It’s okay. Nitsa. We’re coming. I’m coming. Just a minute now, and—”

Then they were there, five, then six glinting atmo suits along the gantry, clamping down the rocket tubes and aiming the lines.

“Lower!” Alec called. “One low and one high. Then I’ll latch onto—”

The gantry rail ripped loose from his hand as huge mass punched invisible through the air above him. The magnet slabs, pulling close on the sprocket shoes then pushing away. The sprocket, rotating forward. The endless face of the sunshield, puffing dust along its fiery distant edge as it started to move.

The six along the gantry had gone slack-sleeved, helmets tilted up. “Forget that!” Alec yelled. “Re-aim the lines. Get ready to fire once I’ve winched back.” She was still under two hundred, maybe one-seventy, still in range. Then suddenly backlit by a sheet of white—the unshielded sunlight—a sheet of fire sparking with dust specs each incinerated in a microsecond—

No.

“Fire! Fire them now!” he screamed. Two, then three rocket lines arced across the black in sparky streaks, trailing faint cables. Crossing neatly to each side of Nitsa floating, within easy tether range. Then past, on to the sheet of fire, piercing its rippling edge. Both lines vanished in instant puffs of vapor. Like they had never been in that space at all. Leaving only a string of sparks crackling up each hairline of cable.

“The rest!” Alec yelled. “All you have!” Even though it would result no different. Comm chatter thudded inside his helmet. Three more lines, four, five shot across the black sky. Then vanished in dust.

No. The shield twitched along in its arc—no, actually holding stationary while everything else rotated around it—and the sheet of fire swung closer. It simmered around her silhouette now, a twitching outline of purest white.

“Sorry, Alec,” her voice came over the comm, thin but steady. “Alec? Had to get done. Ho. No other way.”

“No other? But— But this? Those old mechanics you talk about all the time—your granddad never would’ve done this!”

“No,” she said. “He wouldn’t.” That wrinkle coming through over the comm again. “But I’m no granddad.”

Yes you are popped into his head. It might’ve even sounded inside the humid press of his helmet. But if so, not loud enough that the comm picked it up.

“But it’s no prob,” her voice chirped through. “No prob at all. I’m not him. Or my three-grandmam—she smelled like spent ionic solution. No, I’m just me. Ho, there’s nothing else I could be.”

Alec could almost see her worn face, weals shiny with ointment, wild splay of wiry white hair compressed against the inside of her helmet. Starting to glow dark orange, even behind the almost-black of the visor...

“I’m sorry I...” The inside of his helmet had gotten thick. “Sorry I wasn’t all you wanted. All you expected. I mean, I tried to—”

“Ho, I think I see it! I do, right along there.”

“Huh? See what?”

“The patch, the patch my eight-granddad helped grow over the hole, the hole in the shield. I ever tell you all that?”

She had, at least twice, but this was hardly the—

“The shield burned through in one spot, ho, all the way through. So there was a tiny spec of sun at night, a little circle of day moving across the ground. Really sent the station-deny crowd into a twitch. The engineers weren’t sure—”

“Nitsa? I have to tell—”

“—weren’t sure how to get a patch to adhere over the hole, with all that heat. Ho, no easy trick. But he knew— He knew— That once they—”

He couldn’t look. No, he had to. He needed to. But it was only a wink, a tiny flash, not even a puff. A hunched glinting spec drifting toward the white particulate sheet, then only the searing white still sparkling across the sky.

Nothing else—for sure. Alec’s visor fogged up as he gently winched in his tether, pulling himself back to the gantry.

“Mechanic?” the comm thudded. One of the glinting atmo suits bounded near and landed in a halt, two floating coils gathered in its arms. “Her tethers. Here they are, for you.”

“Mine weren’t damaged—only that section of post.” He latched his back in, secure.

“No, not for that. If you wanted them. To keep. To hold a service.”

A service, for Nitsa? “No,” Alec said. “I don’t think she would want that. It’s the sort of thing she would’ve hated to sit through herself. No, we’ll leave them here.”

“Latched to the post?”

“No.” Alec swung down onto the gantry, pressed the latches open one each hand, and let them float free together.



Harvester Dreams

Michael J. DeLuca

Morning blindness flooded the transparent womb of the ob room. Hector shuffled to the console, twitched the opacity up to a tolerable level, set down his tea. He spent a minute knuckling his aching skull. Then he stepped onto the control disc, fired up the fusion and took the ob room out over the ag.

The fight with Mela the night before had not been pleasant, but work, he was perpetually astonished to discover, never failed to cheer him.

The conduit was a brilliant white spear overhead, barely broken by ribs of fair-weather cloud. The ag spread into haze in every direction, curving gently upward with the concavity of the *Hypatia's* hull: chessboard squares of rippling corn, glittering rice paddies, fallow browns, soft, bright soy, apple plots flowering white, jagged blue agave and lush cane, delineated by the dull, raised grids of rails. Here and there, a skeletal hulk loomed indistinct—some remnant structure of the ship's propulsion systems, long-dismantled; shade crops grew among its latticed shadows: wax-leaved coffee, herbs, tobacco.

In a way, Hector held dominion over all of it. In another, he was its menial servant. It depended who you asked.

A crowd of Workers waited below, lens-tipped appendages craned upward. He smiled in spite of the headache, in spite of the persistent awareness that no matter how he chose to rationalize it, everything Mela had said was true. He called up the log feeds. *Foreman*, they were saying. *Foreman, we need your judgment.*

He brought the ob room down among them, almost to the earth. A grand menagerie they made, his subjects, finely adapted to

their tasks: delicate pollinators, dextrous, long-limbed harvesters, knob-treaded aerators, juggernaut ploughs. “You don’t need me,” he said. “Your designers gave you all the understanding you need. But I’m here, ready to listen. I’ll help if I can.”

The oldest of the ploughs rolled forward. *Your wisdom grants us insight into the will of our designers.*

He nodded, acknowledging the rote response. The Workers appreciated repetition. They were simple beings, the product of their design. They believed in an infallible, benevolent humanity the way humanity had once believed in angels, the way so many Relics now believed in their inscrutable alien creator, the Ix. And Hector was their ambassador, though he’d only held this job a month and the humans who’d made the Workers were fifty generations dead.

He loved it.

H1703 has had a dream, said the plough.

The Workers’ reactions flooded the feeds with the euphemistic, agricultural info-speak they used among themselves, too much to decipher. Excitement, urgency. They didn’t know what to think.

Neither did Hector. Usually they wanted him to speculate on some parallel between human and Worker experience, to suggest how their programming might be adapted to problems unforeseen by the designers. Proof enough that humans weren’t divine: in their wildest dreams, the designers could never have imagined the Ix.

One of the harvesters was thrust from the crowd, the tips of its lower appendages digging gouges in the fallow earth. It averted its lens from Hector’s face—shy. *1,797 bushels Aurora, it mumbled. 179,009 bushels Corinth Black. Estimate 0.13% of harvest lost to white scatter-rot.*

Another burst of commentary, too rich to take in, this time from the harvesters alone.

In fact, all the harvesters dreamed the dream, the plough interpreted, but H1703 the strongest. We wish to ask, was it a true dream?

“What kind of dream?” said Hector, frowning. At night, when the *Hypatia* spun on its axis and the sun shield blocked the conduit, unoccupied Workers performed self-diagnostics. In a sense, they always dreamed.

Windfall 12% above standard deviation, said the harvester H1703, pushing the sharp tip of a picker claw down into the topsoil.

The plough clacked its mud shields in approximation of a human clearing his throat. *They request that you engage with the record directly.*

“Directly,” repeated Hector. A neural connection. If Mela knew he was having this conversation.... “Humans aren’t accustomed to

taking in information that way, except in matters of grave importance. We rarely use direct connection even to interact with each other. There can be...emotional risks.”

The verbose reactions conveyed irresolution. *The harvesters consider this a matter of grave importance. It could effect crop efficiency and yield.* There was a flurry of exchange between the plough and a few of the pollinators, and Hector saw what was coming.

You did engage with one of us directly before.

He took a long gulp of tea.

This job had come as a windfall. The ag foreman only existed because of the Ix—of what the Ix might have done to the mindset of the Workers when it revealed itself a century ago, giving sentience to so many of the tools of humankind. According to the records of every foreman since, that had consisted of exactly nothing. Which was about the sum total of effort the job required: it amounted to checking the work of a computer. In the eyes of society, his family and friends—Mela—that placed him perhaps slightly below a maintainer of waste-processing equipment. He'd never been what you'd call “employable”; if he cared what people thought, he'd never get up in the morning. But this job had been Mela's final effort: if he got himself fired again, he'd lose her too. He knew he had to learn to care. To do that, and not learn to hate himself in the process, he'd needed to know what it was like to be a Worker.

Or maybe he'd just needed an escape.

Reliving that hour he'd spent immersed in the pollinator was almost effortless: the wind in wings, the shapes and scents of pollen, nectar, the textures of stalk and leaf. Through the pollinator's gaze, he had understood the vast complexity of the fields of the ag by a set of heuristics that could be called up and comprehended in a span of wingbeats. No wonder these concepts of self bewildered them. Hector envied the Workers: so little expected of them, so full of questions. It was the answers that ruined things.

But it wasn't his place to withhold them.

He queued up the timestamp in question from the past night, after he and Mela had given up on the fight, which could no longer be solved simply by his holding down a job. He compared the individual log for harvester H1703 with the data for the other harvesters.

These were no diagnostics readouts.

Shit.

He understood that pollinator better than the girl he lived with, and here he was, about to do it again.

He made what parting courtesies the Workers expected. The immersion vat gleamed in an alcove on the access corridor that led to the ob room dock; he doubted anyone but him had touched it since its installation. As he understood it, they were used mostly for medical purposes, and a smattering of deviant sexual practices. The socket fit into the nerve center at the wrist.

Warm, viscous liquid closed over his head.

He found himself possessed of ten finely-articulated limbs, his small body crouched lightly atop six of them, biomechanical muscles coiled, ready to spring. He stood at the edge of a gaping hole in the earth—in the world. Rich topsoil gave way to layers of torn alloy, ceramic, plastic, air and fire. Beyond it: blackness. Wind rushing at his back.

Across the gap, an enormous, spindly-legged harvester—like himself—stepped over the edge and spilled out through the rupture into space, long limbs splayed and flailing. As it shrank away into the near reaches of the Artifice Belt, a hatchling spider sailing by night on the breezes of the ag, caught in the glare of a sower's lamps, Hector formed the conviction that his fellow harvester, his friend and sibling since existence began, hadn't fallen, but jumped, willingly, eagerly, into that abyss.

He felt the same temptation.

The scene shifted without transition. Now Hector resided behind the lens of that lost harvester, spinning away among the countless private ships that clouded the Belt, looking back upon the endless, cylindrical *Hypatia* like a cane-stalk suspended in nothingness.

Hector had never left the *Hypatia*, though the stars and the ships of the Artifice Belt gleamed every evening through the portholes in his bedroom floor. The harvester H1703 had not even conceived of space; it had been built for the ag, for apples and earth and the conduit's warm rays. In this cold blackness, surrounded by distant lights, it felt not fear, but freedom. It didn't need to breathe; it couldn't experience pain. The cold, the force of absence pulling at its chest—they were new feelings. In the moments before that absence thrust inward to consume the spark of its consciousness, it struggled—Hector with it—to fit those feelings into its concept of existence.

He yanked the socket from his wrist, thrashing for breath in the belly of the vat.

Back to the ob room. Back out over the ag to confront them. Green leaves, red fruit, blue heaven. Empty teacup. Hand. The conduit burned overhead, but the memory of cold wasn't easily overcome. The

Workers left their toil in the fields to surround him again, not human enough to show concern, their emotionless lenses somehow conveying the question he knew they'd ask if they could speak. He struggled to muster the self-control to work his lips and found he had nothing to say.

"I'm—sorry. I can't give you an answer. I need to think."

The rush of machine response gave inarticulate voice to a thousand questions, but at an unsubtle clank from the plough—*secondary irrigation blockage, plot 7763*—conversation trailed off. They knew when to coddle him and when to push. Did that make them capable of dreaming?

He couldn't think. Forgoing the usual closing remarks—afraid of what he might admit—Hector pulled the ob room away. Up beyond the range of the Workers' limited sight, he dialed up the scale of the control disc, dimmed the coordinate outputs. Below, lines and colors blurred to a carpet of lushness. Navigating by the conduit alone, he paced out the limits of the ag atop the clouds.

Blackness, cold. Beckoning. What made a dream true?

He queried the histories, paging through patterns of yield and demand. They were human patterns, organic: fads and superstitions that caused soy to swell one generation, sorghum the next. The Workers always managed to adapt.

He slowed to observe a planting. Aerator and sower toiled in line, flecks of dark earth flying in their wake. He reviewed their feeds; all parameters hewed to the median, and they chatted of soil composition and the weather. In the poetics of their machine speech, he could detect no doubt, no resentment.

Foreman, one of them said, lens canting up. *Contamination threat near critical on agent referent not found. Recommend quarantine measures.* A long string of coordinates—plots awaiting harvest. News traveled quickly.

"Quarantine. The harvesters—you think they're...a threat to themselves. To others?"

The answer was a rush of irrelevant data. Only the old plough really demonstrated any understanding of human speech. The sower had been speaking euphemistically—or not to Hector at all.

He took lunch at a cafe on the Appian Way rather than the ag itself as usual. Caprese salad with a lot of olive oil and lemon, a dry lager to wash it down. He called Mela without expecting much. She was always busy. After last night he could forgive her not wanting to see him. If he just gave her some time....

A woman seated herself across from him as he started on his

second beer, though the tables weren't quite full. She was older, sharply dressed, an anemone pinned to her sash, and for half the beer she spoke almost inaudibly to the air in Bissbanian, occasionally throwing him an apologetic glance as she snuck a dainty slurp of pho. At a subtle flash of color from the stylus she'd laid on the table at her elbow, he realized she wasn't on a remote connection. She was talking to the stylus—an Ix Relic. Mindcasting—the same way he talked to the Workers, only more intimate, without a console.

“You look preoccupied,” she said to Hector.

“Am I staring?” He gulped down the last of the beer.

She sat back from her bowl, picked up the stylus and twirled it.

He exhaled. “This is going to sound stupid. The Relics—you think they have free will?” He colored a little, realizing he'd spoken as if the stylus wasn't there.

She laughed, elevating her chin, exposing the graceful folds of age in her throat. “Are you asking me if I think they have souls? No, I don't. But I'm not so sure we do either. The Elu, now—the Bissbanians—maybe they do. Because we know their god exists.”

“But their god—the Ix—made the Relics.”

“In our image. Don't get me wrong, Mister... Aias? I think the Relics deserve as much sympathy as any human. The fact we don't have souls is what makes our lives precious, and what we achieve with them so much more important.”

He looked at his embroidered coveralls, handed-down from the ag's previous foreman. “Oh—my name's not Aias. I'm—”

The tip of the stylus flared green. “Excuse me,” she said.

He'd been away too long. He took his tray to the composter.

He found the old plough at work turning up rootbound soil on a plot of Corfu cherries that had been clear-cut against the latest cell blight mutation. It acknowledged his presence with a clang—offended, no doubt, that he'd taken off earlier without saying goodbye.

“If you still wish for my input...” he began.

Your wisdom grants us insight.

Hector nodded. “Not knowing,” he said, “is a part of human experience. We don't know where we came from, we don't know where we go when we die. Out beyond *Hypatia*, in the emptiness of H1703's dream”—how had the harvester put it? So many stars, so much more black—“there's so much unknown, it's hard even to imagine it—more than we've been able to explore even in the combined lifetimes of every human who ever lived. We don't think about it often—there's nothing to be done about it, after all—but we do think about it. One of

the ways we do that is through dreams. Am I—am I making sense?”

The plough halted, turned its lens to Hector hovering beside it over the ravaged earth. *Do you wish to convene them?*

“The harvesters? The others? No...no, not yet. You understand me better than they do. These are difficult concepts. Many humans never even consider them. I don’t want any of the Workers to act upon them lightly. I don’t want to speak on them lightly. Taken the wrong way, they could be considered dangerous.”

Dangerous, said the plough. *Like the direct connection. And humans escape this danger in the same way, by avoiding it.*

“By...not thinking about it. We recognize our limitations, and we choose to turn our attention to things we can control.”

H1703’s dream was true, but we should disregard it.

“The Workers—you can’t control human demand. You couldn’t have foreseen these new invasives. You adapt, focus your attentions on what you can change: selecting gene hybrids, preparing the earth, irrigation, bettering yourselves...” This wasn’t working. “It’s not the same, I know.”

Those are variables foreseen by our designers. There, we have no doubt.

“I’ll speak to the harvesters, to everyone, in the morning. I—just want to be sure they’ll understand. This isn’t like the issues the Workers have engaged with in the past. You said yourself the yields could be effected. If that happens, the ag could come under scrutiny from the Senate, from humanity, like it has never known.”

He’d spent too much time reading news feeds over Mela’s shoulder not to understand the politics. The Senate didn’t care about yield fluctuations, within reason. For fifty generations, the Workers had provided diverse, delicious sustenance so reliably their existence could be effectively ignored. But if they were suddenly to reveal true sentience trying to hurl themselves out the airlocks in search of ultimate truth, humanity would be obliged to perceive them as an autonomous population—attention even the Ix Relics hadn’t incurred.

The Workers controlled the human food supply. If they understood that—and if they were truly sentient—they could hold *Hypatia* over a barrel. Not to mention getting Hector fired.

He couldn’t read the plough’s reaction. Root matter conditions were ripe for blight, but nutrient adjustment and aeration should eliminate the threat. Its caterpillar treads reengaged with a thrum.

He took the ob room back to the dock and made tea, herbal this time—he couldn’t handle caffeine in the afternoon, especially after two beers.

Any previous foreman would have reported this already. How many perfectly acceptable career opportunities had he shot in the foot because he couldn't stop himself wondering if there wasn't something more?

He called up the central controller. The entire exchange of that morning was there in the history, flagged for review. Plenty of people had access to these logs. His daily audiences were always flagged, and he had yet to be called on any of it. Still.... He exported everything from the time he'd knocked off work the day before until his conversation with the Workers that morning—the dreams, his direct engagement with harvester H1703—to a personal cloud partition, compressed and encrypted. Then he overwrote the most dangerous sections with data from the same twelve-hour period two weeks prior.

This was exactly the kind of thing that kept him from holding onto a job.



He got back late to the apartment, head swimming. There was a message from Mela on her way home about needing to talk. Still time to make dinner: steamed sweet corn on the cob, falafel with tahini, and small, clear cups of a white sake blend to which Hector knew she was partial. It was soothing working with the food, shucking corn and mashing chickpeas. A simple, fresh meal. She wouldn't notice—but why should she?

Mela was the woman he'd always aspired to and more: smart, long-limbed and yoga-supple, inclined to fixer-upper relationships. It was his own fault he hadn't permitted himself to be fixed. Hadn't been capable.

She waited to say it until they were sitting down. "This isn't working. You can't deny I tried."

He couldn't.

"All those jobs you turned down—the senator's office, the ed department—you sabotaged yourself."

"I like my job now," he said lamely. She was ambitious. She wanted her life to mean something. Hector did too—just not in the same way. That was the cusp of it. "I care about my job."

She ate efficiently, without pleasure. As soon as she was finished she'd be gone again, remembering some pressing thing she'd forgotten at the campaign. "You care how many ears of corn were picked today? Or whether the same exact number of widgets were replaced

this month compared to last? I'm sorry, Hector, but your job is a waste of your ability."

"I don't want to have this fight again."

"Neither do I. Look at us—I'm working late every night. I'm trying to accomplish real change. Every time I get home, here you are relaxing, drinking, dinner already on the table. If I wanted somebody to wait by the door for me, I'd have an Ixbear, not a boyfriend."

He leaned back, breathing the scent of the food, looking out through the portholes in the floor at the Artifice Belt and the vastness of stars.

He'd put more into his job lately than their relationship, telling himself it was what she wanted—not that there'd been any chance for things to go otherwise, as she quietly pulled away. But he couldn't tell her that. He couldn't explain the aristocracy he'd built for himself, the escape of being the pollinator, or the weird, euphoric terror of being the harvester. Not when the two of them had never gotten close to trying the vats themselves.

He couldn't ask her advice. Maybe that was the worst of it.

The news feeds were about the HM3C-Xiangqui merger, a scowling Senator struggling to make headway against an unflappable female VP's tenacious defense of mindcasting as an alternative to Ixtech. He ought to care; Mela cared.

"I've got to get back," she said, rising, smoothing her skirt.

None of his arguments had changed. He wanted her respect—didn't care about anyone else's, but hers....

She kissed his cheek, made a perfunctory moue at the brush of his beard and swept from the apartment, fancy sandals clacking.

He slid her barely-touched sake cup to his side of the table and opened the exported logs.

Hours later, when the sake carafe was bone-dry and the Gliese system's tiny red sun was in its umpteenth transit across his bedroom floor, it occurred to him to find out what the harvesters had done, now nearly 24 hours ago, on waking from the dream.

There were thousands of harvesters. Half of them had immediately sought out the closest plot of fallow earth and begun raking their finely-articulated picking appendages over and over through the dirt. They hadn't been made to dig. Or to doubt. He couldn't tell the extent of the damage—to access the maintenance logs or the parts inventory, he'd need to go back in to work.

What would he have done, waking up in H1703's place?

He skipped ahead. Thankfully, the harvesters who'd begun by

communicating with each other soon shared their common experience with the rest. Many returned to their allotted tasks as if nothing had happened. The rest combined their efforts, soliciting help from excavators and ploughs.

With more powerful tools, the topsoil was yielding enough, but beneath it was *Hypatia's* hull. Encountering this, they managed only a few gouges in its surface before recognizing their limitations.

By then it was light, and they'd pushed the disturbed earth back into place, concealing their efforts.

At the audience with Hector, they hadn't said a word about it. He read over the exchange of that morning, then read it again.

They hadn't lied—just failed to share information. He was lucky the Workers couldn't access the controller. They'd gone right ahead, without asking, without thinking, and tried to dig themselves through into vacuum. But then they'd come to him, wanting his insight, wanting him to experience the dream as they had.

And when he couldn't help them, couldn't give them an answer, what had they done then? What were they doing now?

3:15 AM. He didn't know if they were capable of overriding the diagnostics sequence. Something—perhaps the same thing that caused them to dream—had overridden it the night before. What did it take to cause a machine to dream? An intervention from the Ix, that unknowable cosmic intelligence wandering the void, hearing the thoughts and aspirations of all sentient life and acting on its own wry whim to reward some and frustrate others.

Or something else?

Hector stepped back into Aias's overalls where he'd left them crumpled on the bedroom floor.

The Appian Way was on fire with late night partiers. Hector kept his head down. He shared the lift with three women naked but for blue and green body paint and crowns of vine. For an instant he thought the middle one might be Mela. But Mela was beyond all this, off somewhere struggling to further civil rights and preserve civil liberties in her prim skirt and sandals. His best, pathetic hope was that the frustrations of their argument might linger enough to distract her a little.

The girl on the left, he thought, struggling to focus on their faces, was young and slender enough to be an Ix mannequin, though the paint made it impossible to tell. And the woman on the right, gazing back at him serenely...it was the woman from the café at lunch, the one who'd brushed him off to talk to her stylist.

They got off on a residential level; the woman from the café gave him a wry wave. For the remainder of the long ride to the ag access corridor, he was alone.

He made coffee. He hated the taste, but he needed it. A little cardamom and a lot of sugar helped. He couldn't remember the last time he'd been up this late; it was doing weird things to his head.

He glanced through the parts inventory. Since yesterday, it had been depleted by five thousand articulated picker limbs, three hundred chassis shells, seventeen sets of combine threads and nine excavator jaw assemblies: a year's supply costs in one night. A large proportion of the corresponding broken parts hadn't been returned. He imagined the twisted, severed limbs of harvesters strewn among the fields, waiting to break plough blades and foul up winnowers.

He switched to the current ag status.

The sowers and planters lay silent in their bays, along with the vast majority of the pollinators, aerators, ploughs and excavators. Even some harvesters, perhaps one in three, were dreaming their usual numb maintenance dreams—satisfied with their lot, having suffered enough the night before?

The rest had gathered on an empty plot slotted for two fallow cycles after a particularly nasty flare-up of red rot. The old plough, their spokesman, was there, along with a pair of excavators.

Hector ratcheted the control disc scale all the way to seven leagues and rocketed down there like god on a thunderbolt.

They worked under cover of darkness, visible only by the blue glimmer of their cores and the harsh, molten sparks of a half-dozen welding cannon. Where had those come from? The logs were a torrent of machine speech, patterns he'd never seen.

The phosphorescent glare of the ob room's spots revealed a small circle of *Hypatia's* pale hull exposed at the bottom of a pit, where spiderlike harvesters swarmed around a low metal dome, arc-welders flaring. Pollinators bobbed like fireflies.

"What's going on?" said Hector. "What is this?"

The harvesters scattered—most of them. The ones with the welders, two to each cannon—he couldn't believe they even managed to control them—hunkered over their work, refusing to budge.

The old plough stood motionless atop the piled earth. *Foreman. Your wisdom—*

"Yeah, what about my wisdom?" His hands were shaking. The coffee.

—grants us insight into the will of our designers, but we realize it is

incomplete. As you often insist, you are not our designers. There are things our designers could not have foreseen. This is one of them.

“Did you tell the harvesters what I said—not to act rashly, the risks?” Meters above the welders’ glare, he realized what the dome was made of: the body parts of Workers, fused together into plates.

That some things must remain unknown, said the plough. Yes. The harvesters insist they may seek this unknown if they choose. I couldn’t dissuade them. Had you been present, perhaps—

“What’s under that dome?”

1.7 tons ammonium nitrate fertilizer, 53 liters compressed 30:1 methane/biomass ethanol solution, and the pollinator P7209.

A bomb, built from ag byproducts, big enough it just might have the power to rupture the hull. With a pollinator wired inside. How could they have learned to do this? How did they even know the concept of explosives? It must have come from an external source. Which meant the same must be true of the dreams.

The Ix?

“How long until it’s finished?” he asked. “How long until they set it off?”

Then he saw the count—in the log for the pollinator P7209, synced with the system timestamp, but in reverse. Daylight—thirty-nine minutes.

He swooped close to the bomb, as low as he dared, the red arcs of the welding cannon reflected in the ob room floor. “Listen to me,” he told the harvesters. “You have to stop. I’m sorry, I was afraid, I didn’t know what to say. But there’s nothing out there for you. Your designers made you for this place, for the ag. They designed you to work in the fields under the sun, to grow food for us. I...to be honest, I envy you that.”

The logs scrolled with their chatter. The welders kept working, the timer didn’t stop, but they were listening. He didn’t know what he could say, but the alternative was to report them, to do what he got paid to do, too late to keep the only job he’d ever cared about. Maybe too late to change anything. The Workers would die finding out there were no answers.

“Before I came here to the ag, I was like you—looking for something I couldn’t see, ready to throw away what I had for another chance to find it. I threw away a lot that was good, and I regretted it. But when I saw the way you were—the Workers—I realized I didn’t want to look anymore. Simple work in a beautiful place, making something that’s needed. I realized that’s enough. I learned that from you.”

His mouth coated in the bitter taste of coffee, his head full of the terror of coldness and stars, it felt like a confession. He owed Mela, wanted her in his life, but now she was gone.

“Dreams are vague, unclear. Just because you dreamed of a hole in the world doesn’t mean you have to dig a hole to see the sky. I know you’ve never dreamed before. If I could let you all plug into my head so you’d understand, I would. You deserve to understand—but that takes time. Out there, outside *Hypatia*, there isn’t any time. Just emptiness. If you want to see it...maybe I could take you. One of you, safely, in a shuttle. I can show you—just not this way.”

Two of the arc welders had shut down. The metaphors of the harvesters’ machine speech shifted from overripeness, prevailing winds and wormcastings to hybrid grafting, plantings, pulling weeds. He was changing their minds.

“I’ve never left *Hypatia*. It’s my home. It keeps me warm and safe and fed. I’m willing to leave, if that’s what it takes to show you what you need to see. But I don’t want to see *Hypatia* harmed. If you don’t believe me, keep your bomb—but wait. Give me a chance to show you. Shut down the count for now. Cover it up again with earth. And let my friend, the pollinator P7209, whose mind I shared, come out.”

In the logs, the pollinator’s countdown stopped. The hot, angry light from all but one of the welders had ceased, and that one reversed direction. From atop the heaped earth, the old plough clanged.

Hector breathed. He’d doubted their sentience. Treated them like children, pets. They understood him better than he gave them credit for.

Then one of the harvesters moved out of the crowd with an unsteady gait. H1703’s steps seemed palsied, as though its joints were clogged with grit. Its log feed spouted gibberish, errors. *Fungicide contamination diagnostics offline. Backup referent not found could not be mounted. Standby overridden.* It stumbled towards the bomb, towards the new gap in its surface being opened by the last of the welders.

The tip of one of H1703’s long limbs slipped into the gap. There *had* been an external influence: no sudden, miraculous sentience, not the Ix at all, but sabotage. It was the only explanation.

P7209’s feed went silent.

Then he was pulling the ob room away and down, shouting uselessly, thinking idiotically that he could shield some of the Workers from the blast. And then the bomb went off: a lightless explosion, no flash, no momentary vision of green, just an ash-dark shockwave that slammed the ob room wall against his head.



A rejuvenation berth. Viscous warmth, distant light, low gravity. He sat up from the vat.

Flowers drooped in a glass amphora—lilies. Tasteful, impersonal. No card.

News feeds blathered silently at arm's length overhead. He reached a tentative arm, fresh white scars at the elbow and wrist, to shove them away. He knew what they'd say. But the image stopped him: it was that woman from the HM3C, the mindcasting advocate, looking positively glowing. They must have won in the Senate.

He recognized her this time—the smile. He'd never seen her smile like that in the feeds. In the café, though. In the elevator.

He turned up the sound. The HM3C was taking over operations of the ag. A windfall political win for the corporation. No mention at all of the Workers.

What had she said? The Relics have no souls. We don't either. That's what makes us great.

What about the Workers?

He looked at the lilies beginning to wilt, the threat of brown around the gills, and was filled with sudden, implacable dread they were the last green growing thing he'd see.

Behind his eyelids, he sought the refuge of the pollinator's wings, zipping through the orchards of the ag, blue heart humming, nectar sweet at the tip of its proboscis. Instead, there were spiders, flailing, falling into the stars.



When the Jiroft Went Away

Justin Howe

The forecast had been stuck on catastrophe for at least two centuries. But I never had much use for lose-lose games. Not since having my sockets done and getting a taste of the Up and Out beyond *Hypatia*.

I ghosted long-haulers, ‘vat-rattling and vasting radio-waves as they pinged the shielding like grade-schoolers tumbling jacks for all the cosmos to hear. Might say I’ve seen it all, if by “it all” you meant a whole lot of the Big Empty in between.

The only lesson it-all’s taught me is timing means everything.
Right time. Right place.

Hard enough to get both right when we had only the one world under our feet. Now that we’re off-ship and spread across a dozen worlds (hundreds if you count all the Hab Sats), humanity’s back to playing lose-lose games. Doesn’t mean no one ever wins. Fortune’s slot machine’s always spinning. Sometimes it lands on jack-pot. Other times, crack-up.

It doesn’t always pay to be optimistic.

The Captain found that out the hard way. How the Jiroft felt about it I can’t say.

They were one of the system’s charity cases. The Jiroft. Nice enough species, descended from anteaters, which on the cosmic scale put us near kissing cousins. A solar flare had reduced their once green world to desert, and the survivors numbered less than a hundred. The Xeno-Anthropology Corps loved them. They hadn’t had this much excitement since the Ix lifted a tentacle and said, “Boo.”



Now as a sham humanitarian I could at least recognize a real one, and the Captain was the real deal, with a CV full enough of capital C Charity. No sham at all about her. You'd think she was waging a one woman war against negativity. Every meal's a lecture and you can't get past the hummus without hearing how each chickpea was individually raised and brought to ripeness by the nurturing hand of a well-fed and ninety-nine point nine nine nine nine etc. percent satisfied member of society; no 'bots nor negative energy for this chickpea.

She had us working like a well-oiled machine. We'd drop out of transit, bumble-wake, jet to orbit, and flutter down in the shuttle carrying the latest crop of aide workers fresh from bumble-sleep.

That's the way it used to work, before Media Barons started subsidizing Xeno-Anthropology. The MB wanted our *vermilingua* brothers and sisters brought on board and given the gift of conspicuous consumption. So here we were carrying not only the usual assortment of frozen aide workers and vacuum-packed ant farms, but also the finest in immersive socket-vat technology.

The Captain wasn't happy but what could she do?

We landed on the field and taxied to a stop. The officers did whatever officers do, and the xeno-anthro bunch got dethawed and vita-slapped by Basil, our medico. I stayed aboard with the other vat-ratters: Sunming, Charlotte, and Devi. The usual assortment of Up and Out drifters. The four of us lay socketed in our vats spread about the ship. They patched their data on to me, and together we ran the shuttle through its shutdown routine.

Beyond the shuttle's cooling exterior uncanned air waited, bringing the sweet scent off the swaying bromeliads (reintroduced now how many trips back I couldn't remember). Tomorrow would have me unloading the 'vats and bulking them across the compound. Tonight I'd sleep. Glorious times indeed.

By the time Basil got around to giving us our shots it was late, and I was feeling as thin and sense weary as a greasy palm print on a windowpane. The Captain stopped me on my way out.

"Tuli. A word."

"Sure thing, Captain." Nothing but smiles. No negative energy at all. I wasn't in the mood for a lecture. We went to the storage bay where the 'vats sat stacked neatly as buckyballs.

"How do you think the Jiroft will take to it?" She had her arms behind her back and stared at the 'vats.

“Like ants to honey. MB wants the Jiroft vasting, so they’re giving them the best.”

“Basil already has socket surgery lined up for the first batch. You’ll be going under with them once they’re ready to vast.”

“Who? Them?”

“You. The Jiroft. I’m not having them go under alone. XA might have sold the contract, but that doesn’t mean we have to sell our principles.”

“No. I guess not.”

“Good. Expect to play tour guide the day after tomorrow. Let me know how they take to it.”

The Captain gave me the nod and that was it. Dismissed.



‘Vat-rattng is a curious thing. The first stage is chatter, the web dominated by the Media Barons. The second stage is where I spend most of my time, plugged into machines and an array of devices. I had to admit I hated it. Give me one body and five solid senses any day. The third step down is where you tap into the cosmos itself, plugging into the satellites. It’s radio waves and x-rays, the heat death of stars, the wobble of micro-meteorites. Beautiful stuff. It makes you’re head spin.

The next day saw Devi and I socketed up. We controlled the bots, and bulked the ‘vats here and there. Sunming and Charlotte wired them in the assembly hall. When the deed was done we unplugged and hoofed it home.

Toot and her brother were waiting when we got there.

Our very own Jiroft pair, they hung around our quarters whenever we landed. “Shows they have taste and prefer us to the xeno-anthro crew,” Devi said. They sat on the steps, sucking on ant farms. Each one wore overalls with their squawk boxes strapped to the front.

“Up and out.” They tapped out when they saw us. “Up and out.”

“Up and out,” I said.

The pair clapped their claws together, the long black nails clicking.



Shut-eye equaled bliss, and when my buzzer chimed I crawled from bed not quite fresh as a daisy but certainly a sight better than I had been.

The assembly hall was crowded. The Jiroft sauntered about, talking in their own language, peering at the ‘vats set up in rows. The xeno-anthropologists looked important and official with their khakis on and their dat-boards. The captain stood on a platform in the center of the room, Basil beside her, the two of them having a conversation that stopped as soon as I got near.

“It’s going to be a good day. A very good day.” The Captain beamed enthusiasm.

“You ready to work?” Basil asked.

“Everyday.”

“Good, we’ll begin.”

Basil signaled to the Captain who clapped her hands. One of the xeno-anthropologists took the stage. He had an MB patch on, some advertisement that flared and raged across his shirt. I could hardly pay attention to what he said for all the mice and cats chasing each other with hammers across his chest. The usual self-important gubbish I suspected regarding what a grand day this was for the Jiroft and the cosmos at large. The Jiroft paid him no mind. I felt a tug on my sleeve, looked down, and saw Toot. A patch of fur had been shaved off the side of her head, and the sockets still looked pink and swollen.

“We go together,” her squawk box said.

“Up and out.”

The scientist finally finished his need to mark the occasion. The Jiroft pointed their snouts at Toot and I, and Basil led us to the ‘vats. After that it was simple procedure: sockets plugged, gel flooding the cradle, warm, cloying, dragging you down, and—

—First stage, pure thrill. I figured Toot would want to stay here, but a brief glimpse told me she hadn’t, so I went deeper—

—Second stage, the inert shuttle and the bots. Toot had gone this way. Bots wavered about in the yard as if jolted by a sudden charge.

But Toot had not remained —

—Third stage, ping ping went the satellites and the cosmos split. I caught the hum off quasars like they were sea creatures passing; the fading rumble of nebulae broke over me, and the stars pulsed along towards nova. No sign of Toot, and disappointed I started back towards waking.

So much for this great day.



My head was feeling fuzzy.

“How was it?” Basil asked as I sat up. “The Jiroft ready to buy AlphaCrisps and make the Media Barons proud.”

The after-trails of the universe still lingered in my eyes.

“I think so.”

Then Toot came out and the Jiroft nearly rioted. Basil could hardly get through the press to run a post-vat check on her. After that, he had his hands full. The Jiroft all wanted to go under.

“Isn’t this marvelous?” the Captain said. Maybe she was thinking she’d get a few lines in the daily feed and another award for the CV.

That’s how it went for the week.

Basil did the surgery, and I wasted my way into the infinite playing chaperon. Not that it mattered. It was always the same. The Jiroft went under with me then disappeared. Basil would ask if I saw them, and my answer was always the same. The Jiroft were there—but also elsewhere.

“They’re either so deep I can’t see them, or playing a joke on us.”

Basil shrugged. “Media Barons like what they see. The Captain’s pleased. What more do you need?”



On the nights before departure the Captain liked to have a formal dinner. Of course, Charlotte, Sunming, Devi, and I hated it. But not to go was A Very Bad Thing and a sure way of finding out how quickly capital C Charity can get up and walk away. So we went, dressed in our wrinkled formal wear we all kept scrunched down at the bottoms of our packs.

The night passed as dull as you can imagine. The officers fell over themselves doing their best to catch the Captain’s eye, and the xeno-anthro crowd made speeches. Those of us not inclined to make tenure or receive promotion went about our business of drinking ourselves silly with the distillations of barley, rice, and tangawisi.

The Jiroft bustled about, looking as tired and bored in their tuxedos as any old ‘vat-rat. Toot found me lingering in one of the corners. She swayed on her feet, and I wondered if it might be possible to ferment ants.

“Up and out.” She touched her sockets.

“Up and out,” I said.

She shook her head and took my hand, pulling me along.

“Now. Up and out.”

We wandered out to the main Quad and went across to the assembly hall. By now she didn't need any help going under, and I had to rush through my linkup procedure to keep up.

Time and place, like I said.

Up and out.



The black burned with quasar glows and the after echoes of dead stars drifted on the universe unfolding and saying hello. Vasting. Toot was there. She pulled me under. It was unlike anything I'd ever experienced. Sure I was a 'vat-ratter from a long time back and I've pinged the satellites with the best of them. But the Jiroft? The Jiroft were something else. They snapped their black claws, and the universe peeled back, stood on its end and said, "Come on in."



I woke with an acrid taste in my mouth like I'd been sucking on steel wool all night. Basil was looking down at me, wide-eyed and staring with the daylight behind him burning fierce.

"You right, Tuli?" Basil said.

"Yeah. Yeah. Yeah. Let me just get up." I figured I'd give Toot a pat but when I turned to do it, I saw that she was being carried out of her vat. Xenanthropologists were running around, their eyes brimming with tears. The other 'vats showed snouted shadow-forms within. Monitors tolled out a steady flatline tone.

"What the—?"

"Dead," Basil said. "All dead. They filtered out after dinner one by one, coming here and plugging in."

"Toot," I said. "I figured we'd go under one more time before I left."

"Did you see anything?"

Black eyes and snouts and the universe standing on its end; remembering it made me quake.

It was then that the Captain showed up with a pair of officers in tow. They dragged me out of the 'vat and placed me under arrest. I was shaking so bad I barely noticed.



What happened? Like I said: Time and place. Right and wrong. Half of settled space has been waiting so long for something to happen. And it did, only to someone else.

They kept me under wraps all the way back to New Sejong. The Captain was furious and worked Charlotte, Sunming, and Devi like dogs. Whatever she might have cared about the mental state of a chickpea did not descend down to 'vat-rats who ghosted the walls of her own ship. Of course, no one was satisfied with my story but once the initial wave broke I was safe.

Who cares about a 'vat-rat?

But the Captain....

She'd been in charge and what had she been doing while the Jiroft were committing mass suicide? Eating dinner. I don't agree with that. But she had a career and once the Media Barons needed a patsy, well, it's safe to say one's professional career is done.

She took it in stride. Don't ever accuse the Captain of losing her dignity. She took an early retirement and started a Negative Energy Work Rehabilitation Plantation. They do marvelous things with chick-peas.

I lost my stripes and would have gone mad except the Lost and Found on Habitat Beach needed a new tender. So they shunted me off to a backroom looking after junk other long-haulers left behind.

Basil stops by from time to time. He went xeno-anthro after all. We don't talk much about it. But I've noticed he's had sockets put in.

Maybe he gets the same feelings as me.

Sometimes when vasted I get this tingle up my spine like Toot's there, and she and her kind have decided to take pity on the universe's sorriest losers.

Humanity.



Game Over at the Nova Bijou

Jason S. Ridler

To find our hero you must not look in Zanitar, or the artificial sun of the copsetown light, or anywhere where the fresh green grows. If you follow the broken bottles of smoke and the chains of happy gearheads in the heart of the Coma Swirl, past the lines of teens screaming to don the latest sim-suit to wage the war eternal, if you count the walkway lights until they start to break into a binary code SOS that no one sees, you'll find our hero at the dead end of the Nova Bijou, poised in a martial stance from too many hours spent dropping tokens into the geriatric lightbox to see his girl, Ninjiska, Lady Ninja Supreme, come to life on the old screen.

Like now.

Light sparkles from under the screen, her butterfly eyes flash open, revealing her true nature. Then her red smile slashes wide, white teeth tight and uniform, poised and ready. "Ok," she says, "let's go!" And our hero's muscles burn to make her dance, together, heart and soul and body acting as one with Ninjiska and her invisible blade, Dawncutter. Her health bar is yellow and bright and so are his nerves.

The morning sprite lights brighten behind our hero and warm his neck. Soon the noonday gongs will echo through the Coma Swirl and people will flood their way back into the causeways to terminal classrooms and stiff work. But our hero stands with his woman, veins like ragged worms under his skin, fingers aching so fierce he can barely punch his wristcom, not that he'd want to plug into a node and stream with all the rest.

No, today, our hero believes, is the day he beats the Big Boss with just a handful of tokens. He'd come so close last night, before that gang of avatar clowns surprised him from behind with hoots and hol-

lers and screwed up his rhythm.

So, this morning, it is go time.

Daylights hum for afternoon.

“You know,” says a voice at his side, “they do have stainbooths where you could actually toss her for real.” A weak cackle follows, but our hero does not falter.

The voice is familiar, and LEVEL 5 he could do in his sleep. Jemisin’s voice is wet from a bottle of smoke. “Come on, man. Don’t you get tired of playing the same damn game over and over?”

“Don’t you get tired of taking the same classes, seeing the same faces, and making the same jokes over and over?”

“Laughing riot, you are.” Jemisin hisses smoke as LEVEL 6 rolls out, but the poison he huffs dulls the electric sheen of Ninjiska’s dancing-rain leap to the top of the water tower, where the Bazooki Throng Peril hide. It’s a night level and the smoke is not helping. He’s almost tempted to use the hurricane-blade kick, just to get rid of the throng . . . but it always turned her health bar from yellow to red. Last thing he wants is to hurt her. Ever.

He begins to stave them off, reflexes easy and true. “And you know,” Jemisin says, “I meet new faces, pretty ones, too, ones that are in three dimensions. What happens when you finally finish this game?”

“Who says the game is ever finished?”

Jemisin chortles. “You know these archaic light boxes weren’t designed to last forever. You’re either going to get her killed over and over or she’ll kill the Boss Man at the end of the game and then what?”

Jemisin’s ignorance of the last boss is pathetic but understandable. Sweat drips into our hero’s eyes and he blinks a half-second before a robed Bazooki cracks her with a star staff, right between the butterflies.

One life down. Two left. And one spare token.

Ninjiska does not judge our hero for his failure. She does not yell. She does not scold or remind him of how many times he’s let her down before. As long as the tokens roll into the machine, and his reflexes pop, she’s just sword swipes and smiles. No mean laughter, no cutting remarks for anyone but their enemies. You know where you stand with her. Butterfly eyes blink, then the smile goes wild. “Level Seven? Ok, let’s go!”

“Sorry,” Jemisin says, one hand hanging from the top of the machine. “I’m worried about you, though.”

Our hero and Ninjiska dispatch the Bazooki hordes with the old spirit-rain-razor-kick that kills the level quick as a wink. “Why?” our hero says. “They still making fun of me on the screeds, laughing from

every node on the flip side? Hey, hey, the JerkStick of the Bijou rides again to nowhere fast?" Ninjiska runs wild into the clouds to face the ethereal rainwarriors.

"Worse," Jemisin says. "They say zip. Like you don't exist. You don't tap into gangspaces, you don't play any crowd games. You're tied to this relic that no one but you knows about or cares about. I mean, a light screen? Stick and button? It's like you don't exist."

A ripple of calm runs through our hero's nerves. "Good." The rainwarriors are flayed to the sound of nouveau-midi-thunder riveting the game's chips.

"What?" Jemisin says. "You want to become a ghost? Like some greyskin simjerk, trading in his fillings for one last dose of mirage? I love games, man, but I love real girls, too."

Tawdry talk always makes our hero squelch, but he stays frosty as LEVEL 10 jacks up. Speed and accuracy count here, the mist of daggers always shooting at her back, always waiting for one fatal mistake. He will not let Ninjiska down.

"I'm warning you," Jemisin says. "You're one friend away from being a ghost. And ghosts don't get laid. They don't get noticed. No one screeds about them. Helps them earn tokens. Get ahead. When this game ends, you're going to be broken. And alone. And I can't let that happen."

"Why not?"

"Cuz there's a price to pay for being friends with a ghost."

Glass shatters with meteor force against our hero's skull. Pain, real, awful pain engulfs every thought as the empty bottle of smoke cracks across his face. Laughter, the real deal, cackles around him from a legion of voices.

A hundred avatars flash from the old, clunky node station where he'd been harassed yesterday. Our hero drops to the floor, red and wet and cold, his skies no longer a serene world of mock violence. The symphonic plunge of another of Ninjiska's lives flushes through him. The "TRY AGAIN?" countdown spurts from the box. "TEN, NINE, EIGHT." Trembling, he tries to stand, but slips on glass and blood. Soon, the countdown will die.

Thoughts flood his heartbeat faster than light. It shouldn't matter. There's always another token. It shouldn't matter. He can come back tomorrow. It should not matter one flaming iota, just lay down, let it ride, she'll be waiting, she's always waiting.

But what if she's watching? Would she stay down for the count?

Avatars flew from the wall node in the corner of the arcade, projections only the wealthiest of first gen families can afford. The largest, a blue devil with electric muscles, cackles loudest. “Well done, Jemisin. You crashed the troll of Coma Swirl! We thought his sticky hands were glued to that fossil! You can now stream with the crew.”

The countdown charges, “FIVE, FOUR.”

“I’m sorry, bud,” Jemisin says. “Some of us don’t want to be ghosts.”

“THREE.”

Jemisin runs but the avatars stay, screaming at him as the countdown drops. “Quit! Quit! Quit!”

But our hero shoves in his last token.

“TWO-”

-and picks himself up just as “ONE” vanishes, and jams the button.

Ninjiska returns. Same butterfly eyes. Same smile. “Ok, let’s go!”

Her enthusiasm infects him, despite the crowds, despite the laughter and the rotten thrum of pain. They hum at his backside like the mist of daggers. Our hero moves the joystick and races forward.

WARNING! screams the game, as always from this stage.

“TOKEN ONLY BUYS YOU ONE LIFE!”

And if she dies, he knows, I have to start from the beginning.

“Loser! Loser! Loser!” scream the avatars.

This is his last shot. Blood races, inside and out.

The dagger voices grow behind him, hammering his back.

“Ok,” says our hero, gripping the stick tight and blinking away blood, “let’s go.”

Rolling thunder and exploding palms fill the screen with 2D rage. With sure hand, Ninjiska cuts down throngs of bladed enemies as he drips crimson on the screen. But it’s effortless, free, like breathing. Ninjiska cuts her way through each ascending level with grimsack determination driving her ballet of ricocheted violence onward, a pure and radiant cadence to every slice, chop, cut and combo, until-

The werewolf samurai. Bodyguard of the Big Bad Boss, Dr. Horns.

“You’re dead, ghost!” screams the blue devil. “This is going to be priceless.”

“Yes it is,” says our hero. Five subtle movements unleash Ninjiska’s thousand-rings-of-fire heel kick combo. Soon, a werewolf skull is howling as it races toward the moon.

Our hero gasps and wipes away the blood from the screen.

“Shit,” says a grinning pixie floating at his side. “He’s pretty good.”

“Shut up!” screams the Blue Devil. “We’re here to watch him lose!”

The golden doors of the finale open.

Soon, the game will end. Time to say goodbye. The avatars are hushing and some are still tossing insults, but Ninjiska is all he can see, wild-eyed and smiling . . . until the Big Boss steps out: an electric green bull, covered in muscle and cackling like the crowd behind him.

Our hero blinks, dripping red, then grits his teeth. The boss snorts smoke. “I am Doctor Horns. Your persistence will be your death warrant,” says the boss.

“Your arrogance will be yours,” Ninjiska retorts. She turns to our hero.

“Weird,” says the pixie. “It’s like she’s staring at us.”

“Not us,” says a zebra unicorn. “Him.”

Ninjiska smiles. “Ok, hero, let’s go!”

Our hero smiles back.

Blizzard combat unfolds. A thousand nightmare kicks, flaming chi fists, and near-fatal blood choke, as Dr. Horns counters with laughter and parries with horned stabs. Ninjiska’s health bar drops from yellow to orange, then the orange fills with red until there’s only a sliver left.

Her face is bloody and purple. The only ones smiling are the green bull in front of our hero and the blue devil behind him.

“This is going to be sweet!” says the devil.

But another voice cuts through. “Go get him! Finish him off. Everyone, he’s at the last level!”

It’s the pixie. Others change their tune, calling for our hero to do what he does best.

“Shut up!” screams the blue devil.

“Oh, you shut up, Larish!” says the Pixie, “I wanna see what happens next!”

“Yeah!” says the zebra unicorn. “Cram it and let him fight!”

“Do it,” they chant. “Do it!”

Our hero focuses his will back to the game, and Ninjiska throws the cat-of-nine-tails defence against Dr. Horns’ screaming fist, as the dagger crowd at his backside screams. The salted laughter in his wounds is gone. Instead, cheers follow every dodge, block, and parry.

“Finish him!”

“You can do it!”

“I’ve got the cheat code if you want it-”

“No!” our hero says, ragged, frayed, and cold. “I’ll finish it pure.” And he knows what he has to do. A hurricane blade kick.

It would hurt her . . . kill her . . .

And there’s no choice. He won’t let the boss end this for them. Victory, death, the end. It will be on their terms.

Sneaky jabs soften Dr. Horns’ guard to pink flesh, then a splinter kick to the knees infuriates him, making his eyes steam. Then onto the defensive against his epic scything combos, to make her look weak and spike his confidence, right where our hero wants him. Meanwhile, the crowd of avatars grows, and he can only imagine his rise in the ratings as thirteen funeral punches are blocked, thirteen fatalities denied, thirteen death warrants crushed.

Until at last Dr. Horns does his cackling laugh and rages at the moon to deliver his un-blockable hammer-strike. The green bull leaps in the air, hands growing to the size of anvils, arching back to crush Ninjiska like gutterbugs.

Our hero drips, slow. Hands red, eyes fuzzy, but spirit smooth, he screams in time with Ninjiska as she goes from a crouch into a twirling launch, dawncutter, and kicks spinning like a double-sided human chainsaw, until Dr. Horns is sliced into a thousand angry ribbons that flutter to the floor, each twirl tearing her last strip of health to black.

The screen screams back through the thick blood. “YOU WIN! YOU WIN! YOU WIN!”

The crowd pops with the cadence of starshells, but before his eyes Ninjiska fades. Holding her wounds, she smiles as colors dim, and her features wash into the darkness. Before she’s gone, she bats her butterfly eyes. “Well done, partner,” she says. “Now, let go.” She winks and is gone. White credits from long-dead hands roll up the screen like a funeral parade as digital violins bleep in harmony.

Our hero takes his sticky hand off the joystick, yanks the other from the buttons, and turns.

The throng of avatars cheers as he crunches through the glass. A space elf calls for a medibot while zombinauts and shining wizards say his net rating is crazy high. Everyone, it seems, is watching, and our hero is terrified to his marrow at the attention, then adoration, the inescapable closeness of it all.

The Blue Devil snorts. “Well, shit. That was pretty impressive, for a loser. Come on, gang. There’s a rat fight in the ag dump. Let’s stream.”

They vanish into the wall node, off to their next spectator event.

All but a digital goat. “Wow,” Jernisin’s goat says. “That was kind of incredible. And, man, I’m sorry. I just, well, wanted to stream with the crowd, you know? I mean, you can’t blame me, can you?”

Our hero marches, weak and dripping, to the goat and throws a rotten punch through the avatar, straight into the wall node. Crackles and hisses fill the air as the lights shake and the goat vanishes.

It’s quiet now in the Nova Bijou as our hero’s wounds are tended by the medibot and microcrews repair the busted node. Both man and machine are fixed in a jiffy, and sitting, thinking, our hero dials up his wristcom. His popularity is off the charts. His final match jazzing across the entire sector. Though it will fade by tomorrow.

Except for him.

He takes a look back at the lightbox that has been his sanctuary. It’s dark. But when he blinks, there is her smile. He taps his wristcom and dials in an avatar. With his rating so high, he has his pick of the litter, but he only wants one simple design. A crimson butterfly. Stitched back up, he lets the avatar hit the node, racing through the stream as a thousand congratulations flood his wrist. “Ok,” our hero tells it, walking out of the Coma Swirl, the peaceful sound of the Nova Bijou behind him. “Let’s go.”



The Gambrels of the Sky

Erin Hoffman

Kelara is a galaxy.

Her sunstar shape is familiar, myriad spreading arms an everlasting roof of light. But she is not the idea of a galaxy, the abstraction or distant quantum impression—she is every star, every planet, every cosmic duststorm that burns or bubbles in the vast elemental nothing. She is precisely 1,125,899,906,842,624 of these bodies. In a remote corner of her an electrical storm is brewing as five supernova collide in spectacular fashion. Elsewhere, there is an arrangement of stars whose hydrodynamic currents suggest a kind of consciousness, and she is pleased.

Subroutine terminated.

The words faded in and out from Kelara's left eye as her ego came back online. Beside her, Ilar opened her eyes, disengaging from the link.

"This is passable. You lean too much on g-type systems."

"Galaxies are not my specialization."

"We are looking for passion independent of specialization, Kelara. You know that."

"Really. I thought the synod was interested in obedience."

Ilar flickered, an ultraviolet rumination across her shoulders that indicated she was aware of but unmoved by Kelara's insolence.

"When will I be moved to another assignment?"

"When your simulation is complete. The green district is quite looking forward to your findings. And they are concerned that Ma Emi is getting old."

She ignored the push. "Will it be a human?"

"Humans are not your specialization."

“They should have put someone on the bubble who had a passion for the Bissbanians.”

“That would have represented a contaminating conflict of interest.”

“Like my being assigned a human,” Kelara said.

“Yes.” Ilar was still unmoved.

“And yet the synod desires passion.”

“It’s called ‘work’ for a reason, Kelara.”



The Brain is Wider than the Sky

A small piece of Kelara is a goldfish.

The goldfish is not an unnoticeable tax on her resources, but it is close. It operates in space sanctioned for personal use, not like Bruce. The fluid mechanics of the water surrounding it are more interesting to simulate, but the goldfish is alive, and so its patterns have an ineffable charm. She was not enough of a philosopher to tell you exactly what differentiated them, a turn of meaning slender as syllable from sound, but different they were.

There was something in the goldfish that fascinated a deep part of her; something about its simplicity coupled with how it retained integrity. Perhaps she should, as Ilar had often suggested, invest in some philosophy training. Yet intuition said that the human philosophies were incomplete, and she found android ones unbearable.

Size measured in synapses was a funny thing. She could run herself and the goldfish simultaneously, or herself and Ma Emi, or the goldfish and Ma Emi. But not Bruce and herself. Or Ma Emi and Bruce.

Kelara had no real idea of Bruce’s integrity, though he had been set up well in theory. It was too risky to simulate him here on the transport from mainship to the bubble, and so she had to content herself with the goldfish, its sensations, its reactions. A kind of meditation on its identity kept her busy until the pockmarked black lettering of the John Muir hove into view.

She dismissed the goldfish as the transporter docked, and unfastened her restraints moments before the light bonged to announce that she was allowed to. The ship complained, threatened, but she ignored it. If the synod could ignore Ilar, and Ilar could ignore her, she could ignore a ship.

The humid green scent of the bubble flooded her nose as she stepped off the gangplank. And another scent, an unfamiliar one, coming from the pale blue smoke that spiraled up out of the mud hut at the end of the brushed-steel pier.

Ma Emi was baking. That's what the humans would have called it, anyway. Kelara had never seen her bake. She wished she had been able to record the patterns during the process that led up to the baking, but was also perversely pleased that her meeting with Ilar had made her miss it. Let the humans wait. If they were just going to shove another Bissbanian at her for her next assignment, she had no real interest in wrapping this one up.

The door to the hut was open, but Kelara knocked on the threshold anyway. A soft whistle drew her inside. Ma Emi was opening shelled animals with a long knife. They steamed as she split them open. More already sat steaming on her low table; she'd made over two dozen, far too many for one of her kind to eat. Kelara reached back in her mind for the name of the crustaceans—ourani, she thought. Believed to grow bravery in children, they were rarely eaten by adults. Ma Emi must be experiencing maternal urges. As a Ma she would likely never have had children of her own, but if not for the bubble she would have lived in a village and been part caretaker to the children of her sisters.

Ma Emi finished splitting and scraped the opened ourani into a bowl that had been lined with purple seaweed. Then she brought the bowl to the table and folded herself down next to it. She gestured with a webbed hand.

“Can you eat?”

“I can pretend.”

“Pretend, then.”

They ate, and Kelara extended her perception array perfunctorily. There was little new data; her projections that Ma Emi was baking to assuage her desire for a brood proved correct, but the hypothesis had been so simple as to border on insulting. She activated her Ma Emi simulation, and fell into the rhythms of speaking as if she were another Ma of a neighboring village.



A Narrow Fellow in the Grass

Kelara is a small boy named Bruce. He is nine years old. His favorite thing is an ancient homeworld artifact called Super Mario Brothers. He

is playing it in the spidergrass of the patch, a hundred meters or so of dry land that holds the hut out of the swamp.

Bruce is fixated on this level of the game, an underwater one. He has beaten it before, but he's never gotten all of the coins. It's a secret level, which makes it even better. But the coins are hard to get, and he hates the white squids. He might even hate them more than snakes. He'd come on across a snake once in the spidergrass, a giant one with a yellow head, and he'd had nightmares about it for weeks.

Thinking about the snake distracts him, and he doesn't swim fast enough. He gets sucked to the bottom of the screen, and he dies.

He's mad, but only for a second, because a noise from behind him makes him jump up, afraid it's a snake. But it's not. It's a tall thing, as big as his mom, and it has eyes and hands like his mom does, but it's covered in scales, and deep cuts on either side of its neck puff in and out as it breathes. It is way, way scarier than a snake.

Subroutine terminated.

Kelara turned then, met the dark pearlescent spheres of Ma Emi's eyes. The nanosecond that it took to disengage from Bruce's simulation was too long to activate and project perception routines.



There's a Certain Slant of Light

Kelara is herself. She is trying to convince Ma Emi that Bruce should not be reported.

Even as Kelara and the synod studied Ma Emi, Ma Emi studied humans, and their android tools. She would know as she saw Kelara hunched in the grass, talking to herself, that she had an unauthorized simulation.

"Please don't tell them. Please," Kelara said.

The Bissbanians, who called themselves Elun after their own name for their mudball of a planet, did not have a concept of "please". Kelara was relying on Ma Emi's exposure to humanity to convey the strength of her request. Possibly she was also telling Ma Emi that she, Kelara, was the only friend she had.

"Why did you simulate a human child?" Ma Emi asked. She sat on the floor of her hut with a feathered chicken-like beast on her lap, stroking its feathers. "Why not an Elu child?"

There was no good answer, and Kelara thought Ma Emi knew it. "I've been working on him a long time." It was true, and also not an

answer.

“And what happens when I tell them about him?”

“They’ll delete him.”

Ma Emi looked at her. The amphibious eyes of the Elun were notoriously difficult to read, even for another Elun. Underwater they could communicate emotion with pheromones, so there was little need for facial muscles, but here above the water they were nearly unreadable.

In Emi’s eyes she tried not to think of the yellow-headed snake. It was difficult. It had actually been difficult to not think of the snake ever since he’d had that incident. She knew that this meant that Bruce’s identity had contaminated her already, had probably compromised the assignment, but she didn’t care. Kelara looked away, and tried not to imagine the snake.

A kernel of fear had developed in him, rare and arising as they sometimes did. The image had passed in front of him early in the simulation, had echoed off a cluster of neurons and formed a pattern that he could not eradicate on his own. And since he had been thinking of it when he saw Emi, it had escaped out of him and into her.

“I have no children of my own,” Ma Emi said. “I never will.”

Kelara looked back at her. The eyes, dark and light around the edges as a fine sherry, bored into her like the distance on the look of death.



About the Contributors

Scott H. Andrews is a writer, an editor, an e-publisher, a chemistry lecturer, a musician, an amateur luthier, an armchair historian, and a connoisseur of aqueous solutions of malted barley. His literary short fiction has won a \$1000 prize from the Briar Cliff Review, and his genre short fiction has appeared in venues including *Weird Tales*, *Heroic Fantasy Quarterly*, and *Space and Time* and is forthcoming in *On Spec*. Follow him on Facebook or Twitter (http://twitter.com/Scott_H_Andrews), or on his website, <http://scotthandrews.com>. Scott lives in Virginia with his wife, two cats, nine guitars, a dozen overflowing bookcases, and hundreds of beer bottles from all over the world.



Michael J. DeLuca brews beer, bakes bread, hugs trees, and dreams nightly of dirt beneath his fingernails. He volunteers at Small Beer Press and operates <http://weightlessbooks.com/>, an indie ebook site. He translated two stories for the Mexican SF anthology *Three Messages and a Warning*, due in December from Small Beer Press. Look for more of his short fiction upcoming in *Space & Time*, *Pseudopod* and *Basement Stories*, or read his blog at <http://www.michaeljdeluca.com/>.



Justin Howe grew up outside of Boston. His fiction has appeared in *Beneath Ceaseless Skies* and the anthologies *Fast Ships*, *Black Sails* and *Be-
were the Night* among other places. He lives in South Korea. His favorite
movie is *The Bride of Frankenstein*.



Jason S. Ridler has published over forty short stories in such magazines
and anthologies as *Brain Harvest*, *Not One of Us*, *Big Pulp*, *Crossed Genres*,
Tesseract Thirteen, and more. His non-fiction has appeared in *Clarke's-
world*, *Dark Scribe*, and *The Internet Review of Science Fiction*. A former
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Erin Hoffman is the author of *Sword of Fire and Sea*, which debuted
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Ville*. Her fiction and poetry have appeared in *Asimov's Science Fiction*,
Electric Velocipede, and *Beneath Ceaseless Skies*. She lives with her husband,
two parrots, and two dogs in northern California.

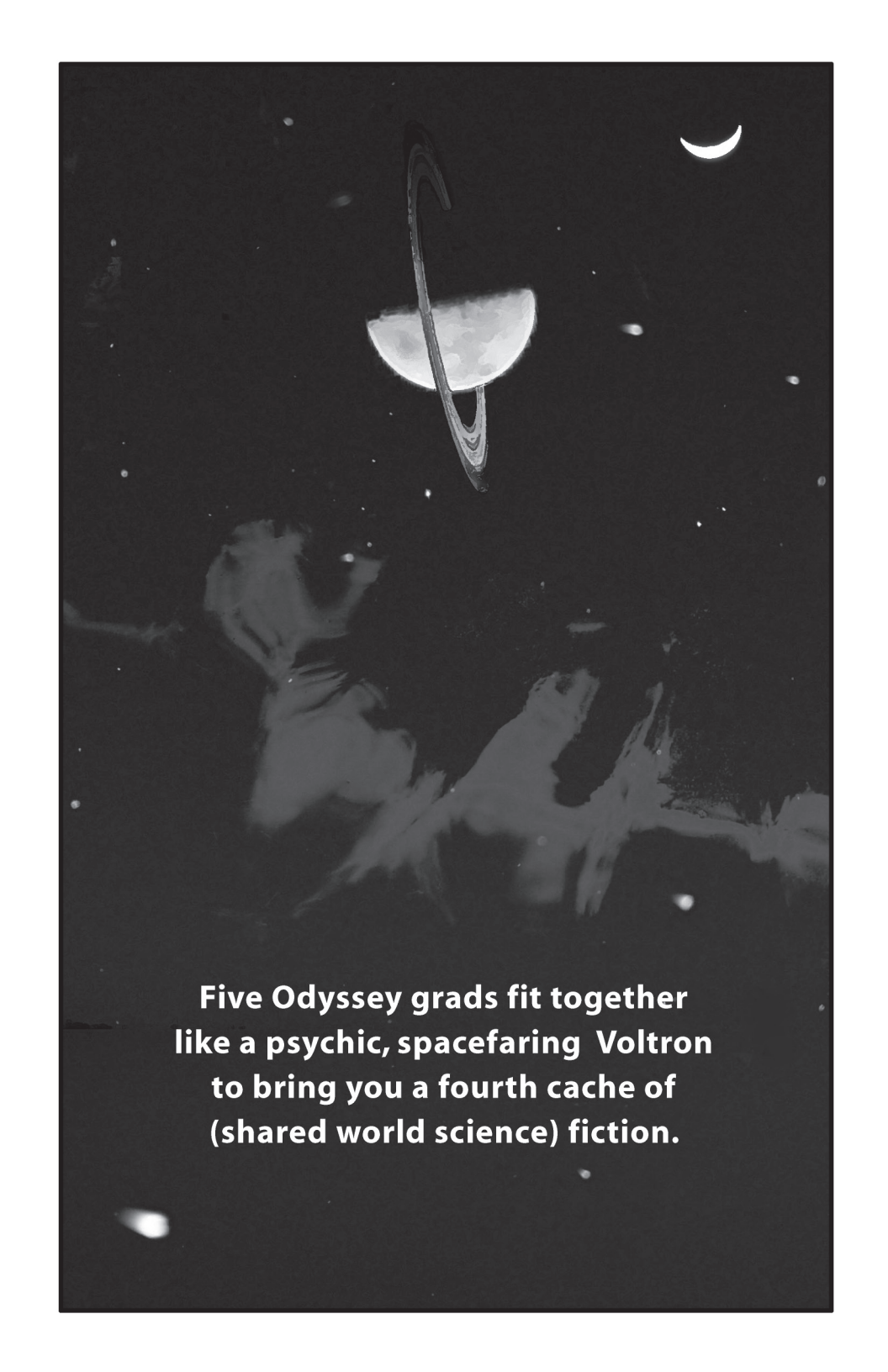


“Over the town roamed the homeless moon. I went along with her, warming up in my heart impracticable dreams and discordant songs.”

- I. Babel



<http://www.homelessmoon.com>



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