

# LIGHTSPEED

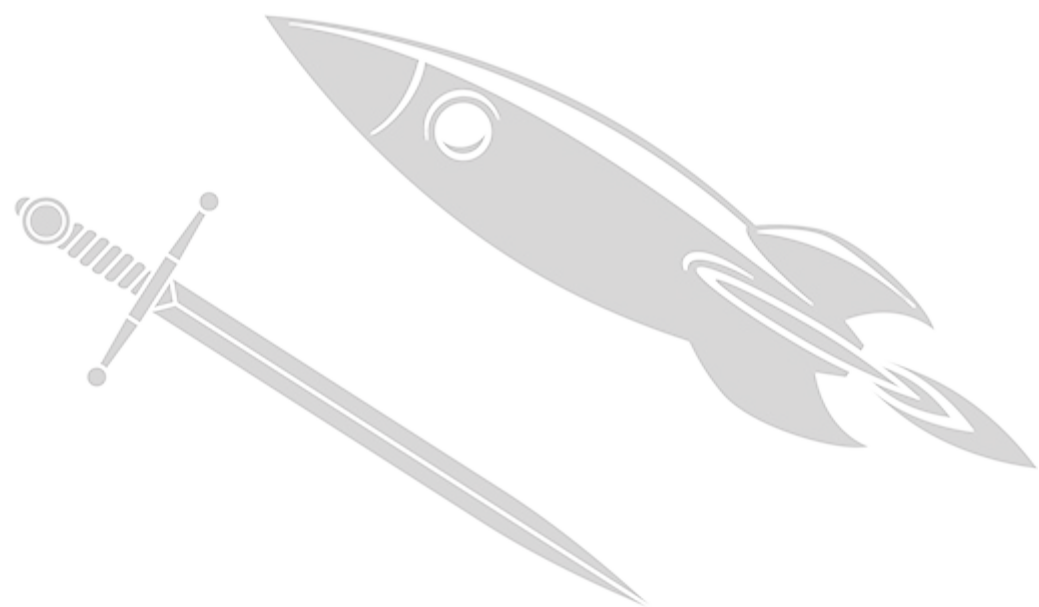
SCIENCE FICTION & FANTASY



ISSUE 68 • JANUARY 2016  
EDITED BY JOHN JOSEPH ADAMS

# LIGHTSPEED

SCIENCE FICTION & FANTASY



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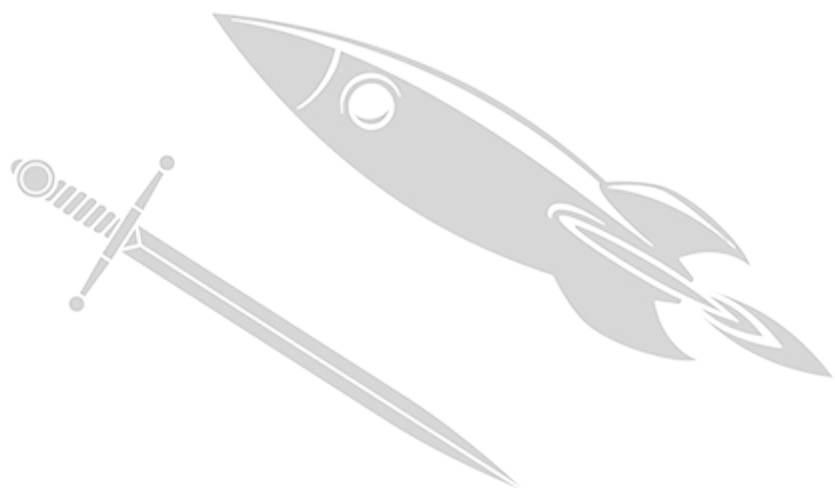
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Cover by Galen Dara

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# FROM THE EDITOR



## Editorial, January 2016

John Joseph Adams | 957 words

Welcome to issue sixty-eight of *Lightspeed*!

In case you missed my big news last month: Houghton Mifflin Harcourt, publishers of my *Best American Science Fiction and Fantasy* (and the rest of the Best American series), have offered me the opportunity to edit a science fiction/fantasy (and horror) novel line for them—and naturally I agreed!

The line will be called John Joseph Adams Books (their idea, not mine!), and will be a tightly curated list of seven to ten titles per year. We'll be pre-launching the line in early 2016 with new editions of three Hugh Howey novels: *Beacon 23*, *Shift*, and *Dust*—making them available via traditional publishing for the first time—and then the line will kick things off in earnest in early 2017 with our first batch of never-before-published works.

If you're a regular reader of my magazines and/or anthologies, then you should already have a good idea what to expect—and if you like my work as a short fiction editor, then I suspect you'll like the novels I publish as well. The John Joseph Adams Books website is still under development, but if you bookmark [johnjosephadamsbooks.com](http://johnjosephadamsbooks.com), that'll take you to it when it's ready.

And never fear, dear readers—I'll still be here, working to bring you your monthly dose of *Lightspeed*, and I'll also still be editing *Nightmare* and anthologies as well. *How (!?)*, you may ask. Good question—I'm not entirely sure! I will probably have to get much better at delegating! But the good news is, I got lots of practice this year serving as a judge for the National Book Award (Young People's Literature category), where I had to consider about 300 novels while keeping up with my short fiction duties. So I think I'll be able to fit everything into my schedule. If not, I'll just give up some optional extracurricular activities, like sleep.

Also, speaking of HMH and *Best American Science Fiction and Fantasy*—ICYMI, it's now available. In it, guest editor Joe Hill and I present the top twenty stories of 2014 (ten science fiction, ten fantasy), by the following: Nathan Ballingrud, T.C. Boyle, Adam-Troy Castro, Neil Gaiman, Theodora

Goss, Alaya Dawn Johnson, Kelly Link, Carmen Maria Machado, Seanan McGuire, Sam J. Miller, Susan Palwick, Cat Rambo, Jess Row, Karen Russell, A. Merc Rustad, Sofia Samatar (two stories!), Kelly Sandoval, Jo Walton, and Daniel H. Wilson. Learn more at [johnjosephadams.com/best-american](http://johnjosephadams.com/best-american).

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In other news: You might notice something a little different this month in the magazine. That's because we're changing the way we select our covers. Previously we sought out existing artwork and licensed it for use on our covers, but henceforth we'll be commissioning original cover illustrations, based on one of the stories in the issue. First up is Galen Dara, with an illustration of Will McIntosh's "The Savannah Liars Tour."

Our current plan is to use a small team of artists we know and like, and rotate among them—and since that means we'll be repeating the same artists fairly frequently, we're doing away with the artist spotlight feature. So in lieu of that we'll be presenting a new rotating nonfiction column, starting with a new movie review column by bestselling author Carrie Vaughn. Carrie's column will appear a couple times a year (probably quarterly), and we'll rotate in other nonfiction in the other months; as for what will be in that "slot" next—stay tuned! We'll have more information about that next month.

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With our announcements out of the way, here's what we've got on tap this month:

We have original science fiction by JY Yang ("Secondhand Bodies") and the collaborative team of Keith Brooke and Eric Brown ("Beyond the Heliopause"), along with SF reprints by Jason Gurley ("The Dark Age") and Kate Bachus ("Pinono Deep").

Plus, we have original fantasy by Will McIntosh ("The Savannah Liars Tour") and Kat Howard ("Maiden, Hunter, Beast"), and fantasy reprints by Peter S. Beagle ("La Lune T'Attend") and Leena Krohn ("The

Gorgonoids”).

All that, and of course we also have our usual assortment of author spotlights, along with a feature interview, the latest installment of our book review column, and the debut of the new movie review column by bestselling author Carrie Vaughn.

For our ebook readers, we also have an ebook-exclusive novella reprint of “Griffin’s Egg,” by Michael Swanwick, and a novel excerpt from *Barsk* by Lawrence M. Schoen.

It’s another great issue, so be sure to check it out.

Well, that’s all there is to report this month. Thanks for reading!

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**Errata:** In our December 2015 issue, we mistakenly included the Artist Gallery images for our November artist, John Brosio, instead of our December artist, James Ng. We’ve updated the Dec. 2015 ebooks and our website, so you may visit our website at [lightspeedmagazine.com/nonfiction/artist-showcase-james-ng](http://lightspeedmagazine.com/nonfiction/artist-showcase-james-ng) to view the corrected gallery, or our ebook readers may re-download the issue to get the updated version. If you subscribe via Kindle Periodicals, unfortunately there’s no way for us to update that version of the ebook, so the only way for you to view the correct gallery is to visit the website. We apologize for the error!

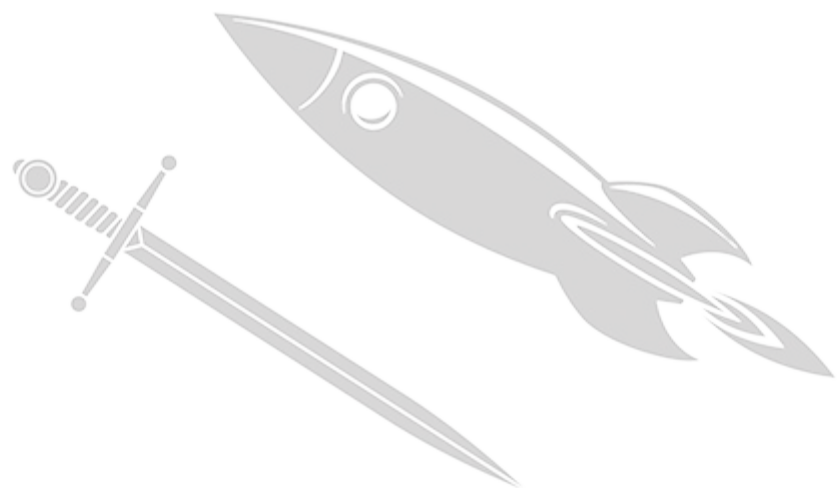
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## **ABOUT THE AUTHOR**

John Joseph Adams, in addition to serving as publisher and editor-in-chief of *Lightspeed*, is the editor of John Joseph Adams Books, a new SF/Fantasy imprint from Houghton Mifflin Harcourt. He is also the series editor of *Best American Science Fiction & Fantasy*, as well as the bestselling editor of many other anthologies, including *The Mad Scientist’s Guide to World Domination*, *Armored*, *Brave New Worlds*, *Wastelands*, and *The Living Dead*. Recent projects include: *Robot Uprisings*, *Dead Man’s Hand*, *Operation Arcana*, *Loosed Upon the World*, *Wastelands 2*, *Press Start to Play*, and *The Apocalypse Triptych: The End is Nigh*, *The End is Now*, and *The End Has Come*. Called “the reigning king of the anthology world” by Barnes & Noble, John is a two-time winner of the Hugo Award (for which he has been nominated nine times) and is a seven-time World Fantasy Award finalist. John is also the editor and publisher of *Nightmare*

*Magazine* and is a producer for Wired.com's *The Geek's Guide to the Galaxy* podcast. Find him on Twitter @johnjosephadams.

# SCIENCE FICTION



# Pinono Deep

Kate Bachus | 6400 words

It was Martin Rios who found the captain's body. Captain Naguen was splayed on the *Chieftain's* deck where he'd fallen, and Martin realized as he stood there staring at the disarray of limbs that at least this was some small comfort: As unlucky as Martin had been in his life, there was always someone who had been unluckier.

"Two meters," Uld said drearily as Martin opened the door into the pilot house and stuck his head in. "Two solid meters of ice in all directions and the nearest skimmer to burn us out is in Port Newson. What is it?" Uld prompted. He stood a head and a half taller than Martin, with two thick yellow braids and a beard that didn't hide his sour expression.

"The captain's dead," Martin told him.

Uld didn't move from where he was bent over the weather console. "Of course he is," he said. "Of course he's fucking dead. Go roust the first mate. Where the fuck is he? What the fuck happened to him?"

"Main deck, port side by the crane. Maybe he fell."

"Of course he fucking did. Of course." Uld tapped the long range and stared at Martin with baleful blue eyes. "What? What the fuck are you waiting for? Go."

• • • •

When Martin got to the first mate's cabin, the first mate answered with her deck coat wrapped around her like a bathrobe, and a displeased expression on her face.

"The captain's dead," Martin said quickly. "On the main deck. Maybe he fell."

The first mate Verhoeven had black hair in a braid and pale skin made ruddy by weather. She was slight, and they said the biologist was both her lover and brother, though Martin didn't think Slaine was her brother at all. Slaine came to stand behind her now, his expression incredulous. "Dead, as in dead? That'd be a good joke, if it weren't five in the morning and we weren't locked in. Come back to bed, Alisa." He yawned and turned

towards Verhoeven's bunk, but the first mate took his arm and pushed him past Martin, out the door.

"He's not joking, Slaine. And that's 'Captain' to you," she said.

••••

Martin helped carry the body belowdecks, limp and too-heavy, wrapped in plastic. Then he set to work cleaning up the dark spot on the deck.

"They'll want an inquest at Farview. We can't just tip him overboard."

The new captain Verhoeven and Slaine stood close by at the rail.

Verhoeven considered Slaine's words, gazed out at Uld's two meters of solid ice that held the *Chieftain* captive. "The swimmers won't work if there's a corpse on board.

"Take Uld and Karian. Torch a hole a few hundred yards out and sink him."

"We'll all be in prison by the end of the season," Slaine said, but he was already going, and Martin knew Verhoeven had never expected he would do otherwise.

"When you're done, roust both watches," she called after him.

••••

In the galley, the crew were packed tight, both watches crammed into a space barely big enough for a dozen men. But the galley at least was warmer than the frozen deck above, the air heavy with the smell of coffee and speculation.

"Naguen's dead," Captain Verhoeven said.

Then there was clamor.

Shouts and exclamations and the quartermaster blew his whistle, but it was Badrille everyone heard, sharp over the noise: "Malevolé!"

And a chorus from the knot of swimmers after that, some banging their tattooed hands on the tables. "Malevolé! Malevolé!"

Superstitious, the sailors had told Martin. The swimmers were like children, they'd said, superstitious and impressionable.

Martin wasn't so sure, himself. The swimmers were the only ones who

understood the pinono, and had whatever they used—skill or, depending on whom you asked, magic—to control them. Without the swimmers, no one in the water and maybe even out of it had a chance of surviving a hunt. They kept to themselves, separate from the crew and the ship's day-to-day functions, but once in the water with a pinono pod, their function was essential.

“Malevolé!” Badrille’s voice was bright and shrill, and it was to him now that the new captain spoke.

“I know the taboo,” she said, and though the quartermaster had lifted his whistle to his lips, the swimmers quieted of their own accord. “The body will be gone by tomorrow morning. As soon as the ice breaks or we’re thawed out, we continue north towards Fillion’s Hip. We’ll work the northeast pack ice and lead edge of the Malden front, along the summer migration route. At least until we get a sighting.”

There was silence, then. The swimmers seemed to be mollified, and there was not a sound of objection to this plan. A strange lack of question about where the captain would be gone to.

Or not strange, considering. Martin knew it had been a thin season before he signed on. The *Chieftain* was well under her quotas, and everyone’s pay wholly dependent on her success. Only a few hunts, and from those, only a few thousand kilograms of pinono bale, where by now the barrels should be in the tens of thousands, twenties, even.

No one questioned pushing ahead. No one wanted to return to Port Lum empty-handed.

“Wolf Magnussen replaces me, and Euan takes Master first watch. The new second-watch Master is Badrille.”

Now the roar went up. Simultaneous outcry from many of the boatsmen and drayers, and astonishment and laughter from the knot of swimmers at their table.

Swimmers were not crew exactly, and they did not become officers, or take officers’ pay. Many of them knew little about ships and sailing, and few of them cared to learn. Their world was different, their purpose on board specific, bordering on the mystical.

“Quiet.” Magnussen’s voice rumbled out then, and he exchanged a look with Badrille, who was still caught half in laughter, half in surprise. The

captain looked on as Wolf gave the swimmer a look of inquiry: yes, or no?

After a moment, Badrille shrugged his golden shoulders, and put his hands up. “Aye, if the Captain says so.”

Verhoeven was about to reply, and Martin wondered what she would say next, when the sounding claxon went.

There was a moment of everyone moving in unison; Martin, Wolf, the swimmers, even the cook, alike all in habit, before even the second trilling whistle went.

Then there was a pause.

Because, Martin thought, we’re locked in. Locked in.

“Stations anyway,” said Captain Verhoeven. Everyone moved again.

On deck, it was stark noon and impossibly, inconceivably colder. Martin pulled his gloves back on, and wished for another pair to go over them. Around him as he went to the starboard cart bay, the crew had set about their appointed tasks, half paused in confusion before the claxon stopped and Euan’s whistle pierced the air.

“Stations!” Wolf’s voice was a carrying bellow, loud enough it hardly needed to be echoed down the deck by other men’s repeating voices.

Two drayers came to join Martin, and they rolled the carts out of the metal shed and down the track to sit under the cranes. One right over the spot Martin had mopped up before, he realized.

The carts on their tracks before they were loaded were slippery and unpredictable, sliding too-quick right after they’d just been stuck fast. After they were loaded, they became stubborn and immovable, even for bigger men than Martin. Handling them for the first hunt, he had come away bruised and bloody. Now, a nimble and a quick learner, more accustomed and learning to keep out of the carts’ way.

“Give me a spoon and I’ll dig my way to him!”

It was Karian’s bellow, coming past on deck, massive harpoon cannon laid on his shoulder. “Where is that son of a bitch? I want to shoot him, now.”

There were answering shouts and laughter from the crew around him. Bette, stout and red, pulled a thin white bone from her belt, waved it at him. A bet, Martin now knew. “First kill’s mine. Three hundred.”

The crew around her roared.

But, Martin thought, if there's a pod anywhere nearby it's under a man's body length of ice. How? How?

Karian waggled what was left of a forefinger at her. "After I dig it out with my spoon and shoot it, you can hand me four hundred, Bettina. No! Better yet, five."

Digging, with his free hand in his pockets, until finally an onlooker handed him a bone.

He tossed the bone down to the deck at her feet with a wide grin. "There."

"Five hundred," Bette said, with a shrug. She bent, picked up the bone, stuck it between her teeth and wandered away off to her cannon station.

Nothing to do unless there was a kill and a great jinn hooked and raised, so Martin and the others went to the rail to watch what events unfolded on the ice below. Wolf and the captain Verhoeven stood around a hole in the ice with Badrille and a handful of swimmers. Slaine was straightening away, some equipment or other balanced on one shoulder, shaking his head. There was argument down there, but on deck they could hear very little of it. Only Slaine, one wave of his hand and then another, emphatic. Verhoeven looking at Badrille, who looked at the swimmers in turn, and there was some nods and shrugs and more conversation.

More from Slaine and now his words came up, angry and strident.

"You can't send swimmers under the ice, I don't care how good they are, I don't care if they find their way out by fucking precognition. It's twenty-nine and a half degrees in the water. And you can't shoot at jinn if they're not breaching. It's impossible!"

"If they're getting soundings," Karian said, leaning on the rail where he stood a few sailors down from Martin, "then they're surfacing somewhere."

The drayer with Martin at the rail nodded agreement. "Maybe thaws. Can't hold their breath forever."

But they could hold it for a long time, thought Martin. So could the swimmers; he'd seen it. Submerged for five minutes, ten. Someone said Badrille could stay under for half an hour or even longer if he didn't have to come out to warm.

Karian sucked at his front teeth, fished in his pockets for a cigarette that another sailor eventually supplied him. "Two metres is thick ice," he said

reflectively.

Martin wondered if they'd dumped Naguen's body, then. He looked down at the expanse of milky white and wondered if the captain's corpse was bumping along under the thick, cold surface, like Karian's bull looking for a thaw spot. Or maybe it wasn't. Maybe Slaine and Karian had taken the bag full of golf clubs that had been the captain's prized possession, and sunk him with it.

Out on the ice, the captain Verhoeven said something they couldn't hear, and Slaine's voice came back up again. "It's too dangerous. This is without my sanction, I want it clear, and you can leave me out of—"

There was a sound, then. One Martin knew already, the thin whine, starting soft and getting louder, that was the scanners on the harpoon cannon activating. Ascending, louder and higher, until the deck was full of it. Each gun taking it up in turn as it would be when the water was full of breaching jinn.

"Christ," said the drayer, beside Martin. "Bulls. They're all around us."

Then came the creaking, towards the *Chieftain's* stern. A creaking loud enough to drown out even the men's exclamations. Below on the ice, the captain, swimmers, biologist, and Wolf were scrambling for the ladder.

The sound of creaking grew louder, and they could hear along with it now crackling, and a thundering sound that was not at the aft anymore, but traveling forward, along the port side.

Karian bolted for the port rail, cannon brought to bear and leaping, heavy-booted, over crates and rope coils. "Somebody get me a fucking SPOON!!"

"—the ice is too thick," someone was saying, somewhere.

The thundering, louder and louder. Until the deck shook with it, under their boots.

"Look," said someone, but everyone was on the port rail and already seeing it. Wolf, sliding the last six rungs of the port ladder back down to the ice. He had a torch tank on his shoulder, and the nozzle in his hand.

"That's it!" Karian roared. He sighted down the enormous cannon, and along the rail, a dozen other harpooners followed suit. Trained on Wolf and his torch, while the harpoon scanners screamed.

"He's out of his fucking mind." Slaine and Verhoeven had come up

behind them: Men parted to give the biologist and the captain room at the rail.

“Maybe so, but if he thaws a hole big enough for a jinn to breach through, we stand a few thousand barrels richer,” the captain said.

Martin watched Wolf’s progress across the ice, far enough from the *Chieftain* to keep the breaching bull from capsizing her. Close enough to where Karian and the others could get a decent shot in. Even in heavy deck boots, Wolf’s feet skidded and slid on the ice’s surface until finally he came to a halt, half upright, half on his knees.

He made a small and lonely shape, as the torch flickered and flared to blue and yellow life, and steam billowed up from the surface, enveloping him.

“Brilliant,” Slaine said as the cloud rose and expanded. “Brilliant. Now he’ll fall in the drink *and* the harpooners will shoot him.”

The last of Slaine’s sentence was lost as there was a sound, a boom like the world’s largest hammer on a drum a hundred miles wide, and on its heels a crack like the floor of heaven shattering. Shards of ice exploded up from the steam cloud. Martin thought he could see Wolf skating back down a plate of it as it angled upwards, but he wasn’t sure.

Then there was nothing but more ice and the sleek green hide of the pinono bull.

Except it wasn’t green, but gray, and a moment later Badrille and two other swimmers were sliding down the ladder and scrambling across the ice.

“Jinn!!” Slaine was hollering, and a cry came down from the crane above to confirm:

“Jinn, aye, and she’s not all the way through, now!”

Even as the leviathan head sank under the surface, sucking ice and water behind it and for all they knew Wolf as well: The first mate was nowhere to be seen, amid ice and water and what remained of the steam.

“Coming up again!” hollered down from the crane, but they were already seeing it, as Badrille arrived at the jagged hole in time for the thundering explosion of flying ice. He and the other swimmers with him were thrown aside as the jinn came straight up through the hole. She towered higher and higher, water and ice coursing off her. Anterior fin, dorsal fins, body narrowing until Martin realized all but the huge, ringed tail was out of the

water.

A good thing, he thought. A good thing Wolf had burned her a hole that far out, or she wouldn't have just capsized them, she would have crushed them.

Captain Verhoeven bellowed down the line of harpooners, who were standing, watching as the jinn all but cleared the hole and began to topple. "What are you waiting for, permission? Shoot her!!"

So it was that when the jinn crashed to the ice and the crack she made raced to split it all the way to the *Chieftain's* hull, so it was that she had a dozen harpoons stuck fast in her hide, and hit the white ice's surface dead.

There was silence, for a few moments.

Then Badrille's voice, wry. "We should have thought of this method sooner. Cut holes in the ice and wait for them to jump through and serve themselves up like dinner on a platter."

But everyone was already in motion. "Dray," said the captain. "Can the carts come off the tracks?"

"Aye, ma'am," said the head drayer without a trace of irony, "they do it all the time."

She nodded. "Use the cranes, get them to the surface. Do what you have to to rig runners."

"Runners, aye," the dray said.

Then she was scanning the ice surface again, looking for Wolf and the swimmers, Martin thought. "Uld, get us soundings, see where the rest of the pod is. Slaine—"

"I know. Kit and levels. Rios, come and help." A gesture, and Martin realized Slaine was talking to him.

Martin took a last look at the immense sleek body of the jinn, with this sense that it was such an impossible sight that it might not be there when he got back abovedecks. Then he followed Slaine below.

"Ph, roe count, biodensity indicators—" Slaine was throwing worn packs and satchels at him. The roe count equipment was in a red backpack. "You've only seen one hunt, haven't you?"

"Yes, sir," said Martin, shouldering the backpack and another bag.

Slaine gestured impatiently at the honorific. "Dispense with that shit, I'm a scientist. You were from Van Dieman?" He didn't wait for Martin to

confirm or deny. “What was your time for?”

The cabin was small, and he was already squeezing past Martin to hook a radio off its charger, while lighting a cigarette with his free hand.

“Murder,” said Martin.

“Ah.” Then into the radio, “House, Slaine. I’m headed up with Rios. Tell the captain unless she has other ideas I’ll take my samples from the really big hole.” He turned back to Martin, who hadn’t told anyone on the crew that before. “Smoke?”

“No thank you.”

It was all Slaine said, apart from the periodic curse as they made their way out across the treacherous ice surface, keeping their distance from the enormous gray crack that ran from the beached jinn to the *Chieftain’s* hull. Some of the swimmers and a rough dozen of the crew were already out at the body of the jinn, though no carts or drayers yet, Martin noticed.

“Jesus, I hate this shit.” Slaine slid and staggered on the ice, and as he arrived at the knot of crew by the jinn, grabbed Karian to steady himself. Karian agreeably reached out a meaty hand, and steadied him in return. “Found Wolf yet?”

Karian shook his head. He was still chewing on the end of the unlit cigarette. “If you ask me,” he said with a nod to the immense jinn, “that bitch swallowed him.”

Slaine looked at the jinn, whose gray bulk eclipsed the midday sun and the better portion of the sky around it. “Only one way to find that out,” he said.

Martin looked over to the ragged edge of the hole she’d breached through. Badrille was just surfacing, to the hands and arms of Coq, a few other swimmers and a handful of crew.

“Three more jinn, no bulls. No Wolf,” he added.

Nothing but the pattern of tattoos and a handful of pinono grease had stood between Badrille’s golden skin and the cold of the water, but he stood now with his coat around his sinewed shoulders, comfortable and unconcerned. Except to hear that no one had seen the first mate, and then he frowned. “Not good. He’s not in the water.

“The bulls would have come.”

“You can’t be sure the bulls aren’t there.” Slaine made his way over, and

Martin followed.

“No?” Badrille turned and lifted an eyebrow that was sticky and white with pinono fat. “Because you have not yet stuck your little probe up the ass of the universe, nothing can be true.” Badrille clicked his tongue. “You and your backpacks have been wrong many times, Mattathias. I haven’t been wrong yet.”

Slaine chuckled. He crouched a short distance away from where the floe gave way to water and floating chunks of ice, inching his careful way towards the edge.

“It’s all right,” Badrille called out to him, as Slaine went on his belly and put a hand out for Martin to slide him the biomass pack. “If . . . no, *when* you fall in, I’ll still come and fetch you.”

Slaine was about to reply, when there was a strange, deep gurgling from the body of the jinn.

“Gas bubbles from surfacing,” he said as he glanced over at the body. The rumbling continued. “She’ll probably—”

There was a rushing sound, then, and several thin streams of black smoke shot from the jinn’s dorsal vents. “Well, that’s different,” Slaine said.

“Smells like supper,” Karian laughed, just as the stench reached Martin. Oddly smoky, like burnt meat.

“It’s the torch,” Martin said suddenly. “It’s Wolf, with the torch. Inside,” he added, when everyone was still staring at him.

“Cut her open,” Karian said, but he had little rank here, and everyone looked at Badrille.

“It will take too long,” Badrille said. “We won’t get to him in time.”

He looked to Slaine, who had backed away from the hole and was looking up at the great carcass, muttering to himself. “Slaine?”

“—ninety-five times around three-fifty—quiet, I’m thinking—” Then finally Slaine looked away from the jinn and at Badrille. “She can’t be any less than four years old. Her esophageal passages aren’t more than a foot and a half across, even in rictus.

Badrille frowned. “Too small for me, or you.”

“The passages open up when she’s swallowing, and peristalsis might have forced him through.”

“Grind him to fucking powder in the process,” Karian grumbled, but

then they were all seeing it, the oily threads of black smoke still drifting skyward.

“Stick a charge up her snout, blow her open,” one of the men suggested.

“And Wolf in the process.”

“And then we lose a few thousand barrels of bale.”

It could happen, Martin knew. It could happen that they would let Wolf die in there rather than risk harvest and processing. A case of too many men’s jobs, too many men’s livelihoods.

His mouth was dry, and part of what he said came out hoarse. “I can fit in there. I’ll go and find him.” Already pulling his coat off, despite Karian’s rumble of protest and Slaine shaking his head.

“He’s right,” Badrille said, but for just a moment Martin thought he saw the golden gaze go shipward, as though perhaps a higher authority than his own should make the decision.

“Find him and then what?” Karian demanded. “Then I have to pick pieces of boy and first mate out of my nice bale.”

“You don’t have to do this.” Slaine was next to him, pulling a green tank out of the medical kit. “Nobody gets paid enough for that.”

Martin didn’t say anything, and after a moment Slaine handed him the tank. “Use it sparingly—don’t open it up more than a quarter turn, and if Wolf isn’t in good shape don’t waste it on him.”

Martin nodded, and put the tank strap over his shoulder.

“The bale’s going to be a fuck of a tangle to get through, but don’t worry about which passage to take; they all go to the same place. If you’re in luck she took a big gulp of air when she surfaced.” Slaine was silent a moment, then. “Best case, you’ve got about two hours. Worst, around forty minutes. Wolf’s little barbecue isn’t going to help matters.”

Martin nodded again.

Men had gathered around them, and there was encouragement and dissent. “Not worth it,” he heard, and “he might not even be in there.” Though smoke still curled lazily from the jinn as though she were some huge, slumbering dragon. If smoke goes out, Martin thought, maybe air goes in. It was a small hope, anyway.

Karian and a few of the others were prising the jinn’s mouth open; thick, rubbery lips and spiky whiskers. Someone stuck an ice axe in the opening,

which was little more than a smirk of a hole at the far corner of the jinn's mouth.

"Martin, wait." Badrille's hand was on his shoulder, and he stopped, turned back for a moment to look at the swimmer. "Listen to me. Will you listen?"

He drew Martin a few steps away, hand still on his shoulder. "All right," Martin said.

Badrille cupped the side of Martin's face with a warm hand, then, and drew his thumb in a firm stroke across his forehead. "Like you, like me, she is filled with water. Water carries life. We pass it from one world through one wall into the next. Don't be frightened."

"I'm not." They were odd words, but Badrille's voice was soothing, lulling.

"Everything is in the water, everything you need. Just live there.

"Only live there."

When Martin looked down, Badrille was letting go of his forearm, and there were mottled blue marks there where his hand had been, rising into shapes and characters. The tattoos, he realized. Which were not ink at all. "They'll fade," said Badrille, with a shrug.

"What if I don't want them to?"

Badrille blinked at him, then looked out over the ice, away from ship, men, jinn. "I don't know." He looked back at Martin and smiled.

Martin stood for a few more moments there, then stepped back from Badrille and made his way over to the jinn. Karian and one of the drayers held the corner of the jinn's lip up higher for him as he pushed through, like climbing under the hem of a slick rubber skirt into darkness. Inside the mouth was slippery and wet, but not smelling anywhere near as foul as Martin had thought it might.

Past the lips, the jinn's mouth opened up, giving him room to stand upright for a brief moment before he lost his footing and fell.

"What?" Karian was still standing at the opening when Martin stuck his head back out into the air and white icy light again.

"I need this." Martin wrapped his hand around the ice axe, and Karian stuck his big shoulder under the lip, heaved it up with a grunt so he could pull the axe free.

“Here.” Slaine was shoving a pathetically small flashlight at him. He took that, too, pocketing it while Karian held the lip up and his face turned red with the effort.

“Anytime, now.”

Martin was already turning, heading back in. Before, he thought, before he saw the lip dropping closed and lost his nerve.

A moment later, he was plunged into darkness.

He crawled along, using the axe to reach ahead, sink it deep, and anchor, pulling himself towards it. His hands and knees sunk into what felt like a carpet of knobby, wet mushrooms. Mushrooms which, Martin discovered with a surprised sound and a curse, contained the first and second rows of teeth. Small and raggedly sharp, and the cut they’d made on his palm burned fiercely.

Somewhere in the back of her mouth the bale would start, he knew that much; thick strands of tough membrane that would tangle and catch. He’d asked the first day the draying was done and as they helped with the processing, “What do they want it for?”

The head dray had looked at him blankly a few moments and shrugged. “No idea. Creams or medicines or something, maybe.”

“Who cares, right?” One of the other drayers had laughed, then. “Who cares as long as they pay a fuck of a lot for it.”

Here the cavern of the pinono’s mouth sloped up, and the slick, knotted flesh under his feet seemed that much slicker. He hefted the axe, drove it into the slippery floor, and pulled himself along and up with it. Dead, he reminded himself as the axe sunk in; he could smell the familiar mineral smell of her blood, or the grayish ooze that passed for it. She was dead, and the floor wouldn’t convulse suddenly at the prick of the axe, she wouldn’t sneeze him out, send him flying a hundred miles out over ice and frozen seawater.

The oozing blood made his footing more difficult still as it flowed down to his boots, and caused them to slither out from under him. Martin hung grimly to the axe with both hands as he fell to his belly, feet sliding out down the slope. Wolf, he thought, frontfirst in the carpet of slimy nodules. Wolf, or go back into the daylight now. The notion of loading the big purple cubes of the jinn’s flesh into carts and then barrels, knowing he might find

the first mate's arm or leg among them, made his stomach turn.

He reached up, plunged his hand into the fleshy knobs and knotted his fist, feeling his nails tear in and cut, feeling the seep of her blood again. He twisted his wrist, tangling it all around it, flesh of her mouth and his fingers. Secure enough, and he pulled himself up by it and unstuck the axe, then hefted that and plunged it in again higher up.

By hand and axe and slithering boots, he made progress along.

He came to the bale, then. Slick and stretching over his head and down to his feet, like wet strands of rubbery tape caught at the top and bottom of the immense pinono's throat. Here he found he was less likely to slide back, as he pressed into the tangle of bale, and could brace his feet against the strands, catch them in his hands although they were slippery like everything else, and here and there he lost his grip. As difficult as the bale made it to go backwards, it made it to go forwards. Soon, he was using the axe to swing and try and cut the leathery bale so he could continue to press on through it.

Deeper, and deeper.

He imagined suddenly that he'd lost sense of direction, and was circling around and around in the jinn's throat, in this wet, sticking veil that smelled of the wood of the ship's deck, and deepest, most brackish salt.

And smoke.

Now he smelled it, amid the bale, the jinn's smell. Smoke, that sick, fleshy burning smell.

He plunged forward, forcing himself through the bale, strands tangling his feet and arms and he'd trip and fall, only to hang by strands he could haul himself back up on. Then have to untangle, force himself forward. More dense, and he shouldered and squeezed and found himself having to go to his knees.

And then his belly.

The smoke smell was stronger, but the air seemed close. Thicker. The struggle of climbing through the bale had made his breath shorten, he thought.

Then again, maybe it was something else.

He thought of the tank on his back, whose strap had tangled a half dozen times with the bale and he'd almost left it behind him.

He reached, found the rubbery mask somehow and put it to his mouth

and nose, and fumbled with the valve until he tasted cooler air that seemed thinner and sweeter, somehow.

Good. This was the right direction. Tighter, just as Slaine had said.

He closed the valve, shouldered the tank and crawled forward on his belly, forcing himself between the catching strands of bale. Then suddenly there was nothing there except darkness, and a tight wet tube all around him. No bale.

Just a narrowing tunnel of flesh, with hard ridges in rings around him that kept him from shouldering it or kneeling the fleshy aperture wider. Bone, maybe. Cartilage? Slaine or Badrille would know.

Forward, until he was forced to push the green tank along the slippery tunnel ahead of him, and crawl along on his elbows, jabbing them between the ridges as he pulled himself along. He had to stop again and put the now-slippery mask against his face, draw cooler, sweeter air before continuing forward.

*Don't waste it on him, Slaine had said. Don't waste it on him.*

••••

Martin's sentence had taken four months to come down the wire, a communications lag that wasn't subtracted from the four years he was given. He'd been in the wrong place at the wrong time, to be among a thirty-man crew working tea crops on a South Five hydroponics station when the sabotage happened. Unlucky, to have a gun put in his hand and not completely understand why until he'd shot a foreman and been left to take the blame. The security feeds told a partial truth and Martin made his best attempt at the rest of it, but there were the adjusters and owners and auditors to placate. Martin was sent to Van Diemen for four years, on top of the four months he'd already spent incarcerated.

Unlucky, as the judge had said.

Martin had liked the hydroponics bays. They were levels and levels of sweet-smelling green, where he'd planted and tended and sown, and done minor repairs on the machines that made light and leached feed into the beds. He'd liked the clean, warm air, and the soft feel of the plants in his hands; he was good at what he did.

He'd started to set a little money aside, bit by bit. For what, he didn't know. Something else, maybe. Something else of his own someday.

• • • •

Light ahead.

Light, Martin realized, flickering ahead and the air had taken on a more burnt, acrid smell. He struggled forward, squirming through the passage as best he could, body stretched out towards the flicker down along at the end.

Further. Further, but it came to Martin that the end was too far away, and now—even worse—he'd become stuck. Caught in a casing of still-warm flesh, where he could now move neither forward nor backwards.

He lay gasping, reached for the rubber mask again. *Don't waste it on him.*

On an indrawn breath, mask most of the way to his mouth, he smelled it then. Smoke, this time drifting down the narrow passage towards him. This time not the smell of burning flesh, as he drew in another breath again, but something else. Cherry. Cherry, and wood.

"Wolf," he said, but it came out in a croak. Louder: "Wolf."

There was sound, a splash, maybe a rustle up ahead. The light flickered again, flaring ahead of him more brightly. "Rios?"

Martin struggled in the grip of the pinono's throat. *Everything is in the water, everything you need. Don't be afraid.*

He lowered his cheek to the pinono's slick flesh, ear pressed to it as though he could hear Badrille's voice there. Maybe he had. The throat was warm, and wet. Wet, he thought.

*. . . she is filled with water. Water carries life.*

*Breathe.*

The flesh clung slickly to his nose, cheek, throat. He breathed in deep, then deeper. *Pass through.*

A thrashing squirm, and Martin clawed hard, dug in his toes and fingers and suddenly, in a rush, popped free and shot through.

He and the green tank landed in a pool of water in the wider passage that was illuminated only by the ember of Wolf's pipe. The pipe was still clamped in the first mate's teeth as he slithered over to Martin to help.

“Lit it on the last of the torch,” he explained, while Martin gasped and wheezed in his massive grip, and Wolf shook his head at the offer of the oxygen mask. “No, better you go first. The heat forced her vents open for a while, but they’ve closed up again. Not big enough to crawl through.”

Then, after a moment: “You all right, there?”

“Yes.” Martin took the mask away from his mouth and pushed it at Wolf. “Have you ever done anything you’re sorry for?” he asked him.

Wolf considered him in the darkness, beard and hair wild and smelling of cherry pipe smoke and char.

“I killed someone,” Martin said before the first mate could answer him.

“Not the captain,” Wolf replied.

Martin had a moment of confusion, watching as Wolf took a long drag from the mask and exhaled slowly as though it were the pipe he’d just extinguished. “No. The foreman at Roryn station. I shouldn’t have. I shot him.”

Wolf was silent a while longer, and handed the mask back again. When Martin hesitated, the first mate shook his head. “Take it.” His grip was still heavy on Martin’s sodden shirt, and he sat half-in, half-out of the pool of water that Martin had landed in. “There’s six of us with bad licenses,” he said, then. “Me, Uld, Karian . . . a few others. We got in late to Port Sum, and they’d closed the numbers for the season. So we bought forgeries.”

Martin didn’t say anything. He just listened.

“Naguen found out. He told Verhoeven they’d go back to port, take the season’s loss.”

“Because of the bounty he’d collect if he turned you all in,” Martin said after a moment, realizing.

“Hrm,” said Wolf, a rumble of assent.

Mutiny, Martin thought. If the crew knew, they’d mutiny and then the shipping company could collect on whatever bale they brought in, all the wages and bonuses would be lost and they’d all be stripped of their licenses permanently. Everyone. If Naguen went back and turned in the six, he’d get his bounty, and the season would be over and that would be that. He’d be fat wealthy, and the crew would be penniless.

“Was it you?” Martin asked, though he knew better. He didn’t ask, *was it Captain Verhoeven?*

With Naguen gone, they had a chance of one or two good hunts, and the whole remaining crew finishing out what they could of the season.

“No one comes out clean, anyway,” Wolf told him.

Martin thought about that. He sat in silence for a while. Thought of who might have killed Naguen, thought of Wolf opening the ice so the jinn could break through. Thought of himself, inching along through crushing, wet darkness. He gave a last thought to the warmth and green of distant bays, then let them go. He belonged here, now. It had nothing to do, as he thought, with what was earned, but what was given.

He and Wolf passed the mask back and forth, then, in the darkness. Until the tank ran out and a voice told Martin not to be frightened.

Martin wasn't sure if it was Wolf or Badrille or the pinono who'd said it. But he woke smelling ice, and bale, in the bright light of certain day.

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## **ABOUT THE AUTHOR**

Kate Bachus's fiction has appeared in venues such as *Asimov's Science Fiction* and *Strange Horizons*. She lives in Massachusetts with her wife and two kids.

[To learn more about the author and this story, read the Author Spotlight](#)

# Secondhand Bodies

JY Yang | 5800 words

“Admit it, the only option left for that body is getting rid of it.”

Cousin Aloysius says this as he sprawls uninvited along the length of my bed, and I hate him for that. I hate the carefully browned skin on his shoulders and the deliberately ruffled edges of his collar. I hate the way he’s kicking one faux-suede heel against the bed’s heirloom oak panelling, leaving tiny ding after tiny ding on the priceless surface.

Most of all I hate the smug upturn of his lips and the way his eyes stay critically on my mound of belly-fat. I turn my back on him and study the displeasing, embarrassing shape it makes of me in the mirror.

“It’s just a bit of fat,” I say, but even the word feels uncomfortable on my tongue. Clumsy and unwieldy. When I tap my fingers on my belly I feel it jiggle in alien geometry.

Cousin Aloysius laughs.

Good cousin Aloysius has an easy smile and an internship in a big bank and a judge’s daughter for a girlfriend. When we were both seven he took my neural calibrator and hurled it into the storm drain quarantining our schoolyard from invading tendrils of forest. I wailed as the device sank irretrievably into rotting leaves and organic muck. “Cry what cry, your father can afford to replace that shit, right?” he had taunted.

He was already good cousin Aloysius back then, while I was only scabby-kneed loud-voiced cousin Agatha, so guess who got the blame? Daddy had been so angry, his rough hand bruised one corner of my cheekbone. “You want to become stuck in your own body? I’ll leave you there, you know!” Aloysius had laughed at the mottled skin on my face. He thought it was funny.

Cheap cousin Aloysius. Tacky cousin Aloysius.

He continues to kick my bed. “Don’t embarrass the family. Chinese New Year is in three months and I’m bringing my girlfriend. Are you going to diet like a pleb?”

I have bad genes. My mother’s mother had a round face and a body that bulged like a beehive, a victim of bad metabolism that spared my mother

but resurfaced in me, her wayward daughter. Much as clinicians have tried to iron out the kinks in my DNA, each body they generate still goes soft and gelatinous within months. This is my fourth body since I turned twenty. Nothing sticks, not diets, not exercise. Only overhauls.

Rumours say one company has found a permanent fix to the metabolism problem. Vivaco has won awards and gathered effusive praise worldwide. They're reputable, oh, we know they work. But they only grow sixty bodies per year, to an exclusive pipeline of suppliers. Money problems are no obstacle to me, but this isn't a money problem. This is a who-you-know problem.

Cousin Aloysius has clinician friends who are supplied by Vivaco. Clinician friends who make a killing in reselling discarded bodies. Clinician friends who give him a cut for every client brought in and every financial transaction covered up.

Cheap cousin Aloysius has a smile that could cut flesh. Tacky cousin Aloysius says, "If you're willing to resell that lump you have, I can set you up with my friend."

And because I'm vulnerable, because I'm desperate, because I think what else have I got to lose? I say yes.

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To illegally sell your body takes a surprising amount of extra work. There's extra scans to be done, extra things to be mapped, extra things to agree to. And all the fake paperwork: Guarantee of incineration. Waiver of indemnity. Dissolution of joint patent over the body.

The law highlights body recycling in big red bold font and a bunch of big red Xs, of course, but even idiots know that where there's a demand, there's a way to get a hold of things. The black market in secondhand bodies thrives, even in neat shiny little Singapore.

Dr. Subramaniam has a yearly quota of six orders from Vivaco. Not all buyers resell. To be offered you have to be introduced by friends, his network of enablers like Cousin Aloysius.

The doctor is a lot classier than I expected. Nicely done-up office, modern lighting, no tasteless looping posters selling the wonders of

nanotech surgery. He has dry hands and a warm smile, perfectly paired with his doctor's manner. Talks a lot too, like a doctor. About massaging the DNA and changing the face for the recipient. Some nonsense about identity.

"I don't care about that," I tell him. "I want to know when. Can it be done by Christmas?"

Dr. Subramaniam smiles. "Of course. The major issue is usually finding a second client—you know, you can't just hand over the body to any Tom, Dick, or Harry. But luckily for you we have the perfect candidate."

He turns a screen towards me.

I am confused. There are pictures of a woman—the same woman—but she cannot possibly be the client. Because she is beautiful. She is so beautiful the bottom of my heart falls away and empties its contents into the deepest pits of envy. Long limbs. Slender. Obsidian-skinned. The face of an Indian beauty pageant queen: wide lips, sharp cheekbones, high forehead. Eyes luminous. Dark hair spills everywhere, loosely curled and seemingly endless. Her face glows, and a universe of possibilities shines out of it.

"Is this a joke?" I ask. "She looks like a model. Why would she swap that for this lump?"

Dr. Subramaniam makes a soft noise. "You really have no idea, do you?" No, I don't. And he's not answering my question either.

The screen says her name is "Maryam." Maryam. I form the word softly on my tongue, feeling the roll of its Rs, the softness of its vowels, the folds of its consonants. I imagine whispering it into the dark shell of her ear. I am in love. I am in love.

"Is there a problem?" asks Dr. Subramaniam.

No. Yes. No. How am I supposed to answer? The idea of a problem, a thing that can be *solved*, is too prosaic for the beauty in front of me.

Buyers and sellers of bodies don't meet. Too much potential for awkwardness afterwards—it's not the done thing. But I don't care. Since when have I allowed the rules to restrict me?

"I want to meet her," I finally say. I will brook no dissent. Dr. Subramaniam has already lost the argument. He just doesn't know it yet.

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She's even more beautiful in real life.

Skin that shimmers in the afternoon. Curves like a champagne glass, subtle and refined. Light clings to her on the verandah of my favourite café, the one with the red velvet cake that is to die for. Perfect makeup, not slathered on tastelessly but just enough to highlight her lovely features. Her smiles are tiny little things that reveal only teasing glimpses of her piano-white teeth. I take in her toned arms and the shape of bones in her ankles. Everything about her pleases me.

"I was born in the Philippines," she says, when I ask her to tell me about herself. She has a voice like the velvet cake we're eating, smooth and rich. "My father was a Singaporean, an Indian man, so we moved here when I was a baby. He passed away when I was very young, but my mother had already gotten her permanent residency so she decided to stay and work. She raised me alone."

"Okay," I say.

Maryam looks at me as if waiting for something else, but I shrug.

"Okay? That's it?"

"Yup." Her past is of little interest to me, honestly. Just making small talk. "How's the cake?"

She has a tiny, fluttery laugh, like a hummingbird's wing, like a potted indoor plant. "Oh, it's good. It's good. It's very good." I smile and pat her hand.

We talk about my work, my blogging and reviewing, until we've wrung the topics dry and the words peter out. Silence congeals between us.

"Come home with me," I say. Mother is in Europe until her spring collection launches, and Daddy could live in his office for all I care. I have the house to myself.

She bites her plump lower lip, and I see trepidation simmering in her. "I'm not a serial killer," I joke. "Why would I hurt you? I need a buyer!" I laugh, she doesn't.

"May I make a phone call?" she asks, standing up.

I look at her face—there's uncertainty there, but not animal fear. "Leave your wallet," I say anyway, just in case.

So she does. She's gone a long time, and I wonder if she's just run off anyway, abandoning her tacky little PVC purse. My strong personality has

no doubt left a bad impression on her. But that's how I am with people. Stubbornness turns people off. It's a blessing, it's a curse. To calm myself down I stroke the surface of her wallet, which reassures me that she'll be back. It's her loss if she doesn't. And I do so want her to come back.

She does return, holding her phone like a talisman. Whoever it was she was speaking to has calmed her down, because she's smiling, a full, toothy smile. She sits down, and her voice is soft and high and musical as she says, "I'll go with you." I like that tone of voice. It's sweet, it's supple, it's malleable.

So I bring her home, filling the car ride with pleasant small talk. Maryam acts like she's never seen a house as big and multilayered as ours before. She walks around the cavernous living room with her eyes wide, long fingers trailing the air over the glass sculptures and the moulded furniture but never really touching it.

"Come upstairs to my room," I say. "I want to show you something."

My room is rosy in the afternoon sun that filters through the generous French panelling. As Maryam looks over into the garden and koi pond I get undressed in front of the mirror. Unclothed I stand in the middle of the room, ankles deep in white sheepskin rug, until she turns around.

She doesn't even look surprised. The afternoon sun backlights her hair like a halo. I hold my hands out. "Here."

Maryam walks around my naked body with a faun's gait. There is wonder in her eyes. Wonder and joy. I feel vindicated for bringing her back here.

One tentative hand stretches out and hesitates millimeters from the skin of my arm. My hairs stand and my flesh shivers as those shy fingers of hers ghost over me. "It's okay to touch," I say.

Her fingers land, warm and radiant against my white skin. She presses once into the yielding flesh before her fingers depart, and move to my shoulder, my chest. Heat curls deep in my belly and I bite my lower lip.

Her hand moves downwards to my midsection, which sinks under her touch. She pushes gently on the fat, feeling its softness, its generous give. "This is it? This is why you want to change your body?"

I nod. A small sound comes out of her, somewhere between a sigh and a laugh. "The doctor said it was something small, but this—" She looks me

straight in the eye, and it feels like it's for the first time. "This I can live with."

Her gaze is hypnotic. I gently close one hand over hers and slide it downwards, towards the waiting ocean. I see the meaning of my gesture catch in her face, and there's no surprise there: She knows what I want. She'll give it to me. Deliberately, she brings my hand to her full lips and kisses it.

Her sundress comes off easily, like a dandelion shedding its coat in the wind. She plays my body like a stringed instrument, quick nimble fingers drawing gasps out of me effortlessly. I lay her down on the thick carpet and kiss every inch of her body, her supple and rice-fed, sun-warmed body, firm and yielding at the same time. When I have her in my mouth she makes salt on my tongue and birdsong in her throat.

Walls break and reservoirs of pleasure wash over us. In their wake we lie like debris, breathing deep, sweat evaporating into the air conditioning. I decide, right there and then, that Maryam will not do the swap, no matter what. Dr. Subramaniam will have to find another buyer. I will convince her to stay perfect, right the way she is. I'm very good at that, convincing people when I have to. Getting my way is a survival skill.

I turn to her with a soft smile. "What do you think?"

She doesn't return my smile, gaze fixed on the ceiling. Her voice is dreamy. "It's something like a fairy tale, this place you live in. This life. I wouldn't have believed something like that existed."

A smile blossoms on my face. There's my hook, there's my opening. Lucky for me she was underprivileged, raised by one working parent. It makes my life an easier sell. I stroke the skin of her arm. "There's plenty more where this comes from."

Now she does look at me. "More?"

"You saw my car, the Volkswagen. But I have a Ferrari. It's in the back. Yellow, kind of loud and tacky, but it's a fun drive. You can try it, if you want."

She makes that little not-laugh-not-sigh sound of amusement. I pull her closer. "Live with me. The house has plenty of space, you can see. I'll show you all of the wonders, like they said: a whole new world of things. You can be my Princess Jasmine, and I'll be your Aladdin."

Her fingers grip the sheepskin. “And every night one of these magic carpet rides?”

“Took the words out of my mouth.” I kiss her on the cheek. “How about it?”

Maryam looks back up at the ceiling. Time elapses in agonising seconds before she nods.

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And so begin my days of propaganda, my campaign of love; a four-week affection bombardment, my version of shock and awe. I fill our room with gifts: coloured silks and precious stones and perfumes for the wrists and hair. “Those dresses look perfect on you,” I tell her. “The colours match your dark skin so well.” She merely smiles at my compliments, but I think she looks pleased.

I feel indulgent, just like a sheik of old, showering luxuries on my beloved. Or like a genie, wreathing her in magic. *Prince Ali, marvellous he, Ali Ababwa.*

I split our days like this. The nights are ours, a delightful confection of warm sheets and soft skin. Mornings are given over to work, phone calls and empales; afternoons I take her shopping; evenings she accompanies me to parties and events. Club openings, product launches, parties with \$5000-a-bottle champagnes. My Maryam absolutely shines in them, my little black diamond. People coo and gather around her, sometimes dragging her off to corners to have one-on-one conversations. She’s the belle of the ball and I couldn’t be prouder.

Maryam has surprises in store for me, too. Like on the morning after the first day we spent making love, when she crawled out of the bed in the darkness of six am to search for her things on the floor. “Where are you going?” I’d asked.

“Home,” she’d said, her voice sleep-hoarse and crackly. “I need to get dressed for work. It’s Monday.”

“Take the day off.” Shouldn’t she be quitting her job anyway, if she was soon to commit identity fraud?

Turned out she still had a few weeks left to serve on her contract, with

some PR agency I'd heard of but never bothered with. "Just leave," I'd instructed. "I'll pay off the balance. Surely your contract has a clause for that."

"Look, my immediate boss knows what I'm going to do, and she's agreed to write job testimonials for my new identity. I've got her full support, I don't want to burn that bridge." Her voice had gone a little glacial then, as she added, "Maybe you can afford that, but I can't."

Stubborn as you like, this one. Eventually I persuaded her to stay home with the promises of job referrals. There's plenty a marketing and PR rock star like you can do in my line of work, I tell her, sweet words rolling off my tongue. I know all the people you should meet.

In my final plan for her, she won't be working at all. Why would she need a day job that would take her away from spending time with me? No, I get it, seriously I do: Maryam wants a better life, and she thinks becoming Chinese will do it for her. I read this stuff on the Internet, too. But why bother with doing it herself, when I can simply give it to her?

I only have to get her acceptance. Which I'm working on.

I'm not a fool. I know she is far from swayed by me. She spends a lot of her time on the phone, hiding in bathrooms or whispering private conversations in corners. When I ask her who she's talking to I get a dismissive "a friend," or sometimes "colleagues." I know lies when I hear them. I contemplate taking her phone, or smashing it into a thousand tiny glittering bits and blaming it on an accident.

But no, there are other ways of achieving my means, subtler ways to get her to drop her life plans. I need her willing and ready.

In bed one night she whispers to me, voice thinned by wistfulness, "You know, people treat me a lot better when I'm with you."

I smile and squeeze her hand. "Of course they do. My influence counts for something, darling." *Something that even a new body won't afford you.* Maryam's face changes in the dim light as she considers this, and wordlessly she pushes her face into my shoulder.

It'll all work out, you'll see.

••••

At one of the cocktail parties, cousin Aloysius shows up, the judge's daughter on his arm, oval-faced and slender-hipped. I introduce her to Maryam, and while they make small talk on the verandah, cousin Aloysius pulls me aside. "So," he says, voice dripping sulphur, "you're taking her on a grand tour of your body or what? Showing her how all the plumbing works?"

I roll my eyes, even as my chest fills with fire that might be hurt pride or indignation. "We're in love," I spit at him, and it sounds like I believe it. "It's for real, and she's going to forgo her part of the swap. You'll see."

Cousin Aloysius makes an indignant A shape with his arms. "And then what? She's going to live under your table, eating your scraps?"

"She can write. I'll let her take over my blog while I run the events business."

Cousin Aloysius laughs with a sound like a small dog barking. "You're a fucking idiot." He slaps me on the back, much harder than he needs to. Leaning close, he whispers, "Don't fuck this deal up for me, Agatha." And then he's back out to the verandah before the goosebumps finish prickling over my skin.

Maryam has vanished into the folds of the party. I push through the spangled, suited crowd looking for her crown of curled hair, for flashes of her dark skin. Nothing. She isn't in the washroom or by the bar. She can't have left without me, can she? I go back out onto the verandah and ask the judge's daughter where Maryam is, but she doesn't know. "Perhaps she went for a smoke?"

Maryam doesn't smoke, but on a whim I go out to the smoking area near the carpark anyway. Nothing but a rangy cluster of service staff shrouded in their own cancercloud. A waste of time. I turn to leave—and that's when I see her.

Hidden behind a pillar a stone's throw from the smoking area, but given away by the heft of her hair, Maryam is in intense conversation with another woman. One of the serving staff in the club, still clad in uniform. Something's going on. I stick to shadow as I walk up, hoping to eavesdrop on something telling.

They kiss.

My muscles freeze as my guts turn to liquid. The kiss is not even a

tentative one, the hesitant half-breath first-kiss type. This is the full-on, tongues-recruited, chest-to-chest kiss of the longtime lover. The kiss you share when nobody else is looking.

I don't know why I'm surprised. I don't know why I'm disappointed. But I am, I am, I am.

They break apart and the rapid-fire Tagalog begins. So this is the true identity of Maryam's phone conversation partner. I clench and unclench my hands. Enough. I step into a streetlight. "Something you want to tell me, darling?"

Maryam doesn't even have the decency to look dismayed. "What are you doing out here?"

"Looking for you. Guess what I found."

Maryam's chin tilts upwards defiantly. "This is my girlfriend, Belinda," she says.

The woman glares at me, stone-faced. "You were going to mention this at which point?"

"Never, because you didn't bother to ask. And it wouldn't have stopped you anyway. Would it?"

No, it wouldn't. That's not the point. I look at my rival's face. Belinda. Her face is moon-like, rough brows and broad nose. Yes, I recognise her, I've been a patron of this club long enough. Belinda. She's one of the senior serving staff.

This is her. This is the woman that Maryam would choose over me. This worm. Belinda. My heart curdles in my chest. I will not see this woman's face when I come here again. I refuse.

I march straight inside the club and summon the night manager. Benny. A good guy. "You need to come see this," I tell him, and I pull him outside.

Maryam and Belinda are still engaged in deep and intense foreign chatter when we come up. Belinda's face goes rabbit-like when she sees I've brought her boss. "This member of your staff has been soliciting one of my guests," I declare. "Is this behaviour condoned by your establishment?"

"She's my girlfriend," Maryam blurts, trying to step between Belinda and Benny.

She might as well be invisible. Benny remains stone-faced, stern. "You know our policies," he says to Belinda. "Go inside and pack your things."

Belinda's face crumples like so much paper. "But, sir—"

"Just go."

And she does. Benny turns to me. "I apologize for this. I'll speak to the rest of the staff and let them know this sort of behaviour is unacceptable."

"I understand," I tell him. "No worries. Sorry for keeping you from your duties." He's a good guy, as I said.

Maryam stands where she is, breathing in and out hard enough that I can see the movement of her chest in the lamplight. "I'm saving you from bad choices," I inform her. "You can't be hanging out with this sort of low-class person if you want to get anywhere."

She turns to me with a smile that resembles a shark's. "You know, just when I thought you couldn't get any more despicable, you actually do." And she storms off. Where to? Where can she run to? She's stuck with me. I still have what she wants.

• • • •

The moment Maryam gets home she flings open the closet and starts pulling out clothes. Only the cheap, ugly ones she'd brought with her.

"What are you doing?"

"What does it look like?" She pulls her carry-bag from a drawer. "Do you think I'm still going to keep up this charade? After what you've done?"

The sweetness and suppleness is gone from her voice. It's as if a spell has been broken, and my malleable Maryam has been replaced with a spitting, angry caricature. But no, the pleasing confection has been the illusion all along, a crafted mirage of a lovely woman whom I could work on, who actually appreciated all I had been doing for her. I feel betrayed by my own dreams, by my own foolish feelings.

"I loved you," I say, a last-gasp attempt at reconciliation. "I wanted you to stay with me forever."

Maryam slaps a toiletries bag on the table with more force than necessary. "You have no idea how to love a person."

"Says the lying, gold-digging backstabber."

Maryam shoves the carry-bag full of her possessions. It bulges with cheap, tacky items—she takes only what she had brought over here. Trying

to zip it up, she says, “Dr. Subramaniam said you were going to cancel the sale if I didn’t give in to your demands. So I did everything you wanted. But guess what? It’s too late to pull the plug on the deal now, I called and checked. So fuck you, fuck the car you drove in with, and I’ll see you never.”

The bag’s cheap zipper gives up the ghost with a plastic snap, and she slings the bag on her shoulder with it still open, contents swinging and yawing. “You think nobody loves you because your body doesn’t fit some fucked-up definition of the perfect woman. Well, no. Nobody loves you because you’re a miserable ugly-hearted lump of shit who cares only about herself.”

“I cared about you!” I did. I *did*.

She laughs as she leaves. Her laughter echoes all the way up the stairs. I stand in the middle of the room, my skin clammy, my mind swinging like a solar system cut free of gravity. I remember Cousin Aloysius’s schoolyard pranks, how they made me feel. This is worse. The failure is acid. The humiliation *stings*.

The liquidity in my gut, lingering from earlier in the evening, catches fire. Maryam thinks she can fuck with me? She doesn’t know the meaning of that word.

• • • •

I call Dr. Subramaniam to check on the progress of my Vivaco order. It’s coming along, it’s nearly done: “It’s too late to change your mind,” he says, simply.

In essence, he’s saying nothing I do can mess with the transfer on my end. It’s still going to happen, for me at least. Even if the other half of the swap is canceled. Even if, let’s just say, something terrible and irreversible happens to the body I’m reselling.

Drastic times require drastic measures—that’s always been my philosophy. I wait until it rains, turning the roads into ice-slick ribbons with no grip, before I get behind the wheel of the yellow Ferrari.

Deep pain begets deep pain. I tell this to myself in the split second between the wheels leaving the road and the roof coming towards me.

••••

The accident shattered my pelvis, broke four ribs, and punctured a lung. One of my vertebrae cracked and the doctor said I was lucky, I could have been permanently paralysed, even beyond the help of nanosurgery. If even the wiring is broken there's nothing to transplant into a new body, nothing to set roots into.

I hadn't even thought of that. I'd dropped bodies so often I'd forgotten how easily they can be maimed beyond repair. How easy it is to forget we're mortal.

Well, as the doctor said. I'm lucky.

Mother wants to come back from Europe, but I say it's hardly necessary. Both she and Daddy feel guilty enough that they offer to pay for a new body. Isn't it nice that I already have one from Vivaco all lined up? Daddy nods with approval. He knows Dr. Subramaniam, friend of a friend of a friend. "Next time don't arrange these kind of things without telling me," he admonishes, but he lets it drop there. Feeling magnanimous to his injured daughter, I guess.

My hospital room fills with flowers and fruit baskets and ludicrous Mylar balloons, the last sent by people who clearly don't know me very well. Cousin Aloysius is conspicuously absent from the visiting stream of relatives and well-wishers. His only communiqué comes in the form of a text. It's four words long: "You fucking selfish bitch."

I don't care. I don't need him any longer. Cheap cousin Aloysius. Tacky cousin Aloysius.

On the fourth day of hospitalisation Maryam comes to see me. She's dressed like a pleb again, her hair tangled like brambles over her shoulders, her face plain and shiny. In place of her sweet expression there is a shark's smile as she sets down the largest, cheapest, ugliest floral arrangement possible on my bedside table.

"I picked it specially for you," she says. "It was so horrible, you were the first thing I thought of."

Fine, I can play along. "What's it for?"

"To thank you." She sits on the edge of my bed, crouched like a spider. "I was so sold on swapping out this body. But four weeks with you opened

my eyes. I realized that if I went through with it I'd be faking all the time. That every day of my life with a secondhand body would have been misery."

She shudders like an actor in a community play. I see now that the light that I saw in her, that ineffable glow, is actually more of a forest fire, untamable and terrible. I could have let this woman burn me. I could have let her laser shark teeth chew right through me. Dodged a bullet right there.

"What a fool you are," she says. "You thought you could punish me by doing this, didn't you? But hey, you saved me from forfeiting a hefty deposit from canceling my half of the swap. It's not *my* fault that the sale didn't go through now, is it?"

She stands up, smug as a fishmonger who has won a marketplace quarrel. Her hair swings as she turns on her heel. "So take these awful flowers, with my compliments. And enjoy the rest of your fucking miserable life."

"The same to you," I spit. She walks out of my life, easy as she had entered it.

• • • •

My new body arrives and is perfect. Home from the hospital, I dance naked in front of my room mirror, admiring Vivaco's handiwork. A week since the transfer but I'm still not used to how light and supple it feels. The skin is white and flawless, the stomach flat and firm as a store mannequin's. I watch muscles ripple pleasingly as I turn and bend.

I'm so pleased. Maryam, who needs her? I shed the memory and desire I had for her like an old skin. She can go back to her pathetic life and her substandard girlfriend, and stay there until she rots. It was just as well that abomination of a body, tainted by her touch, was destroyed. Dr. Subramanian hadn't been able to find a new buyer. Good riddance.

I spin on my heel and nearly lose my balance as a tremor seizes my leg. I sink into the sheepskin, frowning. Glitches are common in the first weeks post-transfer, when the nervous system is still learning the ropes of its new body, but they're supposed to get better, not worse. I massage my calf. Surely a company as storied as Vivaco wouldn't have given me something

defective.

A rumble in the driveway. I pull on a bathrobe, open one of the French windows, and peer out. It's Cousin Aloysius.

The last time he came here he had an agenda. What does he want this time?

He enters my room, a sly fox, the smile on his face beguiling. "I came to see how you were doing, my dearest cousin. Now that you're finally back home from all your hospital visits."

I stand up, full height, as cousin Aloysius circles the room like a vulture, like a military inspector. My hands go to my hip. "I'm perfect."

"Pity about the swap failing, huh."

"Yes, a real pity." I narrow my eyes as cousin Aloysius peers out of my open window. If he's here for an apology, he's not going to get it.

As he turns around one of my hands shakes violently and slips from my hip. I let it go, but it hangs by my side, twitching and shaking like it has a mind of its own. Cousin Aloysius sees it and his smile widens. "Having a little problem with tremors, huh?"

There's some meaning hidden in his words, layered like organic rot. "What do you mean?"

"You know, studies have begun to emerge from respected journals. Turns out there are risks associated with doing so many body swaps. Too much nano surgery and the nerve endings start to degrade in some cases. It's rare, but it's been known to happen."

"What have you done?"

"It's a gradual process. First you get shaking in the extremities, which get progressively worse. Soon you'll lose feeling in your feet and hands, and then major motor control will eventually go. It takes a few months. It's almost exactly like being poisoned with slow neurotoxin."

"You low lives, you scum," I scream, "What have you done?" My arms are shaking now, and I can't tell if it's from rage or my poisoned nerves.

"You really fucked us over, Agatha. The paperwork we filed had serial numbers, and now they don't match with the documentation of the actual incineration. Do you know how quick the police are to pick up on that shit?" Cousin Aloysius sits on the edge of the windowsill, arms folded, smile like broken glass. "Consider this a gift from the both of us, dearest

cousin. If we're going to rot in jail, you might as well rot with us."

When we were seven, cousin Aloysius threw my calibrator into a storm drain, and laughed as my father beat me for it. The look on his face then matches the look on his face now, a brittle and bitter triumph, a bastion of cheap tacky one-upmanship. The window is open and the sunlight fills my room with an incandescent glow. Beneath it, the koi pond waits with its silt water and rocky bottom, sharp points waiting to meet cousin Aloysius's spine. My legs are still working, for now. Still active and able to accept my will, for now. I run forward.

I savour the surprised look on cousin Aloysius' face as he goes over, his face finally scrubbed of its smugness, headed for the organic slime layer waiting to suck his broken body into its depths. I stand at the window and watch pond water thrash in disturbance, and exhale. My hands won't shake if I grip the windowsill hard enough. Just another body to get rid of.

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## **ABOUT THE AUTHOR**

JY Yang is a lapsed scientist, a former journalist, and a short story writer. She lives in Singapore, in a bubble populated by her imagination and an indeterminate number of succulent plants named Lars. A graduate of the 2013 class of Clarion West, her fiction has appeared or is forthcoming in *Clarkesworld*, *Strange Horizons*, and *Apex*, among others. A list of her publications can be found at [misshallelujah.net](http://misshallelujah.net), and she can be found on Twitter as [@halleluyang](https://twitter.com/halleluyang), grumbling about Scandinavian languages and making displeased noises about the state of the world.

**[To learn more about the author and this story, read the Author Spotlight](#)**

# The Dark Age

Jason Gurley | 5000 words

## THEN

I caught her.

The doctor gave me a textured blue wrap. Frannie looked alarmed and said, “No, no, skin—skin-to-skin, I want skin-to-skin,” and the doctor assured her that this was only for me, so that I wouldn’t drop her. I lost track of what I was supposed to feel, and I bent over the bed, only dimly aware of Frannie’s feet near my head, her toes splayed wide as she fought. I heard her scream like I’d never heard her do anything before. It was primal, and I felt like a hunter on the savannah, standing over my kill, like a warrior, head thrown back and the taste of blood in my mouth.

And then she came to me, like a child on a water slide into my arms, slippery and dark and blue, and I caught her, and her tiny face looked like the wrinkles of my knee, almost featureless in her surprise, and she bawled rapidly. She pierced my heart and my ears with her cries, and a nurse clamped and clipped the cord, and I carried her to Frannie and laid our daughter on her breast.

She wailed and clung to her mother, her tiny fingers opening and closing against Frannie’s skin, and Frannie breathed heavily and said, “Elle.”

I didn’t want to look away from either of them—Frannie dripping with sweat, her hair in damp rings on her face, and Elle, pushing against her mother’s skin like a fresh piglet—but the movement at the door caught my eye, and I did, I looked up, and for the rest of my life I wished that I hadn’t.

Frannie saw, and looked, too.

The man in the doorway smiled regretfully, and wagged his fingers at me, and nodded.

I met Frannie’s dark eyes, and watched the tears well up, and I felt my heart pull out of my chest and stay behind in that beautiful room, the most wonderful place that had ever been made. I kissed Frannie, but she kissed me back, harder, and then I nuzzled Elle’s tiny soft ear with my nose, and kissed her head everywhere, and her small hands. I would have stayed in the room forever if I could have.

But I followed the man out of the room, my ears ringing with sadness, an enormous hole in my head and my heart, and that was that. We both knew that it had to happen, but we pretended it wasn't going to. And then it did.

I followed his dark suit through the hospital corridor. I couldn't feel my hands. My feet moved on their own.

He said something, but I don't know what it was.

We stepped out of the building and into the light, and the cold wind turned my tears to ice.

## NOW

Elle taps the camera, and I watch her fingertip, large enough to crush worlds, grow dark and obscure my view. I laugh, and she giggles, and this makes her laugh harder, and then she begins to hiccup wildly. She rocks back on her bottom and puts her hands on the floor behind her, and reclines and stares at me, hiccuping and laughing, and I laugh with her.

"You're silly," I say to her. "Silly, silly Elle."

She babbles at me, and in the stream of muddled sounds I hear something that sounds like *a-da*, and I say, "Frannie!"

Frannie turns the camera on herself, and her smile is big and bright and threatens to push her eyes off of her face. "We've been working on it all week," she says. "She can't quite make the *d* sound work, so all we've got is *ada-ada*, except, you know, it's more like *atha, atha*."

I turn away from the camera and wipe at my eyes.

"Daddy's crying," Frannie says. I look back to see her turn the camera to Elle, who thinks this is hilarious. She pats her round tummy and laughs harder, and then the hiccups take over in a big way, and a moment later Elle burps up breakfast.

"Oh, uh-oh! Uh-oh!" Frannie sing-songs, and she says to me, "We'll be right back, Daddy!" and puts the camera down.

I watch Frannie's feet, then she scoops up Elle and whisks her out of frame.

I sigh and push off of the wall and turn in a slow flip, waiting.

Sarah comes in through the research wing hatch and sees the camera and

says, “Oh, shit—I mean—oh, *goddammit*, I—fuck! Shit.”

I laugh at her and tell her it’s fine. “Elle spit up,” I say. “Commercial break.”

Her face relaxes. “Whew. Okay. I don’t want to corrupt your little girl or anything.”

“Did I forget to flip the sign?”

Sarah turns around and leans out of sight. “Well—nope, no, you did,” she says, leaning back in and holding up the little handwritten *recording* sign. “I wasn’t even looking, I guess.”

“What did you need?”

She looks around, scatter-brained, gathering her thoughts. Then Frannie comes back into the room with Elle, singing a bit, and she sees Sarah on the display and says, “Sarah! Hi!”

Sarah looks up at the screen and smiles sheepishly. “Hi, Francine,” she says.

“Everything okay?” Frannie asks me.

“Everything’s fine,” I say.

“I was—I shouldn’t be in here,” Sarah says, making a slow turn towards the hatch. “I’m sorry. Nice to see you, Francine.”

“Bye, Sarah,” Frannie says. She lifts Elle’s small hand and flaps it at the camera. “Say ‘Bye, Sarah!’”

Elle yawns.

“Bye, sweetie,” Sarah says, then shakes her head at herself and looks at me. “Really, I’m sorry. I’m sorry. I should’ve checked first.”

“Not a big deal,” I say, and then Sarah floats back into the research module and presses the hatch shut behind her.

“It’s not like we were having phone sex,” Frannie says, chuckling. “Make sure she knows it’s fine.”

I look at the readout beside the screen. “Time’s up anyway,” I say.

Frannie’s frown is adorable. “Oh, I’m sorry, dear,” she says. “We wasted so much time cleaning Elle up—I’m so sorry.”

I smile, but I know it’s a sad smile, and I know Frannie can tell. “Kiss her for me,” I say.

Frannie kisses Elle, a big playful smooch that sets Elle’s giggles off again.

“Love,” I say.

“Love,” Frannie answers, and then she squeezes Elle and coos, “Love! Love!”

The screen goes dark, and I sigh, and look around the module. It’s cramped and small, but it’s private, at least until Sarah bumbles in again. I point my hands at the floor and push off with my feet, just enough to reach the lights, and I snap them off. The module goes pitch-black, and then my eyes adjust to the faint light from the porthole. And then I cry, the way I always do. The tears stick to my face like film, and when I’ve cried enough to feel better, I sop them up with my sleeve, and turn on the lights, and get back to work.

• • • •

This is the way it has to be.

I was already in the program when Frannie and I met. She sometimes asked me that awful, difficult question: Would I have signed up for this if we’d already been married? And I tell her no, of course I wouldn’t, but I would have. I still would have. Some things are important, and then some things resonate through history like a bell, and this is one of those resonant things, being here, aboard the *Arecibo*, crawling through the night.

Then Frannie got pregnant, despite our best efforts and multiple contraceptives, and my answer to that question softened.

When I caught Elle that morning in the hospital room, I knew that it had changed. Frannie saw it on my face, I think, though we have never talked about it since then. But she knew that my heart had changed, and by noticing that, she learned that my earlier answers had been kind lies.

We are a crew of seven, with the simplest of orders.

*See what’s out there.*

So that’s what we’re doing.

We’ve all left something behind.

It isn’t easy for any of us.

We are martyrs.

I think of Elle’s bright eyes and her shock of blonde hair, and I wonder what it would feel like to hold her, that hair tickling my face as she falls

asleep on my shoulder.

I would hold her for hours and hours and never grow tired.

It wouldn't matter to me if my arms fell off.

Every day I grow heavier with regret.

Every day I hate my younger, star-crossed self a little more.

• • • •

Sarah is the scientist. Introverted, awkward, a little odd.

Then there's Mikael, our technician. We wanted to call him an engineer, but he prefers *spaceship guy*. As in, "Hey, spaceship guy, the wing just fell off."

Stefan and Heidi are the pilots. Heidi has a secondary specialty—she's the shrink.

I'm the communications guy.

Walter is the physician and nutritionist. Edith is the researcher.

They are all quite nice.

We have a pact among us—an unwritten one, one that the WSA probably figured would happen but did not write into our training manuals, or account for during our isolation boot camp in Antarctica—that anybody can sleep with anybody else, and nobody will be jealous, and that our families on Earth will never know. It was Walter's suggestion. Heidi thought it was a marvelous idea, and would reduce tension. So far I think Mikael and Edith have been together, and Walter and Stefan, and the plan has held water. But I think soon someone will feel bad, and then things will be strange.

I told Frannie about the pact. It was our first video chat. She thought it made sense, and told me that she couldn't begrudge me for taking part.

"Sarah seems nice," Frannie had said.

"I don't want to sleep with anyone else," I told Frannie. "I miss you."

"Be practical," Frannie said. "We're talking about the rest of your life here. You aren't a monk. You shouldn't be."

Heidi approached me a few days later. I said no, and she wasn't upset or embarrassed. I didn't tell Frannie. I don't know why I didn't.

• • • •

We have all left something behind, somehow. We talk about these things, about our families and lovers, as if it will somehow ease the pain of it all. Mikael had just met his birth parents for the first time. He thinks it would have been easier to never have met them, but Walter thought that it was better to know. “Now you won’t spend the rest of your life wondering about it,” he said to Mikael once.

Heidi has a husband and two children. They’re in college. Her husband writes novels. She thinks that he’ll be happier alone. She doesn’t talk about her children. Each of us keeps something for ourselves, and doesn’t talk about it.

I am just like a new father on Earth. Each time Frannie sends me a video of Elle doing something new, I show everyone. Stefan seems the most enthusiastic about her progress. Edith always watches and nods, and then goes back to what she was doing before. I don’t care. I sometimes wonder if I must share Elle with everybody so that everybody will recognize the enormity of my personal loss. I told Heidi that during one of our sessions, once.

Heidi said, “Is that what you think?”

Of all of them, Sarah is the closest to a friend for me. She seems to like Frannie, and that makes me like Sarah more. I like that she doesn’t talk much, that she prefers to be alone. I like that she considers me the next best thing to being alone.

*Sarah seems nice.*

Sometimes I think about it.

• • • •

Elle gets bigger and bigger. Frannie and I celebrate Elle’s birthdays every month, to make up for the many I will miss. The WSA permits only two communications per week, and I look forward to them as much as I did to my own birthdays as a child.

I miss every first.

Frannie will wait for my call, then excitedly tell me that Elle has started walking, that she had her first solid food, that she said her first word. Elle demonstrates all of these things for me, but I feel like one of my shipmates

—not a parent, but an audience. I cry every time. The emptiness between us feels incalculably large, larger every time we talk. I see Elle’s eyes change from blue to green, her chubby cheeks become slim, her hair fall to her shoulders. She wears the clothes of an adult—pretty sweaters and thick tights and patent shoes, and I feel a terrible fear seize me when I realize what is coming.

Frannie sees it in my face. She doesn’t know what to say. She only says, “We love you more than anything.” She means it, but I can feel the helplessness behind her words.

The inevitability of the *Arecibo* launch hung over our pregnancy like a pall, like a storm that grew darker and more ominous every day.

But it is nothing like the storm that approaches now.

• • • •

“The WSA has mandated special counseling sessions for each of you,” Heidi says over breakfast a few days later. “Now, I’m inclined to agree—but I’d like you all to tell me if you prefer them to be one-on-ones, or if you would consider a group session.”

She studies everyone’s faces, and when nobody speaks, she adds, “I think a group session would be more productive.”

Everybody dreads the Long Sleep, as they’ve been calling it. Walter says it’s not exactly a Sleep. “It’s a dark age,” he says. “Literally, it’s *the* Dark Age.”

Heidi looks around the room and says, “Right. Okay. A group session.”

• • • •

Sarah sits beside me. We’re all gathered at the dining table in the galley. There aren’t many chairs aboard the *Arecibo* that aren’t attached to consoles, so the galley was the default choice. One by one the crew floats in and buckles themselves into a seat at the table. Heidi comes in and sits down and says, “Who are we missing?”

“Edith,” Mikael offers.

“Is she coming?” Heidi asks.

Mikael shakes his head. “She doesn’t want to talk about it.”

Heidi sighs, and thinks about this, then says, “All right. We’re on our own out here, folks. WSA can’t really do anything to you. Does anybody else want to skip this?”

Silence, and then Stefan unbuckles and leaves. Mikael shrugs apologetically, then follows.

We watch them go.

“So,” Walter says cheerily.

Heidi smiles at him and I wonder if they’ve slept together.

“The Long Sleep,” Heidi says.

“The Dark Age,” Walter contradicts.

“Whatever. How do you all feel? Who wants to talk about it first?”

I begin to cry immediately.

Sarah pats my knee beneath the table, then leaves her hand there, and I feel my skin flush hot.

*Sarah seems nice.*

“Maybe this should really be mandatory,” Walter suggests.

• • • •

Frannie is exhausted. She’s alone on the screen, her eyes rimmed red. Her hair is disheveled, and she’s wearing her pajamas.

“Frannie?” I ask.

She tells me about her day—Elle has been throwing tantrums, but it’s because she has a fever, Frannie thinks, so she’s trying to remain as patient as she can, but it’s wearing her down. Elle hasn’t slept more than a half-hour for two days. “Can you hear her?” Frannie asks.

“Yes,” I say. The sound of my daughter crying hundreds of thousands of miles away is wrenching. I want to go to her. I want to pick her up and hold her close and say, “It’s okay, Daddy’s here.” I want her to snuggle close and sniffle herself to sleep in my arms.

Frannie says, “It’s so hard,” and she cries.

“Fran,” I say, leaning close to the camera. “Darling.”

“I’m so alone,” she says.

I strap myself into my bunk that night and think about my sins.

I have abandoned them.

I hate myself.

I unstrap and go to Heidi.

“What if I killed myself?” I ask her.

• • • •

The Long Sleep, the Dark Age. One hundred forty-four years of hibernation sleep. Autopilot. Essential systems and life support only. Seven people, quietly stored in airtight sleeves in a module with countless system redundancies. Heart rates slowed and monitored. Data transmitted daily back to Earth, for a long slow journey to the WSA’s computers for analysis and modulation.

“Well, you shouldn’t do that,” Heidi says.

“Tell me why,” I demand. I’m crying. I’m the most unstable person on the *Arecibo*, I think.

“Because your wife and daughter would know,” Heidi says.

She doesn’t have to say another word.

But she does.

“If you want to kill yourself when we wake up,” Heidi says, “then at least you won’t hurt them.”

• • • •

The possibilities are impossible to predict. The WSA and our native governments have put in place a series of treaties and contingencies, and written a strange new constitutional document that will take effect should any one of those bodies no longer exist when we wake up. A lot can happen in a century and a half. We might wake to find that the WSA has lost its funding. There might have been wars. Earth could have been destroyed by a meteor. Or it might have evolved into a technological utopia. The cure for death might have been discovered, in which case our families might survive to see us again.

But nobody knows for sure.

Frannie says, “What am I supposed to do?”

“What do you mean?”

Elle sits on Frannie’s lap, playing with a toy I don’t recognize, a plush character from a children’s show, and it strikes me again that I am left out of even Elle’s tiniest experiences. Does she hold that doll close when she sleeps? Is it her favorite?

“Am I supposed to be alone for the rest of my life, too?” she asks.

I don’t know what to say to her.

“I’m sorry,” she says, wiping her eyes. “I didn’t know it was going to be this hard.”

“I’m an asshole,” I say.

Her eyes widen and she looks in Elle’s direction, then back at me.

“I’m sorry,” I say. “Elle, ignore Daddy.”

Frannie turns the camera to Elle’s face. “Say night-night to Daddy,” she says.

My beautiful daughter looks up and smiles and says, “Nigh-nigh, Daddy.”

Frannie turns the camera back to her own lovely face and says, “I’m sorry. Don’t worry about us. We’re going to be just fine. We love you.”

“I love you, too,” I say, and kiss my fingers and hold them up to Frannie’s.

• • • •

Sarah is in the research module when I come out.

“I thought everyone was asleep,” I say.

She shrugs. “Sorry. Sometimes I can’t sleep. Are you okay?”

I touch my face. My skin is tight. “I was crying,” I say. “I’m fine.”

“You’re a sweet man,” Sarah says to me.

“I wanted to kill myself.”

She smiles sadly. “We all do.”

I float past her and go through the hatch to our sleeping quarters, and then I turn and look back at her.

“I’m putting her through so much,” I say. “It’s inhuman. I can’t think of anything worse.”

“I can think of lots worse,” Sarah says. “But Frannie’s wonderful. She’ll

be okay. She'll find someone."

I look down.

"You have to let her do that," Sarah says. "You're not really hers any more. She's not really yours."

"I—yeah."

"I don't know what it feels like to be in your skin," she says. "But maybe it helps if you think of them as a story that you're watching. Like on television."

"I'm going to miss every episode," I say.

She nods. "But you'll know the ending tomorrow."

I can't help it. I cry. The thought of my family growing up, growing *old*, dying—and that all of it will happen while I'm asleep—feels like someone has grabbed my ribs and is spreading them apart, pulling as hard as a body can be pulled. It feels like I'm going to come apart, and I double over involuntarily.

Sarah is there, then, and she holds me and we wobble in zero gravity together. She puts her hand on my face, and my tears crawl from my skin to hers.

"You won't lose everything," she whispers. "I'll be here when you wake up."

• • • •

The last conversation with Frannie is surreal.

She is wearing the bulky sweater that I liked, the one with the neck that is wide enough for her shoulder to peek through. I stare at her skin and try to remember what it felt like to touch it. I try to remember her smell. I can't.

Elle is wearing a beautiful sundress and yellow rain boots. "Boots!" she cries, pointing at them.

"Boots," I agree, trying not to cry again.

Frannie smiles with shining eyes as Elle runs to her toy chest and picks up a building block, then brings it to the camera.

"Block!" she says. Her eyes are big and she bites her lip, waiting for me to understand.

"Block," I say, nodding.

I wish that I could stack the blocks with her into a great big prison cell, and stay inside of it forever with her. I watch her run to the toy chest. She puts the block down and picks up a squeaky giraffe.

“Raffe!” she says, displaying it to the camera.

“Giraffe,” I say.

“Elle, honey,” Frannie says as Elle runs back to her toys. “Daddy has to go in a minute. Can you say goodbye? Can you tell him how much you love him?”

I cannot hold back my tears. I suck in deep breaths and stare longingly at the Earthbound room and my girls inside of it.

“I miss you, Ellie,” I choke out.

“Daddy misses you,” Frannie says.

Elle comes back to the camera and holds up a stuffed pig. “Piggie!” she cries.

I nod like a fool, and she runs away again. Frannie snatches her up and brings her back to the camera, and Elle kicks in protest, and Frannie looks at the camera with a terrible fear in her eyes and says, “I’m sorry, I’m sorry, she’s—”

The digital counter beside the screen runs out, and the screen goes dark.

••••

Heidi and Walter see to us all, one by one. Walter will be the last into the units, as the ship’s doctor.

He stands in front of me, adjusting the monitoring belt. He is close enough that I can feel his breath. He smells like coffee. He smiles at me and says, “It’s going to be a pleasant dream. Okay?”

I nod and look away, uncomfortable at his closeness.

Heidi comes by next, after attending to Sarah, who will be in the sleeve beside mine.

“Are you okay?” she asks.

I am tired of crying. I feel as if I have cried a thousand years.

“The first thing Walter’s going to do is adjust the gas compounds in your sleeve,” she says. “There’s a light neuro-sedative in the mix. You’ll feel relaxed and care-free.”

“I don’t want to sleep,” I say.

“We all have to,” she says.

“I’ll stay awake. I’ll watch over the ship, make sure everything runs fine. I’ll make sure you’ll all be okay.”

“The ship can do that for itself,” Heidi says. She leans closer and kisses my forehead. “You are going to be all right. When you wake, we’ll talk. Okay?”

I think about Heidi’s family. “What about your kids?” I ask. “Don’t you care about them?”

She is unruffled by my tone. “My boys will be fine,” she says.

“They got to know their mom,” I say bitterly.

Heidi’s smile is kinder than I deserve. “Let me help you inside,” she says.

• • • •

Inside the sleeve is a slim, curved screen. It is fixed to the thick polyglass before my eyes, and it displays a simple message.

*You are humanity’s finest, it says. We wish you godspeed and long lives. Make us all proud.—WSA, Earth*

The message disappears, replaced by something new.

*Hey. Look left.*

I frown, then turn my head.

Sarah waves at me in the clear sleeve next to mine. She says something, but I can’t hear her, and I shake my head. I mouth, “I can’t hear you.”

She points at the screen in front of her face. I understand, and look back at mine.

The message reads, *We can talk until we fall asleep.*

Then another line: *It’s voice-activated. Just talk.*

I say, “Hi.”

*Hi.*

I look over at Sarah—weird, strange Sarah—and she smiles.

“You’re too happy,” I say.

*You’re the saddest person I’ve ever met.*

“I should be,” I say back. “I’m a monster.”

*Will you be okay?*

I hear a dim hissing sound, and outside the sleeve Walter waves at me, then gives me a thumbs-up. He folds his hands beside his face and mimes falling asleep. I nod blankly at him, and then he moves on.

*It smells sweet.*

I sniff the air. “I don’t want it.”

*I know you’re scared. You’re a good man.*

“I’m not. I’m not a good man.”

*You’re not really the best judge of character. Your own, I mean.*

“Sarah,” I say, feeling the drift of the gases. “I’m terrified.”

*It will be over before you know it.*

“That’s what I mean. When I wake up, my little Elle—“

*She will be proud of her daddy. What do all the other dads do that’s so special?*

“She’ll hate me,” I say. “She’ll die thinking I left her, that I didn’t love her.”

*She knows.*

I stare at the screen. To my left, Sarah is drifting.

I say, “Record a message.”

• • • •

*Elle, Frannie—*

*I hope with all of my heart that this message comes through. Maybe the WSA will see it and make sure. I hope so.*

*We’re going to sleep now. It’s about to happen—I already feel woozy. I’m sorry. This is my last message and I’m going to sound like a drunk. I’m sorry, I’m so sorry—*

*Frannie, my dear, my sweet wife. I have loved you since I met you. I wish that I could hold you forever, but I can’t—I have to let you go. Be happy. Fill your days with love. Fill Elle’s.*

*Elle, sweetheart—I’m going to cry, I’m sorry—Elle, there is nothing—I—oh, god, I’m drifting, it’s happening—*

*Elle—Elle—*

*I hold you always.*

*I am—I am always—*

*Elle—*

• • • •

The message ends, and I blink away tears.

“Stupid,” I whisper to myself. “I didn’t say anything at all.”

Sarah is wrapped in a white blanket beside me. Her eyes are wet, too.

“You said everything,” she says. “Everything.”

We sit in shock around the table with the others. Each of us leans on another.

Heidi looks the worst, as if she can’t believe it’s real. “My pretty boys,” she whispers.

The table is lit from within, a soft bone-blue glow like a ghost, which is exactly what it is. Before each of us are the messages we sent to our families and loved ones—except for Stefan’s. He presses his palms hard to his eyes. Walter rubs his back.

“I didn’t know,” Stefan rasps, his voice tired from the years of sleep.

“He didn’t send any messages,” Sarah whispers.

I nod. What a terrible feeling for his family on Earth—to wait for his message, to see reports of the others and their final letters, and to never receive their own.

Poor Stefan.

A gentle tone sounds, and I look down at the table.

*2,783 messages retrieved.*

“What’s this?” I ask.

“You’re the communications specialist,” Mikael says.

• • • •

2,783 messages.

The sum total of missives sent to the *Arecibo* from Earth following our entry into the Long Sleep. Most are reports from the WSA—status updates on major events. It is an otherworldly feeling, thumbing through them and seeing tiny bites of history. They read like fictions: *North Korea. Nuclear detonation. Dissolved democracy.* It’s like reading an alternate history, a

science fiction novel.

The WSA is gone, we learn. The World Space Association was disbanded in 2142—“They couldn’t have waited until we woke up?” Walter asks—which explains the dead air on the networks.

The United States is gone as well.

“All empires fall,” says Heidi, but she says it in a haunted voice.

The rest of the messages are personal ones.

Sarah has dozens from her parents. Heidi’s boys have recorded hours of video—she is a grandmother. Each of the crew has countless messages. Stefan has many, and this seems to cheer him.

I have one.

• • • •

It’s a video.

I don’t recognize her at first. Her blonde hair is brown now, her green eyes steady. She is outdoors, at a picnic table. The sky is pink behind her—dawn over the trees. She’s backlit, partially in rose-colored shadow. She stares into the camera, and opens her mouth once, then twice, as if she isn’t sure where to begin. A nervous smile, and I see her then: I see her mother in her upside-down smile, the smile that should by all rights be a frown but isn’t. I see myself in her eyes. She is older than I am now.

*Elle.*

Nine hours of video.

“Daddy,” she says, looking straight into the camera. Her voice is strong and a little scratchy, like her mother’s.

I remember her wrinkled pink skin, her insignificant weight in my hands. Her strange smell, her little fish mouth gasping at the air.

*“Boots!”*

Her tiny fingers, opening, closing.

*A-da.*

A tear slides down her cheek. I am struck by her beauty and how much of an adult she has become. I have so many questions for her, and I will never be able to ask any of them.

“I hold you always,” she says, repeating my own confused words back

to me.

Her tears spill over, and so do mine, my long sleep over, my dark age turned to light.

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## **ABOUT THE AUTHOR**

Jason Gurley is the author of the novels *Greatfall*, *The Man Who Ended the World*, and the ongoing *Movement* series. His bestselling self-published novel *Eleanor* is forthcoming from Crown Publishing in the U.S., HarperCollins in the U.K., Editora Rocco in Brazil, and Heyne Verlag in Germany. His short fiction has appeared in *Lightspeed Magazine* and numerous anthologies, among them *Loosed Upon the World* and *Help Fund My Robot Army!!!* from editor John Joseph Adams. Jason lives and writes in Oregon.

**[To learn more about the author and this story, read the Author Spotlight](#)**

# Beyond the Heliopause

Keith Brooke and Eric Brown | 6100 words

As soon as the recorded message pinged in her peripheral vision, she accepted and listened to the call on her cochlear implant. “Suzanne, I need to see you. It’s urgent. I . . . well, I’ll tell you when I see you. All my love.”

She was in a borrowed apartment in Paris, finishing a piece about corruption in the European Parliament. She rounded the story off with a couple of vox pops and some infographics, squirted the file to her editor in London, and then forwarded it to her street team to get the social buzz going.

Folding her screen away, she sat back and replayed her father’s message, but she didn’t pick up anything new from his words or tone. Then she booked a seat on the noon flight from Orly to Stansted and took a taxi to the airport. She would be in the sleepy Suffolk village of Little Tinningham, if all went well, before the early December sunset.

Her father had sounded weary. If the call had been from anyone else she would have replied instantly, but her father hated his days to be interrupted by “importunate calls,” as he called them—even from loved ones.

She wondered why he needed to see her so urgently.

••••

Suzanne looked away from the window as the jet took off. Across the aisle she saw a big, silver-haired man in his forties, and for a second she thought it was Charles. She even wondered what her ex-husband was doing back on Earth when the man turned to speak to the hostess and she realised her mistake. She felt a surge of relief, sat back, and closed her eyes as the take-off forced her back into the seat.

She summoned a retinal menu and selected a news channel. Thoughts of Charles made her wonder how the Heliopause Project was progressing. Two years ago there had been nothing else on the science and technology newsfeeds but the joint Europe-US mission to send a scientific research station out beyond the orbit of Pluto—to map the vast universe beyond, as the pop-hacks termed the project. Since then, the news had dried up.

Sometimes, in her more paranoid moments, Suzanne wondered whether Charles had used the project as an excuse to leave her. He'd been offered the directorship of the mission: An offer too good to refuse, he'd told her, and almost off-handedly added, "And anyway, you and me . . . our relationship . . . it was never going anywhere—"

"Never going anywhere"? My God. We're *married* . . . Doesn't that mean a damned thing to you? I love you, Charles!"

He'd smiled his insufferably arrogant smile and said, "No, Su, you just *think* you do."

And so he walked out of her life forever.

• • • •

Stansted was as busy as Orly, but a few minutes after taking a taxi from the airport—as they left the A120 and took a B road north to Suffolk—she was staring out across open fields and peaceful villages consisting of clusters of thatched cottages. She tried to visit her father every month and, as always, it was like going back in time to an earlier, more innocent age. She could forget the modern world, the ceaseless influx of information, forget the space race that saw the superpowers staking claim after claim to chunks of Mars, Venus, and individual asteroids—switch off her implant and for two days at a time enjoy the company of her father. He was nearing ninety, and she knew that her visits would one day end.

She wondered if these trips were nothing more than a reversion to her childhood, a reaction to her husband's leaving her. When she had been with Charles, her visits had been far less frequent, but then, when he left, they had saved her sanity. Her father's company and the village where she had grown up were a refuge, a haven of familiarity and reassurance in a brash and complex world.

Half an hour after leaving Stansted, Little Tinningham appeared through the mist, a collection of ghostly houses, a church steeple, and, next to it, her father's rambling thatched house. An orange light showed in a small downstairs window, and she knew he'd have a log fire blazing.

She paid the driver and hurried inside.

••••

Over a dinner of minestrone soup followed by roast beef, prepared by her father's housekeeper, he asked her about her work. She told him about the recent conferences she'd attended and the corruption piece she'd finished that day.

Her father was a tall, perilously thin man, stooped and grey. His dog collar, which he still wore even though he'd retired as a Church of England rector twenty years ago, hung loose on his wattled neck. Suzanne thought he looked ill since her last visit, and lacked energy. He ate a small meal slowly, without appetite.

He suggested a brandy after dinner and they sat in the front room before the roaring fire. This was Suzanne's favourite room in the house. She imagined the previous inhabitants warming themselves here on long winter's nights: Elizabethans, Stuarts, and Georgians . . . right up to the present day. The house was over five hundred years old and the sense of history in the air was like a physical presence.

During a lull in the conversation—her father had been bringing her up to date on the doings of various villagers, and for a time he had seemed his old, animated self—she sipped her brandy and asked, “You said you wanted to see me urgently. Is something . . .” She had been about to say “wrong,” but she paused and her father interrupted.

“I know you don't believe, Suzanne.” He smiled. “What did you once say? That you haven't a spiritual bone in your body?”

“I've always been impressed that you never tried to make me believe. Never. I respect you for that, you know?”

He sighed. His fingers, curled around his brandy glass, seemed as white as bone. His eyes regarded the flames. “Well, you were right.”

She blinked at the discontinuity in the conversation. “About?”

“About the idea of a God. There really is nothing . . . *nothing* . . . is there?” His gaze remained on the dancing flames.

Suzanne felt sick. Her father's faith had been his rock, his foundation. She could not imagine how he might exist without it.

“What makes you say that?”

He lifted his gaze from the fire and looked at her. “I've lost my faith,

Suzanne. I look back and think of all the years I believed. I wonder what sustained me. I wonder *why* I believed, what gave me faith. It was an inner conviction, something as elemental within me as my . . . as my lifeblood. And it is as if that lifeblood, that faith, has suddenly drained away, leaving nothing. A terrible emptiness.”

He looked back at the fire, gripping his glass tightly.

She felt tears sting her eyes. She shook her head. “But why, so suddenly?”

He gave a weary smile. “But it wasn’t sudden, Suzanne. It happened years ago, little by little, a gnawing doubt. The diagnosis . . .”

The word pierced her like an arrow. ““Diagnosis”?”

He drew a heavy sigh. “I’m old, Suzanne. We can’t expect to live forever. They found a tumour during my last check-up.” He tapped his balding skull. “Up here. Inoperable. They give me three to six months. I’m sorry, Suzanne. I . . . I didn’t want to tell you, but that wouldn’t have been fair, would it?”

She set her glass aside, rose and crossed to the settee where he sat. She held his hand in silence, words beyond her. She felt his old bones, his frailty, smelled his old man odour.

She gripped his hand and said, “Perhaps the tumour—”

He laughed. “What? Do you think the tumour might be responsible for my loss of faith? You know better than that. Anyway, according to the specialist, it’s only been there for a year at most. My doubt began long before that.”

“I’m sorry,” she murmured, and wondered if she was referring to his illness or his doubt.

“I really believed the whole Christian offering, you know? The reward of Heaven for the virtuous. Now . . .” He sighed. “Now, it feels like a weight has lifted, being able to say these things aloud.”

“It’s been your life,” said Suzanne. “Don’t you miss it?”

“Some,” he said. “Do you know what I miss most? The notion that we were created for some purpose . . . That all this—” he gave a brief wave of the hand, a simple gesture which conveyed so much more “—is not for nothing.”

She had no answer to that. She sat gripping her father’s hand and stared

into the flames.

• • • •

The following morning, the glow on the beamed ceiling of her bedroom told her that the forecast snow had fallen during the night.

She slipped out of bed and stood before the tiny mullioned window. She looked out over a landscape transformed, softened. Snow covered the lane and the rolling fields beyond, relieved only where vertical surfaces resisted its attention and showed black: tree trunks and stone walls. A dazzling sun hung low in the east.

She would have breakfast and then go for a long walk.

Her father was already up, and it was as if their conversation of the night before had never occurred. He was bright and alert over toast and coffee, chattering away about the Christmas Lights committee, of which he was chairman.

After breakfast she asked him if he was up to a hike, but he held up an old hardback book, a detective novel dating from the last century. "Mrs. Humphries has built a fire. I'll spend the morning reading, Suzanne."

She wrapped up well and set off. The morning was bitter cold but bright; frost had created a crust on the snow and thick panes like shattered glass over puddles in the lane. She climbed a stile and set off over the rising meadow opposite her father's house. The snow was a virgin expanse, not yet marred by footprints.

Fifteen minutes later, at the crest of the rise, she turned and stared down at the village nestling, impossibly tranquil, in the fold of the hills. She pictured her father in his chair by the fire, rug over his lap, absorbed in his whodunit.

Tears found tracks down her cheeks, stinging in the freezing wind. She dashed them away with the back of her gloved hand and set off again.

Her father was eighty-nine; he'd had a long, rewarding life. But, she realised later as she rounded the wood where she'd played as a girl, and approached the village from the east, it was not his imminent death she was mourning as much as the announcement of his lost faith.

He should have been able to go in peace, she thought, comforted by the

belief in an omnipotent Creator in Whom he had believed all his life. And yes, she was very aware of the irony in a humanist mourning the loss of another's belief.

As she turned into Church Lane, she saw a big black Lexus pulled up outside her father's house.

Two tall figures, garbed in black suits, stood on either side of the car and stared at her as she approached.

Confused, she thought at first that something had happened to her father. She hurried up the lane, then realised that she was wrong. These men were nothing to do with the medical profession.

"Ms. Lingard?" one of them enquired as she approached. "Ms. Suzanne Lingard?"

"Yes?" She stopped in the lane, staring from one man to the other. "What is it?"

"You're offline. We've been trying to contact you."

"Who are you?"

"We're with the Heliopause Project," said the man to her right.

Her heart thudded as if her blood had turned to molasses. "And?"

"And we have an urgent communiqué," said the man to her left.

Urgent. That word again. "From . . .?" she asked, but she knew very well who it was from. What she wanted to know was *why*?

"If there is somewhere we could be private?"

She showed them into the house, past the room where her father would be reading and into the library. The men stood before the empty hearth and one of them said, "If you could reconnect to the 'net, Ms. Lingard?"

She did so, her peripheral vision pinging with a dozen missed calls. She silenced them, dismissed the retinal menu, and stared at the men.

"Very well."

"We'll be waiting outside the room," one of them said. "This is for your information only." He nodded, and a figure appeared before Suzanne.

She moved to the table, reached out to steady herself. She noticed the men slip from the room; the door clicked shut behind them.

Her ex-husband stood before her, only the slight pixilation at his extremities belying the fact of his physical presence. He had aged; his hair was greyer, his face a little heavier. He'd never been one to mask his

imperfections with virtual overlays; she'd give him that.

For a second she thought that this was a real-time interactive communiqué, then realised her mistake. The distance would have made that impossible.

If he were still beyond the heliopause . . .

He spoke, and she was relieved to see that it was a recording.

“Su, I hope you're well, and I hope you'll hear me out and not shut this down or walk out . . . though I'd fully understand if you did. I'm sorry for what I did, back then. The thing is, I'd like to make amends.” He raised a hand. “Hear me out,” he went on, anticipating her reaction. She pulled out a chair, dropped into it, and stared at her ex-husband's avatar.

“I'm beyond Pluto on the research vessel. I won't beat about the bush. We've found something. Something big.” He smiled, as if his words were ironic. “It will change everything—everything we know about everything. I'd like you to come out and meet me here. I'll show you what we've found, and then you can break it to the world. I've cleared this with our backers, and they've conducted all the requisite security checks on you.” He smiled. “I know it'll never really make up for what I did, Su, but it's the only way I can think of to apologise.”

He waited a second, then went on. “You'd leave right away, with Jeffries and Usher, for the spacefield at Utrecht. From there you'd take a shuttle to orbit, and then a cruiser out to the heliopause. Journey time, a little under a week. I'd show you around here for a day, maybe two, then you'd return with your scoop. After that . . . well, you'd be in demand, let me assure you of that.” He laughed. “I hope you accept. Just tell Jeffries and Usher, and you can be on your way.” He lifted a hand. “Goodbye, Su.”

His image vanished. She heard a discreet cough behind her. She'd never even heard the pair enter the room.

She stared at them.

The Heliopause Project had found something, something big.

“Well, Ms. Lingard?”

“I need a little time to talk this over with my father.”

“We can give you thirty minutes, but the schedule is tight.”

She brushed past them, hurried along the warped passage to the front room, knocked and entered.

Her father looked up, smiled, and laid aside his detective novel. “Is something wrong?” he asked, his smile faltering.

She knelt before him, took his hand and said, “Something’s happened out there, with the Heliopause Project. I just had a call from Charles. He wants me to go out there, report on it.”

She explained what Charles had said.

For a fraction of a second she saw fear in his eyes. “For how long?”

“A little over two weeks.”

He smiled. Relieved, she thought. He gripped her hand. “And do you want to go?”

Did she want to see Charles again, he meant.

She hesitated, then nodded.

“Then go, Suzanne. It’s an opportunity you’d be a fool to pass up.”

“I’ll come straight back to you,” she said. “You’ll be the first person I’ll tell about what I find, I promise.”

He echoed her words. “It will change everything we know about everything . . .” he said.

She lifted her father’s frail hand and kissed his fingers.

• • • •

She started to dripfeed the story from the shuttle flight to Utrecht, warning her networks and street team that she was going to have some downtime for the next couple of weeks, and hinting that Christmas was going to bring something big this year.

Her editor called almost immediately, wanting to know what was going on. “I don’t know,” she told her. “Something big is all I can say. You just have to trust me, like you did with Jencke, okay?” The Jencke story had won her the first of her European Press Awards, six years ago, and it was guaranteed to win pretty much any argument with her editor on the rare occasion she felt the need to wheel it out. “Could you get Nikki to cover for me?”

“Nikki’s on a break to finish her new documentary,” said her editor. “Seems like everyone wants a long Christmas this year.”

••••

There was only one other person waiting in the executive lounge at Utrecht when Suzanne arrived, escorted by Jeffries and Usher.

“Nikki? Is that you? I thought you had a documentary to edit?”

“*Suzanne?*”

The women approached each other, kissed cheeks and hugged, then stepped back like wary animals.

“You want to tell me what’s going on?” Nikki asked. She was short, with spiky dark hair and cheeks that tended to pinkness like those of a china doll. “I thought I had an exclusive . . .”

“You’re not the only one,” said Suzanne. The two of them went back years together, both at the forefront of the new journalism that harnessed the power of the networks, riding the waves of viral news-chatter, seeding and feeding stories as they went. “Herding the waves,” Nikki had termed it, way back.

A new arrival interrupted their reunion.

“Chinwag,” whispered Nikki, as if Suzanne wouldn’t recognise the young journalist who went by that name online.

Right now, she desperately regretted signing an agreement that had included a comms blackout for the duration of this trip. If Nikki, Suzanne, and Chinwag were here, then there must be others, and the ’nets would be buzzing with rumours about their absence.

She thought back to the message from Charles, and cursed the way she’d weakened like some simpering fool in response to his request. He’d said nothing about exclusivity. He’d just implied it, while laying heavy emphasis on this being a personal thing, a way for him to make up for his bastard past.

It was a job. She should just remind herself of that. A pretty damned *big* job, if this little gathering was anything to go by.

She could live with that.

••••

“So what’s it all about? Why us? What have they found?”

The same questions, over and over again. That kind of repeated speculation would have been bad enough in the best of circumstances, but in such claustrophobic confines it was the verbal equivalent of the Chinese water torture.

Suzanne cut herself off from the chatter as much as possible, after the first few rounds had been enough to confirm that not one of the journalists squeezed into this cruiser had the faintest idea what was really going on.

The worst of it was all the hanging around and the slow acceleration out of orbit; she was thankful that much of the journey would be spent under sedation in a gel bunk, to protect them all from the heavy acceleration.

She'd gone zero-gee before, so she knew what to expect. She knew the tiredness and nausea would pass, and that eventually she'd regain the knack of controlling the exaggerated movements of her limbs. And she knew that she would even get accustomed to the lack of personal space and boundaries, the touch and smells of so many others in such close confines.

She tried not to dwell on how she might react when she met Charles again. He had been the one man, other than her father, who could break through her barriers. He could be infuriating and charming in the same breath, but he was also rarely less than interesting.

Perhaps that was it. Perhaps their relationship had always been destined to break under the strain. She had been drawn to him for the same reasons she was drawn to journalism: She wanted to be inspired, she wanted to see things she had never seen before. Charles had intrigued and fascinated her, and he would not have been Charles if he'd turned down the opportunity to lead a mission to travel farther than any human being had gone before.

Like a comet drawn to the sun, his trajectory must always pull him away again.

• • • •

At the research station, there was a different, almost minty freshness to the air, which Suzanne knew was only in contrast to the rank air of the cruiser. There was room to move around, places where the only sounds were the mechanical, physical sounds of the station: the hum of pipes and fans, unidentifiable clunks and thuds and whistles and background hiss.

There was a viewing area that showed them real-time views from outside, the sun merely a bright star from this far out.

She should have been more bowled over by all this, she knew. For all that she was blasé about being an orbital veteran, this was way more than mere orbital: This was “we’ve almost left the Solar System.”

All of this should have had far more impact.

But there was Charles, hanging in the viewing gallery to greet the new arrivals, and she was pitched back two years, to when they’d been together. She hated that response. She was *not* that weak, dependent kind of woman.

*you and me . . . our relationship . . . it was never going anywhere*

Cameras always add a few pounds. When he’d messaged her he’d looked as if he was carrying a bit more weight, but no, he’d looked after himself out here. You had to; it was all part of the discipline.

There was something about him, though. Something that had changed. A change more significant than the greying at his temples.

“Su.”

He ignored the rest of them, focused only on Suzanne. There was something in his eyes. Fear. Was he scared of how she would treat him?

Then he snapped his attention into a broader focus, gave that charismatic smile of his and spread his arms, welcoming the dozen journalists who had just emerged not-at-all fresh from the cruiser.

“Welcome,” he said. “We really are pleased to have you join us.”

From this point on, everything he said was for public consumption. They would be recording him with retinal cams, sub-voking their own commentaries into storage, all ready for when the media blackout was lifted.

“I know you’ve all been speculating about the reason for this strange invitation,” he went on. “You’re wondering why a multi-billion euro project like this wouldn’t already have a communications plan in place, why we would scrap all that and turn to you guys instead. And I know you’re all going to be incredibly frustrated when I refuse to tell you.”

There was an immediate surge of grumbling voices. All this way, for . . . well, for *what?*

Suzanne held back. She knew Charles’ ways, and she had seen him smiling as he delivered that message.

He raised his hands for silence, and went on, “If I was going to merely

*tell* you, there would have been no need to bring you out here. We're going to show you, instead. We're going to give you twenty minutes to freshen up and then we're going to show you why you're here. We're going to show you the discovery of a lifetime. Of *any* lifetime. And then we're going to ask you to go back to Earth and do all you can to prepare the ground for the breaking of this story. Because when this is made public, we have no way of anticipating the response. You're here because you're the best, and you have networks and street teams where elements of this story can be seeded and spread so that people are, in some way, at least, prepared."

Only now did Suzanne recognise that look in his eye, the subtext to all of this. Only now did she see that it *was* fear.

••••

They filed into one of the station's shuttles, a couple of the less experienced guests in danger of turning the process into a game of zero-gee billiards. Threading her way through the bodies, Suzanne managed to snag herself into a seat up front next to Charles.

"No windows on these things, but you could have rigged up some viewscreens so we could see outside if you wanted us to. What's going on, Charles? The only time I've seen you looking more scared than this was when you were reciting your vows." A low blow, but she could have delivered better if she hadn't been holding back. Two years' worth of better.

He put a hand on hers, where it rested on her knee, and that surprised her so much she let it lie. He really was on edge. She tried not to take too much comfort in his touch.

"You don't know how much I want to tell you, Su. How much I want to say. Something like this . . . well, it stops you in your tracks. Makes you reassess your life, everything."

"It must be big if it's made you realise what a bastard you were."

The look in his eyes. It was as if she'd just kicked a puppy.

"Why can't you tell me?"

A long silence, then: "I . . . Hell, Su, there just aren't the words for it. That's why you guys are here. There just aren't the words."

As the shuttle pulled away from the station, briefly pressing them back

into their seats, Charles raised a hand for the attention of the other passengers. “This will just be a short hop,” he said. “So don’t make yourselves too comfortable.” There were a few grunts and chuckles in response: Nobody was ever going to get comfortable in the cramped passenger hold of one of these tiny crates.

“We are now approaching the heliopause, a notional boundary line where the force of the solar wind is counter-balanced by that of the stellar winds of our neighbouring stars. A bow wave, if you like, as our home star ploughs through the interstellar medium.”

“So what are we looking out for?” Chinwag asked.

“According to theory and the most recent readings before this expedition, there should be a number of measurable effects, including changes in the magnetic field and an increased level of cosmic radiation. None of these should affect us within this shuttle.”

“So what are we looking for?” the journalist repeated.

“If I could just beg your patience for a few more minutes,” Charles said, and would say no more.

The end of the shuttle hop was marked with a jolt and a muffled, metallic clank.

Charles had held her hand for the whole fifteen minutes, but now he released his grip and pushed away from his seat’s retainers. Twisting in mid-air, he caught himself against the forward bulkhead and looked around the gathered journalists.

That same scared look again.

“Ladies and gentlemen of the press,” he said. “I am about to say the first of many sentences I never imagined myself saying. Ladies and gentlemen, we have just landed on the heliopause.”

••••

The babble of voices showed no sign of dying down as the journalists bombarded Charles with questions. Even when Charles spoke, the noise barely eased. “Please,” he said. “If you would follow me to the airlock. We’re going outside.”

The journalists exchanged glances. Chinwag said, “Did I hear that right?”

Outside?”

Charles said, “That’s right. We’re going *outside*.”

“But aren’t we going to suit up?”

Charles smiled to himself and indicated the airlock.

There was only room for four at a time in the lock, and Charles made sure that Suzanne was among the three to join him. On one wall someone had placed a handwritten sign with a big arrow and the word “DOWN.”

Just as she was puzzling over this, and wondering why they didn’t have to wear suits, the outer door hissed open and Charles took her hand and tugged her out—and instantly the meaning of the sign became clear.

Out here . . . outside the damned *shuttle* . . . there was a down.

She fell, expecting to hurt herself. Instead she landed on all fours on a grey, sponge-like substance. She looked around her in wonder. They were in a tunnel a little wider than the shuttle.

Charles helped her to her feet, studying her reactions. “We’re here,” he said. “*Inside* the heliopause.”

“That’s another one of those sentences you didn’t think you’d ever say, right?”

“What is it?” That was Nikki, climbing to her feet. She clearly hadn’t understood the notice and had been taken by surprise by the up and down after the zero-gee of the station.

The other journalist, a guy Suzanne vaguely recognised from his online avatar, stayed quiet, as if struck dumb.

“What *is* this place?” asked Nikki, more forcefully this time.

“It’s what it looks like,” said Charles. “A tunnel. A tunnel through the heliopause.”

The tunnel was about five metres high and wide, with a flat floor and arched walls and ceiling, as if a horse’s hoof had been pushed through the ‘pause’s spongy material.

The airlock had cycled again as they spoke, and another batch of four tumbled from the shuttle. When all twelve were out, along with four members of Charles’ team, the project’s director stood before them.

“I’m sorry,” he said. “I really am sorry that we couldn’t have prepared you for this. But how do you prepare people for the inconceivable?” He gave a soft laugh then, before continuing. “Well, that’s why you’re here. All

the communications plans in the world couldn't prepare us. Telling you is not enough. We had to bring you here and show you, and then it's down to you to work out with us how on Earth we break this to the rest of the human race."

Voices rose again the moment he paused for breath. As he waved back towards the shuttle, heads turned and the babble eased. "We have just passed through an airlock. It was encrypted, but my team is good: We worked out how to get through. It was a little easier than expected. My own view is that we were meant to find our way through. If we've reached this point, maybe we're smart enough to be entrusted with what lies beyond. If you'd care to follow me, we have a short hike, and then you will see what only a few before you have seen."

"But . . . but what *is* this?"

"It's a shell," Charles said. "A great shell around the solar system. It's clearly an artificial construct. Like the skin around a bubble or balloon; a Dyson sphere, if you like. We don't know what it's made of, but we believe that the heliopause itself possesses some form of sentience: enough to constantly manipulate what we could see and measure from Earth. Enough to cast the illusion of the universe as we have understood it up until very recently."

None of this, Suzanne thought, could be real.

She stood there, trying to let at least some of it sink in. The universe . . . an *illusion*. A smart shield around the solar system, manipulating their view of what lay beyond.

"So, Charles," she said, and somehow her small voice cut through the jabber and everyone turned to look at her. "If everything up until now has been some clever kind of illusion . . . if we've grown up isolated from the real universe . . . then what *is* out there? What's beyond the heliopause?"

• • • •

Bubbles.

Thousands of them. Millions of them. Each with a slightly oily sheen against the darkness of the void.

Like bubbles in a glass of champagne.

Each bubble, another solar system, shut off like their own.

“Nobody could have ever conceived of something like this,” Charles said, standing at her shoulder. They had walked for longer than the shuttle flight had taken, maybe two kilometres, Suzanne guessed. Now they gathered on some kind of viewing platform, a clear blister on the outside of the heliopause. It was as if this had all been set up for them, as if this moment had been orchestrated by some greater intelligence. A rite of passage. Already, the story was shaping in her head, as Charles had known it must.

“I’m so sorry, Su,” he said, and for long seconds she was confused at his abrupt change in tack. “I was a bastard,” he went on. “Worse: a *calculated* bastard. Back then, I had to make a choice and I chose this. We didn’t know what we’d find back then, of course. Only that it would be world-shattering. Ever since Voyager 1 hit the heliopause back in 2013, we knew things must be very different to what we had, until then, understood. That’s why we had to come out here to see for ourselves, just as the creators of this shell must have intended.”

“You chose this.” How could he not?

“We didn’t know what we’d find. We didn’t know if we’d ever return.”

And so he had been brutal. He had chosen to break her heart rather than leave her pining for a distant love who may never come home.

“You bastard.”

“I know.” He reached down and took her hand once again, and she decided to let him, for now.

• • • •

The journalists talked. They talked so much it hurt, and still they continued, buzzing with speculations and ideas for how to handle this astonishing news. There would be official announcements, of course. Even as the team of journalists headed back to Earth, governments and international agencies were planning how to break the news. But nothing would happen until the ground had been prepared with countless seedings across the ’net. All of those invited out to the heliopause were skilled in this, the new journalism. It was about managing the chatter, herding the

waves; it was about building speculation and rumour and discussion until they went viral, and then the extraordinary would appear to be the inevitable when the news finally broke.

But first . . . First, Suzanne had a promise to keep.

• • • •

The snow had gone now, and the soft Suffolk landscape was blurred with a steady drizzle. Shutting down her implant, she lost touch with the buzz. As always, it felt like an amputation, particularly at a time like this. In the back seat of the taxi, she closed her eyes and took a deep breath.

She recalled what Charles had said, before she'd boarded the shuttle home. He was returning to Earth in a couple of months, and he wanted to see her again. Suzanne had been too stunned by his words to work out how she felt about his request; she'd prevaricated, said she needed time to think it over.

But before she made that decision, she had another to consider. She opened her eyes and stared out across the lawn of her father's house, to where a light glowed in the living room window.

She wondered how far the disease might have progressed in this short space of time?

"I said 'We're here.'"

The driver.

"One minute?" she said, and closed her eyes again. She had promised her father she would tell him first, but now she was filled with doubt. How would he take the news? Would it be the final nail in the coffin of his faith?

But then . . . a phrase Charles had used came back to her. *That's why we had to come out here to see for ourselves, just as the creators of this shell must have intended.*

There may be no one Creator, but there really was so much more than just *this*.

She might never be able to renew her father's faith, but she knew that she would reawaken his sense of wonder.

"Okay," she told the driver. "Thank you. I'm ready now."

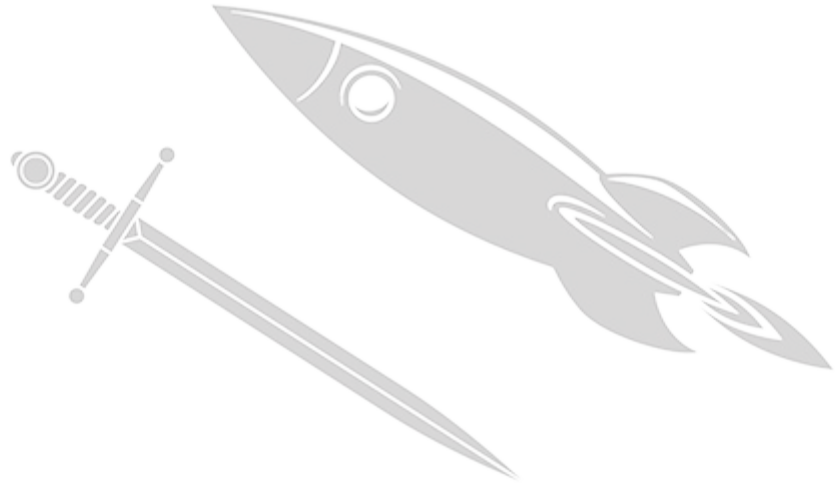
## ABOUT THE AUTHORS

Keith Brooke is the author of fourteen novels, six collections, and over 70 short stories; his most recent SF novel *alt.human* (published in the US as *Harmony*) was shortlisted for the 2013 Philip K Dick Award. He is also the editor of *Strange Divisions* and *Alien Territories: the Sub-genres of Science Fiction*, an academic exploration of SF from the perspectives of a dozen top authors in the field. Writing as Nick Gifford, his teen fiction is published by Puffin, with one novel also optioned for the movies by Andy Serkis and Jonathan Cavendish's Caveman Films. His story "War 3.01", published in *Lightspeed* in 2012, is shortlisted for the 2015 Seiun Award.

Eric Brown has lived in Australia, India, and Greece. He began writing when he was fifteen and sold his first short story to *Interzone* in 1986. He has won the British Science Fiction Award twice for his short stories and has published over fifty books. His latest include the crime novel *Murder at the Loch* and the science fiction novel *Jani and the Great Pursuit*. He has also written a dozen books for children and over a hundred and thirty short stories. He writes a monthly science fiction review column for the Guardian newspaper. He lives in Cockburnspath, Scotland, and his website can be found at: [ericbrown.co.uk](http://ericbrown.co.uk).

**[To learn more about the author and this story, read the Author Spotlight](#)**

# FANTASY



# The Savannah Liars Tour

Will McIntosh | 4300 words



My essence, my soul, whatever you wanted to call it, burst into that place beyond places. After dozens of trips, the ecstasy of the reverse-explosion was as intense as the first time.

I was in downtown Savannah in Chippewa Square. Streaks of perfect lemon-yellow sunlight peeked through a canopy of live oaks. Cars and tour buses glided past, silent, spewing zero pollution because they didn't exist. Most were cruising several feet above the ground.

I caught sight of Delilah running across the street toward me, her feet flying wildly as only Delilah's could, and felt a rush of pure, unfiltered, unqualified, innocent, overwhelming love.

You never love someone the way you do when you're twenty. When you fall in love at thirty, or forty, your past comes with you—your broken hearts and shattered illusions—and there's just so much of it, so many additives and preservatives mixed in that your emotions are never as pure as they were when you were twenty.

Delilah rushed to hug me, her eyes bright. She still looked twenty. Always twenty. And when I was with her, I was twenty, too.

“Hey, you,” she said.

I was tingling, full to overflowing with Delilah. I wondered if this time my hour would feel like five minutes, or a week. Time dropped through a maze here; there was no telling how quickly or slowly it might pass.

“You’ve got to hear this new song,” I said as we separated. “From a new band. They played The Bastille last week.” The Bastille had closed eight years earlier, but I liked to use locations Delilah knew.

“It’s good? Let’s hear it.”

I’d been listening to the CD every day so I’d be able to recreate it almost perfectly from memory, moving the music from my mind into the streets of our Savannah. It wasn’t what Savannah looked like now, or even what it had looked like when Delilah died; it was the Savannah we created when we were together here.

A tour trolley came around the corner. I wasn’t surprised to see it was Delilah’s trolley, the one she’d died in.

• • • •

The woman standing at the front of the trolley, clutching a steel pole to avoid being thrown when the trolley made turns, was grinning like she knew a secret—a secret that could burst the world open at the seams and have everyone dancing in the streets and hugging strangers. She seemed far too young to know such a secret. The trolley was passing a beautiful old home—a mansion, really. The bright new banner draped along the length of the interior of the old trolley, the one that read *Savannah Liars Tour*, flapped in the breeze coming through the open front of the trolley.

The woman pointed at the mansion. “That lovely house was built by Savannah’s founder, a Viking named Erik, who was driven from the city when Europeans arrived, outraged to find the Vikings had gotten there first.”

Laughter from the passengers, mostly tourists from out of town. Delilah’s job was to tell outrageous lies, to make them up on the spot as the trolley threaded the squares of Savannah’s Historic District. It was obvious

she loved her job, and was perfect for it.

I was not a tourist. I lived in a tiny apartment on Whittaker Street, a student at the Savannah College of Art and Design. I was also in a band. Drums. We played the Bastille frequently. I took the Savannah Liars Tour every day, so I knew better than anyone that Delilah never told the same lie twice. I was in love with her long before I ever mustered the nerve to speak to her.

• • • •

“Ben? Wake up, Ben. Come on.”

I opened my eyes and tried to breathe, but I couldn't, because my lungs were filled with fluid. I could hear the dribbling of the fluid draining through the tube clenched between my chattering teeth. The cold went straight to my bones, like fish hooks made of ice.

If entering the afterlife was like a thousand simultaneous orgasms, returning from cryogenic sleep was a hell unimaginable to those who had never experienced it.

I knew they couldn't cover me with the thermal blanket until I was breathing on my own, but if I'd been able to speak I would have screamed for that fucking blanket. One of the aides pressed on my chest; blue water jetted from my mouth. I inhaled, choked on fluid that burned my throat like bleach, then I fell into a coughing fit. Each cough was agony.

Finally, finally, the blanket appeared. I was swaddled like a giant, quivering infant.

• • • •

Jillian was waiting at the curb with the Mercedes running, the heat cranked uncomfortably high for my benefit. My old, familiar friend guilt joined me as I slid into the passenger seat.

“Good visit? How are your Mom and Dad?” The corner of Jillian's eye crinkled as she smiled, but it was a tense smile.

“Great. Great. No sign of Mom's cancer recurring, and you'd never know Dad had suffered a massive heart attack.” It was an old joke, and my

delivery was wooden.

I turned on the radio, tuned it to NPR, where a journalist was relating a conversation she'd had with John F. Kennedy in the afterlife.

"You want to have lunch at Chur—"

"Did you see Delilah as well?" Jillian asked before I could finish. For the past few months, Jillian hadn't asked that question. *The* question—the only truly irreconcilable thorn in our eight years of marriage.

"You know I always do." I tried to sound matter-of-fact, but defensiveness leaked into my tone.

"What did you talk about?"

"Just . . . nothing much. Music, mostly."

"You still haven't told her about me?"

And there it was. "She's *dead*, Jillian. It's not like I'm seeing another woman. I'm visiting the soul of my late wife." I dragged my hand down my face, feeling exhausted, knowing the route this conversation would take and dreading the ride.

"How much of the hour did you spend with her?"

I folded my arms across my chest, realized what a stereotypically defensive posture that was, and quickly unfolded them. "You know how hard it is to judge time in there. I visit the people I've lost. You knew who I'd lost when you met me, and you knew I visited them."

Things had become so much more complicated since that innocent time when I'd promised Delilah I'd always visit her, no matter what. Everyone in Delilah's life had broken promises—her sister, her mother, the men she'd loved before me. She deserved to have one person she could believe in, and twenty-two years ago I swore I'd be that person. When I made that promise, Delilah said she wasn't asking me to never love again, only that I reserve a small corner of my heart for her.

The thing was, my love for Delilah never managed to stay in one small corner of my heart. It took up more like half, try as I might to contain it. Did loving her too much mean I should renege on my promise?

I shouldn't have allowed myself to love someone else in the first place. When I met Jillian, I'd been alone for ten years. That had seemed like enough time to grieve, even if visiting Delilah tended to keep the wound open.

Jillian pulled into the driveway, turned off the ignition. “It’s dangerous, going under as often as you do. You’re not twenty-five anymore.”

“The Surgeon General says cryogenic sleep is safe up to fifty.” What Jillian was really saying was the visits were expensive. Outrageously expensive. We could afford it, though. I wasn’t driving us into bankruptcy or anything.

Jillian sighed. She took my hand. “I know you’re in an impossible position. I know that. But you have to see how hard this is for me, especially with us talking about having a child.”

I squeezed her hand. “I do. I’m sorry this is so complicated.”

••••

On the trolley, Delilah pointed out Chippewa Square, a cozy park shaded by huge Live Oaks.

“At last count there were seventeen hundred such squares in Savannah.” She was speaking to everyone, all of the tourists on her trolley, but she was looking right at me. Her gaze sent a thrill through me like nothing I’d ever experienced. “Under no circumstances should you go near any of them. They look friendly, but they bite, and many carry disease—”

According to Delilah, a creature lived in the Savannah River that could swallow the Loch Ness monster whole. The Buddha was buried in a local graveyard.

Today was the day. I was going to speak to her.

With the tourists chanting her name, Delilah stepped off the trolley, took a bow, waved to or shook hands with each person as they exited her magic trolley, onto the cobbled street, back in the real world.

I lingered so I’d be the last off. My heart tripped as I climbed down the steps. As I paused in front of her, I could find nothing to do with my hands. They felt wrong on my hips, wrong in my pockets, wrong dangling like dead fish at my sides.

“Your show is really something,” I stammered. “I’m spreading the word, telling all my friends.”

“I was wondering when you were finally going to talk to me,” Delilah said.

••••

“Try another year,” Jillian suggested.

I pulled up another year from the woman’s memory file, chose a clip at random. In the clip our client—now in her fifties—was sitting in a bridal shop watching a thin woman in her twenties model a wedding dress.

“I’m not sure that’s the right dress for you, sweetie,” our client said as the bride-to-be examined herself in the mirror.

“Why not? I like this one.”

“You need a dress with more going on around the bust line. You know, because of how F-L-A-T you are.”

The bride tried to mask how much the comment stung.

“I’m trying to understand why anyone would want a permanent reminder of what this woman was really like,” Jillian said.

“She requested the monument herself, post-mortem.” She seemed like just the sort of woman who would retain control of her estate, instead of leaving it to her relatives. The cryo-trips her attorney’s representative had to make to keep her apprised were probably eating away big chunks of it.

“Hey, instead of searching for those few instances where she was not horrible to someone, what if we chose a selection of her bitterest moments and harshest comments?”

“Her greatest hits.”

We both cracked up.

“Or we could show her at her best,” Jillian said. “When she’s not speaking. We choose clips of her eating a sandwich, watching TV, sleeping.”

“I’m just trying to be helpful,” our client said to the devastated bride in her incredibly whiny, nasally voice. That got us laughing harder. I was laughing so hard I could barely breathe. Jillian had tears running down her cheeks.

It took me a moment to realize they weren’t tears of laughter.

“What?” I asked? “What’s the matter?” I already knew, though.

“I’m sorry. I just can’t stop the thoughts. Any time we’re having fun together, I see Delilah’s face. I can’t compete with a woman who died when she was twenty, who doesn’t ever change.”

“You’re not competing with her.”

“I am. You know I am.” Jillian grabbed a tissue from the box on the table, blew her nose. “I understand the corner you’re in, I do. You’re loyal to a fault. It’s one of the reasons I love you. But you can’t be loyal to two women, not in that way.” She squeezed her eyes shut. “You can’t love both of us.”

“I don’t love Delilah. I *loved* her.” I couldn’t look at Jillian as I said it. “She’s—”

“She’s not alive. I get that. But the part of her that matters—the part you fell in love with—is still intact. Otherwise, there’d be no reason to visit.”

I opened my mouth to say something I’d already said countless times in this perpetual argument, when a realization struck me with the force of a marauding elephant.

I turned away. I didn’t want Jillian to see me cry, because I was crying for Delilah.

Jillian was right. How could I have not seen that before? She was completely right, and I was completely wrong. She deserved all of my love, especially if we were going to have a child. And I wanted to have a child with her. I did.

For years I’d been arguing that Jillian was being unfair; I’d built my case, reinforced the weak points with fresh logic, all the time feeling sick inside, because deep down I knew I was wrong.

I had to let Delilah go. I had to say goodbye. The realization was like a gunshot to the belly; it hurt more than anything I’d ever felt. Except Delilah’s death.

••••

The trolley wasn’t moving fast. It was a combination of things, the multiplication of slightly poor judgment on the part of Delilah, the trolley’s driver, and the individual who commissioned a local artist to create an iron mailbox that was a replica of *Bird Girl*, the famous bronze casting that graced the cover of *Midnight in the Garden of Good and Evil*, the most famous book ever written about Savannah.

Delilah was hanging out the door of the trolley, deftly gripping the rail with one hand. The driver was watching Delilah instead of the road. The

mailbox was jutting too far into the street, and it was too solid, too well built. A beautiful old wrought iron Savannah mailbox.

They had to keep the casket closed at Delilah's funeral.

Two years later Petra Beregovoi came back from the deep freeze with her incredible news; three years after that I visited Delilah for the first time.

• • • •

Delilah leaped into my arms. We were on River Street, in front of Kevin Barry's Pub, where we used to get drunk while listening to Harry O'Donoghue belt out "Whiskey in the Jar." The fatigue of two consecutive nights of zero sleep, of two days of eating almost nothing, had been left behind with my body. I was bristling with energy.

"So what do you want to do?" Delilah asked. She had no idea it had only been four days since my last visit, so she had no reason to suspect anything was amiss. "You want to go to the beach?" She took my hand and pulled me in the direction of Tybee Beach.

We walked along the causeway, sea marsh on either side, egrets stepping through the shallow water, nonexistent cars gliding past.

When we reached the beach, white-crested waves crashed at our feet. Sand pipers foraged and pelicans glided on the breeze. The wind smelled like sun and salt.

I didn't tell her.

It was one of those visits that only seemed to last a few minutes. That's what I told myself, and what I told Jillian.

Next time. I swore I'd do it next time.

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Sigmund Freud was coming out with a new book, dictated to an army of volunteers who memorized a few paragraphs at a time and brought them back. Hemingway was doing the same. Meanwhile, the truly ancient souls, who were barely human at this point, were uninterested in human pursuits. I swept aside the newsfeed hanging in the air.

The world had been so much simpler when the divide between the living

and the dead was absolute. When Petra Beregovoi had opened her eyes and dropped her bombshell, it had seemed like the most wonderful thing. But change is always complicated, even if on the surface it seems like the best, most miraculous change ever.

I went back to work, although that didn't provide much relief. Owning a business that created walking, talking holographic memorials of people's deceased loved ones didn't exactly take my mind off my problems. I hadn't slept in five days. I was no longer tired; I'd progressed into a strange hyperactive stupor that featured a constant headache.

My phone burred. I didn't recognize the ring at first, then realized it was the emergency tone. The somber face of a stranger materialized.

"Mister Revere?"

A jolt of terror rippled through me. "What happened? Is Jillian okay?"

The stranger kept her expression a flat neutral. "She was in a vehicular accident. She's been injured, but not badly."

I was already sprinting for the door.

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Jillian cried when she saw me. There was such pain, such grief in her sobs that for a moment I was sure the doctor had lied when he said the truck had only clipped her, that a shattered elbow was her only serious injury. I wrapped my arms around Jillian as gently as possible, and cried with her, staring in horrified wonder at the bright plastic cast on her arm.

"Is the pain bad?"

"I thought I was dying, and I was *glad*. Just as it happened, when I thought I was going to die, I felt this sudden burst of joy," Jillian whispered.

I jerked my head up to look at her. "*Why?*"

"I was so relieved."

"I don't understand. Why would you hope you were dying?"

"It was one of those crazy things you think, that just comes out. If I died, then you would love me as much as Delilah."

I buried my face in Jillian's neck, drew her hand up against my wet cheek. "I'm sorry. I'm so sorry." I looked up into the pain in her eyes. It had been there for years. I'd refused to see it. "I'll make it right. Today. I

promise.”

Jillian turned her head to one side. “Even if you wanted to, you couldn’t. You have to wait a few weeks, at least.”

I couldn’t wait a few weeks. I had to make this right, and I so dreaded making it right. “I just want to get this over with. I want it behind us.”

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I had to sign half a dozen waivers before they would freeze me for the third time in eight days. I scrawled my name on the forms.

How was I going to do this? Delilah didn’t deserve this. She was utterly blameless. She’d taken care of her grandmother, who didn’t eat enough because she was always trying to feed the framed photos that lined her desk and dresser. Once she’d found Grandma packed inside the side-loading dryer in the laundry room, and as Delilah helped her out, Grandma had accused Delilah of putting her in there. Delilah never complained, never lost patience or her sense of humor.

It wasn’t just hurting Delilah that I dreaded, it was losing her. I looked so forward to seeing her. I didn’t want to lose her laughter, her magic. As they prepped me, I took deep, tremulous breaths, trying to calm myself, craving the sedative like never before.

One day I would be in the afterlife, but for now my place was with the living. My promises to the living had to take priority over my promises to the dead. Those were the rules. That was how it was meant to be. I saw that now, with clear-eyed certainty. But that certainty did nothing to banish the terrible anguish I felt.

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“Hey, you.” As Delilah drew closer and saw my face, she stopped, frowned. “What’s the matter?”

I choked on the words. “I have to break my promise to you.”

A single tear popped free and rolled down Delilah’s cheek. “Why?”

“Because I’m married.”

Delilah pressed the back of her wrist to her mouth and turned away. I

reached out to touch her, to turn her around and sweep her into my arms, but I stopped myself. I had no right.

“I was afraid to tell you—”

“No, I’m glad you never told me.” Delilah turned to face me, her eyes bright with tears. “I suspected. It’s been so long, after all. I didn’t want to know. I wanted our world to stay just like it is.”

“I did, too.”

“Here, that’s possible. But where you are . . .” She let the thought trail off.

“I’m so sorry.”

Delilah tried to smile, didn’t quite manage it. “I knew this day would come.” The words were meant to absolve me, but I could see how much she was hurting. The despair in her eyes almost brought me to my knees.

“Can I ask one last favor?” she asked.

“Anything.”

“Can we pretend this is like any other visit?”

I took her hand, and we walked the streets of Savannah. We passed Alligator Soul, our favorite restaurant. We wandered Market Square, past the antique and junk stores. Then along River Street and through all the squares. There were twenty-four squares, not seventeen hundred as Delilah had once claimed on the Savannah Liar’s Tour. As we walked, I realized we were saying goodbye to our Savannah, as well as to each other.

“Is she good to you? Is she a good person?” Delilah’s words broke the silence. We were in Forsyth Park, standing in front of the fountain, where Greek gods blew jets of water out of horns.

“She is.”

“Do you have children?”

“Not yet, but we’re talking.”

“You’ll be an awesome dad,” Delilah whispered.

We walked on, hand in hand, toward The Sentient Bean, where they sold the best brownies in the world, our palms never growing sweaty, our feet never aching.

It was, blessedly, one of the visits that seemed to last a long time.

We ended up back in Chippewa Square, under the live oaks. “I keep expecting you to be gone, but you’re still here.” Delilah smiled, squeezed his

hand. “Goodbye. I love you. I’ll always love you.”

“I’ll always love you, too.”

A trolley floating close by crashed to the pavement, startling us both. Up and down Bull Street, vehicles that had been floating slammed to the ground.

“Ben.”

For a moment I couldn’t quite grasp that Jillian was walking toward us, along the worn brick path that bisected the square. I let go of Delilah’s hand.

“That’s her, isn’t it?” Delilah said.

“She’s never come across,” I said, stunned. “She said she never would.”

Jillian stopped a few paces away, her eyes wet with tears.

“What are you doing here?” I asked.

“Aren’t you even going to introduce us?” Jillian asked.

“I—” I wanted to say there was no need, that we all knew who we were, but I stopped myself. “Jillian, this is Delilah.”

Jillian stepped forward and shook Delilah’s hand. The sight of them standing there together made my head spin. Jillian turned to me as she released Delilah’s hand. “Can I speak to you in private?”

“Sure. Of course.”

I led her past the Savannah Theater and around the corner, burning with guilt that Jillian had caught me holding Delilah’s hand. “Are you leaving me? I told her—I swear. We were saying goodbye.”

“No Ben, I’m not leaving you,” Jillian said. “You left me.”

“What? No, I told Delilah. I told her about you. I told her this was the last time.”

Jillian stopped walking. “I came to say goodbye. I need that closure, but after this I won’t be coming back.”

It was as if she was speaking in a foreign language. “What are you talking about?”

“You died, Ben. You died. You’re never coming back.”

I dropped to my knees. It had seemed like such a long visit. We’d gone everywhere, seen everything. Even with the slippery translation of time, I should have known something was wrong. It just never crossed my mind that I could die this young. “How?”

“Heart attack.”

At forty-two? “I’m so sorry.”

Jillian folded her arms, looked at the ground. “Let’s not go there. Let’s just say goodbye. You were being pulled in two directions, and it was pulling you apart. Something had to give. You had to choose. And you did.”

“*What?*” How is dying of a heart attack on the cryo table a *choice*? I hadn’t swallowed a bottle of pills or hung myself in the garage, I’d had a fucking heart attack. That wasn’t exactly voluntary.

I opened my mouth to say that to Jillian, and then I closed it. The technicians had implored me to wait a few weeks, but I wouldn’t listen.

“I have an hour,” Jillian said. “Do you want to walk?”

I nodded, not trusting myself to speak. We walked, saying very little. It was a different Savannah. There were fewer wrought-iron railings, but more azalea bushes. The edges of the buildings were sharper, the live oaks’ branches less gnarled. It wasn’t just my and Delilah’s Savannah.

Half of my heart was breaking. It just wasn’t the half I’d expected.

When the cars and buses and trolleys all rose into the air, I didn’t have to look. I knew Jillian was gone.

Delilah was still in Chippewa Square, sitting on the grass in a patch of sunlight. When she saw me, she stood and squinted, as if I could be an illusion.

“I don’t understand. How can you still be here?”

“Let’s walk. I’ll tell you while we walk.” I took Delilah’s hand.

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## ABOUT THE AUTHOR

Will McIntosh’s story, *Defenders*, was the basis for a novel published by Orbit books in 2014, and was recently optioned for film. Will’s third novel, *Love Minus Eighty*, based on the Hugo Award winning short story, *Bridesicle*. His debut novel, *Soft Apocalypse*, was a finalist for both a Locus award and the John W. Campbell Memorial Award. Will lives in Williamsburg, Virginia with his wife Alison and twins Hannah and Miles. He teaches psychology as an adjunct professor at the College of William and

Mary, after leaving his career as a psychology professor in southeast Georgia to write full time.

**[To learn more about the author and this story, read the Author Spotlight](#)**

# Gorgonoids

Leena Krohn (translated by Hildi Hawkins) | 2600 words

The egg of the gorgonoid is, of course, not smooth. Unlike a hen's egg, its surface texture is noticeably uneven. Under its reddish, leather skin bulge what look like thick cords, distantly reminiscent of fingers. Flexible, multiply jointed fingers, entwined—or, rather, squeezed into a fist.

But what can those “fingers” be?

None other than embryo of the gorgonoid itself.

For the gorgonoid is made up of two “cables.” One forms itself into a ring; the other wraps round it in a spiral, as if combining with itself. Young gorgonoids that have just broken out of their shells are pale and striped with red. Their colouring is like the peppermint candies you can buy at any city kiosk.

In the mature gorgonoid, the stripes darken. It develops a great lidless eyeball whose iris is blood-red.

I spoke of a leather skin, but that is, of course, not an accurate description. In fact, it is completely erroneous. It is simply, you understand, that the eggshell looks like leather. It isn't actually leather, of course, or chitin, or plaster. Or any other known material. Note: It is not made of any material at all. These creatures are not organic, but neither are they inorganic. For gorgonoids are immaterial, mathematical beings. They are visible, all the same: They move, couple, and multiply on our computer terminals. Their kin persist on our monitor screens, and their progeny mature to adulthood in a few seconds. But how they exist, how—if at all—they live, is a different question entirely. The gorgonoid is merely and exclusively what it looks like—as far as we know.

But what have I said; am I not now contradicting myself? Didn't I say that the eggshell of the gorgonoid looks like leather, but is not leather? There is some inconsistency here, something that troubles me. Perhaps I should have said: The gorgonoid appears to be only that which it appears to be. What it really is, one hardly dares attempt to say.

Not everything that is visible is material. Gorgonoids are visible but immaterial creatures. In that respect, they belong in the same category as all

images and dreams, although they are not located only in an individual mind. We, on the other hand, are visible and material. In addition, there exists matter that is invisible, as astrophysicists have shown. They believe that the entire universe is full of such cold, dark mass, that there is infinitely more of it than of visible matter. Frail filaments of visible matter glimmer amid the darkness . . .

But about that which is both invisible and immaterial, they too know nothing. It is completely unattainable, uncategorisable. It is not merely unknown; it is unknowable. We cannot sense creatures of such a category, but that is no reason to dispute their existence—if not for us.

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Besides the gorgonoid, I have had the opportunity to trace the development of the tubanide, the pacmantis, and the lissajoune. The tubanide looks a little like certain ammonites of the Mesozoic era. It is a mathematical model for *Nipponites mirabiles*, which live in a sea of ammonia.

The spherical figures of the lissajoune have charmed me most. Whenever we wish, the precise flower-spheres of the lissajoune blossom forth on our terminals. They grow in irregular spirals, in which the outline of each figure eventually returns to its starting point. The curve is always closed, unless irrational numbers come into play. And that happens extremely seldom.

Oh how dazzlingly beautiful is the odourless geometry of the lissajoune! Its beauty is not natural beauty, but the flawless logical enchantment of abstract necessity, with which nothing human or material can compare. And yet these figures are merely simulations of material life and natural growth.

And that is what most people in the institute thought: that the gorgonoid, the pacmantis, and the lissajoune were nothing more than models simulating atomic structures. But there were others who believed that, if they were not already alive, they were in the process of stepping across the threshold that separates existence from life.

“Would you like to be like them?” Rolf, the other assistant, asked me once.

“What do you mean? Like them in what sense?”

“Without free will,” Rolf said. “They never have to make a choice. That is a great advantage. Everything they do, they have to do. And they never want anything other than what they do.”

“You amaze me,” I said to Rolf. “You don’t really think they want and don’t want? And that there could exist intention that is bound?”

“I mean,” Rolf said, “that for them action and intention are the same thing.”

“That they lack internal contradiction, unlike us, you mean? But perhaps, still, they feel as if they make choices . . .”

He shrugged his shoulders, and left. His words affected me deeply.

I remembered once looking at a dark hawkmoth lying on a pine-trunk. I asked myself, then, how the hawkmoth knows how to make the right choice. Why does it always choose a trunk covered in dark bark, and not, for example, a pale birch? Does it know what colour it is?

The hawkmoth cannot see itself, but we can. Nevertheless, it always makes the right choice, but human beings do not. Why is that which we call instinct more accurate than that which we call reason? In its flawlessness, the perfection of its life, the gorgonoid—to which we have granted neither inborn instinct nor the possibility of rationality—is more like the hawkmoth than ourselves.

But we, the reason we lose our way so often is that we are freer to err, and because we watch ourselves instead of what lies ahead.

Certainly there were moments when I should have liked to have exchanged my life for that of the gorgonoid, or, even better, the lissajoune, in order to be as flawless, precise and beautiful as they.

And another reason why I should have liked to be like them is that they could at any moment—true, the moment was defined by us, but this they could hardly have known—cease to exist, and then come back just the same as before. We were not allowed to pause for breath, we had to live without stopping. Sleep was not real absence, it was not enough. Everything continued through the nights: The stream of images was ceaseless, it merely took place in different surroundings, without need of eyes or light. And when the night was over and we returned to our desks, we were not quite the same creatures who had left in the evening, for even our dreams

changed us. And our changes were always irreversible, whereas they could start again from the beginning—or from the exact point at which they had left off.

How I should have loved to go away, even for a moment, if it could have been done by pressing a key, to come back later. But for us there was no temporary death, whereas the gorgonoid—when the glow of the monitor was extinguished—ceased to exist in the place where it was, but without going anywhere else.

Inconceivable that something that has existed in some place can no longer exist in any place. How can we help asking, when someone dies, “Where has he gone?”

The gorgonoid does not fall ill, age, or necessarily ever die. Such are the privileges of creatures that do not live in the flesh or in time. They can be transferred to other programs and be copied endlessly.

But was it certain that, outside the program, the gorgonoid did not have its own independent existence, did not continue its existence there in precisely the same way as it had lived on our screens up to that point, with the sole difference that now we could no longer perceive it?

“What do you think, Rolf, are they animals?” I asked once, as the project was beginning to near its conclusion.

“Don’t animals have bodies? Mass?” he said. “They are not animals or plants, because they don’t really have bodies. You can’t touch them.”

“Is that your criterion for an animal? That you can touch it?”

They looked three-dimensional, but of course they were not. Our understanding was that their life was “apparent” life, it was completely superficial. They were objects, no more than objects, at any rate that’s what it—yes, appeared to be.

I couldn’t have lived the “apparent” life of the gorgonoid, even if I had wanted to. And that was because I wasn’t “internally consistent,” for I had a quality that the gorgonoids only appeared to have—the state of materiality, a state of intentionality, self, and freedom that had spread inseparably through matter, had dissolved into it. It was this that kept the visible in existence, that gave it a recognisable form, discrete and relatively permanent. It was a state of choice that allowed changes of direction, but only of place, never of time.

Would I really have exchanged my life for theirs? Would I have given up my materiality, my fleeting moment, for their disembodied seclusion, static even in its mutability?

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What gave us the right to consider their life to be a mere shadow-existence, pictures in a magic lantern? Our life differed from theirs in that that we loved, hated, feared, and pitied—and were conscious of the events of our own existence. When we were no longer conscious of them, there was little to differentiate between our lives and their existence.

There were times when I began to have the terrifying feeling that, in some ways, I was becoming like them. It felt as though the things that made my life human were beginning to wither and shrivel.

During that winter, when I was spending my days in the company of the gorgonoids, I came home to his cold gaze, or did not see him at all. He spent his time in the town, in rooms I did not know, with people I did not know. I did not know which was worse: that I waited for him and he did not come home, or that he came home and it was as if there was nobody there. There was no connection. I looked at him as I looked at the gorgonoids, but he never looked at me. It was as though he was as unconscious of my existence as they were. And when I, too, ceased to look at him, we lived in separate programs.

My life began to thin out strangely, to empty as if from the inside. I began to become detached, abstracted. I still had a body, and my body had mass, but I was conscious of its existence only momentarily. This state of affairs was not visible from outside. If someone had examined my existence as I examined the gorgonoids, they would not have noticed any difference. But for as long as I myself was conscious of it, I was not a gorgonoid, I only resembled one.

I had a body and a voice, but I did not touch anyone with my body, and no one touched me.

And my voice fell silent, even though I, too, desired to shout the ancient words: “My God, if you exist, save my soul, if I have a soul.”

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Gorgonoids always stay in their own world. They cannot approach us, and we cannot approach them.

For we do not associate with each other. We only program them; we are their gods. And they know as little of us as we know of our gods. But although we created the program, we cannot completely predict what they will do at a given moment. And they know nothing of our power and our weaknesses, for we do not inhabit the same time or the same space. At the moment when something in their world changes, they perhaps receive a hint of our existence; as if two-dimensional creatures were to see a ball sink through their surface-world, and then disappear.

Is there any interaction? I am asking a straightforward question: In what sense do they exist? In what sense do they live? The gorgonoid, the tubanide, the pacmantis, and the lissajoune. These statistical animals that can only be seen. That are only two-dimensional, even though they appear three-dimensional.

Did I say “only”? It is unclear in what sense they fail to be three-dimensional. For even if we cannot measure the mass of the gorgonoid, we are able to calculate its volume. And I was unable to rid myself of the following question, however irrelevant it seemed in regard to the institute’s project: Can behaviour exist without consciousness? Does the gorgonoid believe that it can influence its individual life in the same way as we do? And is there any way of proving that it does, or does not?

If someone asks, is it alive, what does he really mean? And I do ask. I ask, does it exist for itself? Because I believe that only that is true life. If it has no consciousness, but only an abstract and superficial reality, I do not consider it to be alive. It may be true, but it does not live. In that case, it is merely an object and—objectively!—it exists. And exists much more clearly and unequivocally than myself, who can never prove the existence of my internal reality and whose exterior form can easily be destroyed, but never transferred. But it is not alive. No, that I deny it.

“You can’t,” Rolf said. “How can you dictate that artificial reality is less real than physical reality?”

“Life is not a spectacle,” I said.

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Gorgonoids always stay in their own world. People always stay in the human world. They cannot function without creatures of the same species. But even a solitary gorgonoid is still a gorgonoid, while a person stripped of all relationships is no longer a person. His life resides in them.

Gorgonoids! Tubanides! Lissajounes! Nipponites mirabiles! In some ways we were like them, and in others—I thought—even more mechanical than they, like inorganic objects.

But did they have even the slightest possibility of dreaming of choice as we do, day after day, again and again, and as we would continue to do even if it were conclusively proved that any chance of choice was over, and that it had never really existed? That was where humanity lay—not in freedom itself, but in the dream of freedom.

I still say that I wish to raise my hand and step out—in that direction! And I raise my hand and take a step. Not knowing whether I have done so because I wish it, or because my will happens to be in harmony with what I must do.

I still ask: In what sense do we exist? We, who are both visible and invisible? What level of reality do we represent? Is it always the same, or does it sometimes shift, without our realising it?

How independent, and how dependent, are we?

And how can we ever cease to exist?

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## ABOUT THE AUTHOR AND TRANSLATOR

Leena Krohn was born in Helsinki, Finland in 1947. She studied psychology, philosophy, and literature at the University of Helsinki, and worked for a few years as a library assistant. Since 1970 she has written nearly forty books, both for children and adults, both fiction and essays. In her writing she asks questions about the borders of

reality and imagination, about human and non-human, about natural and artificial. She is married to Mikael, and has one son, Elias, and a granddaughter, Lumi. Nowadays she lives with her husband and two cats Ilo (Joy) and Uni (Dream) in the coastal area, east of Helsinki, and takes care of two gardens.

Hildi Hawkins is a major figure in Finnish translation, having translated several novels by Leena Krohn, including the World Fantasy Award finalist *Tainaron*, *Gold of Ophir*, and *Pereat Mundus*. She has also translated Jaan Kaplinski's *Through the Forest* and contributed translations to both *Finnish Modern Design* and *Helsinki: A Literary Companion*. In 1996, she edited the comprehensive *On the Border: An Anthology* (Lives & Letters: A Celebration of Finland).

**[To learn more about the author and this story, read the Author Spotlight](#)**

# Maiden, Hunter, Beast

Kat Howard | 2500 words

She had never intended to be a nineteen-year-old virgin. She wasn't opposed to the idea of sex, didn't think the simple act of having sex with someone had to be a big deal, and sure, she went to Mass and knew what the priests taught, but she figured God was actually a lot less concerned about that sort of thing than they were. She just hadn't ever wanted to badly enough.

Which, since there was an actual fucking unicorn walking down the alley outside of her apartment, seemed in retrospect like a really good decision.

Not that she really thought unicorns cared about virginity, either. It was pretty clear from the art and the mythology surrounding them—the hunt for the unicorn ending with its horn in a lady-maiden's lap—that the whole “unicorns only like virgins” thing was just another way the patriarchy policed women's sexuality. If unicorns cared so much about virginity, where were the pictures of unicorns with their heads in the laps of dude-maidens, that was what she wanted to know.

That wasn't exactly the point right now, though. What with the unicorn being here. Which was amazing. And maybe it would still be there even if she'd screwed her entire high school football team and then had an orgy with the cheerleading squad as a palate cleanser. But whatever the reason or the rules, a unicorn was here, and she could see it.

She climbed through her window and clattered down the fire escape. Then stopped at the bottom, pinned by its gaze.

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The unicorn raised its head and saw the maiden. It held her gaze as it swayed on its feet. Tired, so tired. It had been running forever, it seemed. Running to find itself here. This great forest of steel surrounding it, its feet aching from asphalt and concrete. Endless.

It stepped toward her. This was almost finished. It could rest. An end was all it wanted, and she was an end made flesh.

Then.

A crash. A clatter. Shouting. The maiden ran up the side of her building, and disappeared.

The unicorn ran, too.

••••

The hunter stood in the mouth of the alley. The unicorn had been here—she knew the signs. The shimmer that clung to the ground, visible under ultraviolet light. The tiny white feathers that looked like down from a pillow but that chimed like glass when they hit the ground. The scent of summer and roses and frankincense that lingered to mingle with the other, less pleasant, scents of a city alley.

She picked up three of the feathers, and put them in the ancient leather bag that she wore slung across her chest.

It bothered her, though. The location. It was an itch between her shoulder blades. She could believe that a unicorn would make its way here, to this city. It was a place made of myth as well as of concrete and steel, and myth called to myth, even when both were tangible. But this alley was a piece of nothing. Unremarkable. Why come here?

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The unicorn was gone. It had run when her roommate had yelled that the takeout was here, goddammit, and she had better come pay for it now, which was bad enough, she thought, but the fact that it had been replaced in the alley by a platinum-haired older woman with a spear slung across her back—an honest to God spear, not some cosplay fake—was worse. She knew what the woman was. A hunter.

Which was some kind of fucked up shit. What kind of person saw a unicorn and thought, yeah, you know what I'm going to do? I'm going to hunt it down and kill it. People were assholes.

Maybe she could find the unicorn first. It had looked right at her. Like it saw something in her. She had felt the look all the way into her bones. That had to mean something.

She grabbed her jacket, and some apples off of the counter, because

Jesus, who knew what unicorns actually ate, but apples seemed like a possibility, and left.

She stopped. Went back into her apartment, and took the leathery pomegranate out of the basket, too. She had seen a unicorn tapestry with pomegranates in it once. It might help.

• • • •

Legs trembling with weariness, the unicorn stepped onto the patch of grass. It reeked of animal urine, of the tracks of thousands of feet, of stale earth, and of worse things besides. The unicorn thought of forests that smelled of cool water, of pine resin, of the dark comfort of leaf mould.

It could not say how long it was since it had been in such a forest. A lifetime. Two. Or three.

The unicorn could go no further than where it was. Not right now. It barely had the strength to stand.

It could feel the heart of the maiden. It could hear the pursuit of the hunter. This, this too-long life, it would end one way, or it would end the other. But it would end, and soon.

For now, the unicorn would stand on this grass, this filthy, disgusting grass, and it would dream of remembered forests, and it would rest.

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Tracking a unicorn wasn't a difficult thing, not if you were a hunter. The signs—roses growing up from cracks in the sidewalks, store windows turning to stained glass, streetside trees coming into fruit all out of season—were obvious, once you knew them.

Finding the unicorn was never the hard part. Certainly some hunters used maidens as lures, but that could cause complications, and the hunter wanted none of those. She preferred to rely on herself.

Even without the signs, without any of them, she could have tracked the unicorn. She often had, in the past. When it was younger. When it was more cunning. She had learned to rely on her intuition, on her sense of the unicorn, on the weight of the hunt that hung, like her spear, across her back.

And while she had not yet caught it, she had always found it.

There were only so many places it could go.

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She had no idea where the unicorn could have gone. It wasn't like she could listen for the clip-clop of hooves over the noise of the city. And you would think that you would hear shouts, you would hear people yelling about a unicorn walking down the street—that shit should have been blowing up Twitter, Instagrammed everywhere—but no. Nothing.

Maybe it really was true that only a virgin could see a unicorn.

Not that that helped right now, because clearly the hunter could see the unicorn, too, and that was the bigger problem. Because not only could the hunter see the unicorn, the hunter was also better at finding it than she was.

Her feet ached from running all over the city, and her jeans chafed, and she hadn't seen it again, and it would be easier to go home, and not care.

But the unicorn had come to her alley. Had looked straight into her eyes. She had seen something in that look—age and time and the world's one remaining miracle, maybe. Or maybe just something alone and hunted and tired, in need of one kind thing, and with no one to give it. Either way, she had to care.

Think. Where in the city would a unicorn go? She knew what she would want if she were lost and wandering. Food. Water. Shelter. Unicorns probably wanted those things, too. Where would it find those things in the city?

The park. She turned and ran towards it.

••••

The unicorn wanted nothing more than to sleep. To stop. To curl its aching limbs into a cool shadow, to lay itself down on a hill of sweet grass. But it could not rest, not while it was hunted. That was the way this worked—once the hunt began, it ended only in death. The unicorn left the corroded grass, the oil-tainted water, and continued on.

It could smell the hunter's sweat, could feel her footsteps, even though

she walked smoothly, even though her movements were deliberate.

That was the way of things, that the hunted beast would know of its pursuit. It had been a game before. The unicorn had exalted in its own cleverness, had laid false paths, had given counterfeit signs of its presence. Had stood in the hidden places, and watched, and delighted in the hunter's confusion.

Had remembered when it was a hunter, before it had been changed, and had used all of that past knowledge to lengthen this chase.

In those early days, when this body was still new, the unicorn felt like it could run forever.

But now it was tired, and it wished to stop. It wished for an end on things, and it very nearly didn't care how that end came about.

Very nearly. There was a hunter, yes. But there was a maiden, too, and above the strange steel forest, a bell rang, a familiar calling, and so there was something else as well.

• • • •

The hunter felt the change when it happened. The air shifted. There was an undercurrent to it that hadn't been there before. It licked along the hunter's skin like electricity, and she did not like it.

Hunts were not about unpredictability. There was a quarry, and there were signs, and the quarry was tracked, and then there was the kill.

She knew what would happen, had been there before, had been the maiden that had lured the beast. When that hunt had ended, she had pulled the spear from the corpse and claimed her new role. That was the way of things. Simple. Straightforward.

This was not.

• • • •

Fuck her aching feet. She ran. She could feel time getting small, slipping away from beneath her boots as they pounded on the sidewalk. She had passed two parks already and hadn't seen the unicorn anywhere. She had called out to the people she passed, asking for help. It had gone about as

well as she expected. Some asshole had grabbed his crotch and told her “I got something better than a unicorn for you, sexy.” Most people just stared.

She stopped. There had to be a better way to do this. She closed her eyes, trying to think, to feel. To remember the weight of the unicorn’s eyes, looking at her as if it had known her.

If she were hunted, if she were pursued, where would she go? Where in this city was there a place of safety, of sanctuary?

Sanctuary.

••••

The unicorn walked, as it had walked forever. But not away. Toward. Back through a path that had already been walked, back closer to a fate, instead of away from it.

The bell rang again.

The bell was the sound of sanctuary. A holy ringing, calling the faithful to a place of safety. This was something the unicorn knew, something it understood. There would be water there, holy and cool, and hands that might take the knots from its mane and the burrs from its flanks.

It could stop there. It could even sleep, and not violate the rules of the hunt. There was no time on hallowed ground.

Sanctuary.

••••

The cathedral bells rang through the hunter. She felt them in her bones. They were a warning. There is no hunt without a quarry, and there is no hunter without a hunt. She needed to find the unicorn now, before it could cross onto hallowed ground.

She looked to the sky, to the spires and towers clawing at the horizon. She tossed the three glass feathers the unicorn had shed into the air to check the wind.

They shattered before hitting the ground, each chiming the same note as the cathedral bells.

Sanctuary. The hunter spat the word, and she ran.

• • • •

She saw the unicorn fall on the cathedral steps, and she ran, her blistered feet in her too-small boots nothing to her now. Up close, she could see that it was old. Ancient maybe. Rheumy eyes and thinning hair. Hooves that were cracked. Still a miracle, born into flesh and bone. She didn't see the hunter, but she wasn't sure that mattered, now.

She stroked her hand down its trembling flank, over ribs too close to the skin. Her skin gleamed like stardust where she touched it. "You poor thing," she said. "Rest now. I'll stay with you."

Its nostrils were rimmed with red, and she moved so that the fallen unicorn could rest with its head in her lap. She offered the apple, now bruised, from her pocket, and then tore the pomegranate seeds from their leathery skin. It ate one, two, three. Not even a winter's worth. It was, she thought, eating them for her, not for itself.

She did not notice she was weeping, even as her tears fell like shadows onto the unicorn's moonlight colored skin.

• • • •

The unicorn closed its eyes.

• • • •

The hunter stopped at the bottom of the cathedral stairs, just outside the bounds of what had been sanctified. She unslung her spear from her back.

"You. Will. Not." The maiden's voice was sharp as fate.

"I am a hunter. This is what I do." But the spear felt heavy in her hand, strange in a way it never had before. She was unsure of her words, of her very name.

"No. This hunt is finished."

The cathedral bell rang.

• • • •

She kept her hands on the unicorn as the hunter walked toward them.

She didn't know what else to do, so she hunched over its fallen body, shielding it with her own, bracing for the hunter's spear.

She felt the unicorn stop breathing.

In that moment, she felt as if the spear had pierced her heart, felt a world end.

She did not want to be the maiden, if this pain was what that meant. She would be something else.

Beneath her, the unicorn disappeared, the sound of its leaving a thousand shatterings of glass.

• • • •

The hunter's spear fell apart in her hand, scattering to nothing, to uselessness. She stumbled to her knees, unbelieving. Lost.

The hunter was nothing without her quarry. There was no hunt without a beast.

• • • •

She got up from where the unicorn had fallen and walked to where the older woman crouched among the pieces of her shattered spear. She spoke one word.

Run.

The woman who had once been the hunter stood awkwardly. She waited for the thing that must happen—for her feet to form into hooves and her skin to harden into hide. For her body to turn strange and monstrous, moonlight-colored and spiral-horned, for the change to give her the advantage of the hunt.

Nothing. Her own heart thudded, frantic in her chest. Her aching legs—two, only two!—shook beneath her.

Again, that terrible, merciless voice: Run.

She did.

## **ABOUT THE AUTHOR**

Kat Howard's short fiction has been nominated for awards, included in year's best and best of collections, appeared in multiple magazines and anthologies, and been performed on NPR as part of Selected Shorts. Her novella, *The End of the Sentence*, co-written with Maria Dahvana Headley, was named one of the best books of 2014 by NPR. Her debut novel, *Roses and Rot*, is forthcoming in 2016 from Saga Press.

**[To learn more about the author and this story, read the Author Spotlight](#)**

# La Lune T'attend

Peter S. Beagle | 10500 words

Even once a month, Arceneaux hated driving his daughter Noelle's car. There was no way to be comfortable: He was a big old man, and the stick-shift hatchback cramped his legs and elbows, playing Baptist hell with the bad knee. Garrigue was dozing peacefully beside him in the passenger seat, as he had done for the whole journey; but then, Garrigue always adapted more easily than he to changes in his circumstances. *All these years up north in the city, Damballa, and I still don't fit nowhere, never did.*

Paved road giving way to gravel, ping-pong off the car's undercarriage . . . then to a dirt track and the shaky wooden bridge across the stream; then to little more than untamed underbrush, springing back as he plowed through to the log cabin. *Got to check them shutters—meant to do it last time. Damn raccoons been back. I can smell it.*

Garrigue didn't wake, even with all the jouncing and rattling, until Arceneaux cut the engine. Then his eyes came open immediately, and he turned his head and smiled like a sleepy baby. He was a few months the elder, but he had always looked distinctly younger, in spite of being white, which more often shows the wear. He said, "I was dreaming, me."

Arceneaux grunted. "Same damn dream, I ain't want to hear about it."

"No, wasn't that one. Was you and me really gone fishing, just like folks. You and me in the shade, couple of trotlines out, couple of Dixie beers, nice dream. A *real* dream."

Arceneaux got out of the car and stood stretching himself, trying to forestall a back spasm. Garrigue joined him, still describing his dream in detail. Arceneaux had been taciturn almost from birth, while Garrigue, it was said in Joyelle Parish, bounced out of his mother chattering like a squirrel. Regarding the friendship—unusual, in those days, between a black Creole and a blanc—Arceneaux's father had growled to Garrigue's, "Mine cain't talk, l't'en cain't shut up. Might do."

And the closeness had lasted for very nearly seventy years (they quarreled mildly at times over the exact number), through schooling, work, marriages, family struggles, and even their final, grudging relocation. They

had briefly considered sharing a place after Garrigue moved up north, but then agreed that each was too old and cranky, too stubbornly set in his ways, to risk the relationship over the window being open or shut at night. They met once a week, sometimes at Arceneaux's apartment, but more usually at the home of Garrigue's son Claude, where Garrigue lived; and they both fell asleep, each on his own side of the great park that divided the city, listening to the music of Clifton Chenier, Dennis McGee, and Amede Ardoin.

Garrigue glanced up at the darkening overcast sky. "Cut it close again, moon coming on so fast these nights. I keep telling you, Jean-Marc—"

Arceneaux was already limping away from the rear of the car, having opened the trunk and taken out most of the grocery bags. Still scolding him, Garrigue took the rest and followed, leaving one hand free to open the cabin door for Arceneaux and then switch on the single bare light in the room. It was right above the entrance, and the shadows, as though startled themselves to be suddenly awakened, danced briefly over the room when Garrigue stepped inside, swung the door to, and double-locked it behind them.

Arceneaux tipped the bags he carried, and let a dozen bloody steaks and roasts fall to the floor.

The single room was small but tidy, even homely, with two Indian-patterned rag rugs, two cane-bottomed rockers, and a card table with two folding chairs drawn up around it. There was a fireplace, and a refrigerator in one corner, but no beds or cots. The two windows were double-barred on the inside, and the shutters closing them were not wooden, but steel.

Another grocery bag held a bottle of Calvados, which Arceneaux set on the table, next to the two glasses, deck of cards, and cribbage board waiting there. In a curiously military fashion, they padlocked and dropbolted the door, carefully checked the security of the windows, and even blocked the fireplace with a heavy steel screen. Then, finally, they sat down at the table, and Arceneaux opened the Calvados and said, "Cut."

Garrigue cut. Arceneaux dealt. Garrigue said, "My littlest grandbaby, Manette, she going to First Communion a week Saturday. You be there?" Arceneaux nodded wordlessly, jabbing pegs into the cribbage board. Garrigue started to say "She so excited, she been asking me, did I ever do

First Communion, what did it feel like and all . . .,” but then his words dissolved into a hoarse growl as he slipped from the chair. Garrigue was almost always the first, neither understood why.

Werewolves—loups-garoux in Louisiana—are notably bigger than ordinary wolves, running to larger skulls with bolder, more marked bones, deeper-set eyes, broader chests, and paws, front and rear, whose dewclaw serves very nearly as an opposable thumb. Even so, for a small, chattering white man, Garrigue stood up as a huge wolf, black from nose to tail-tip, with eyes unchanged from his normal snow-gray, shocking in their humanity. He was at the food before Arceneaux’s front feet hit the floor, and there was the customary snarling between them as they snapped up the meat within minutes. The table went over, cards and brandy and all, and both of them hurled themselves at walls and barred windows until the entire cabin shook with their frenzied fury. The wolf that was Arceneaux stood on its hind legs and tried to reach the window latches with uncannily dextrous paws, while the wolf that was Garrigue broke a front claw tearing at the door. They never howled.

First madness spent, they circled the room restlessly, their eyes glowing as dogs’ and wolves’ eyes do not glow. In time they settled into a light, reluctant sleep—Garrigue under a chair, Arceneaux in the ruins of the rug he had torn to pieces. Even in sleep they whined softly and eagerly, lips constantly twitching back from the fangs they never quite covered.

Towards dawn, with the moon gray and small, looking almost triangular because of the moisture in the air, something brought Arceneaux to the barred window nearest the door, rearing once again with his paws on the sill. There was nothing to see through the closed metal shutters, but the deep, nearly inaudible sound that constantly pulsed through his body in this form grew louder as he stared, threatening to break its banks and swell into a full-throated howl. Once again he clawed at the bars, but Garrigue had screwed down the bolts holding them in place too tightly even for a loup-garou’s deftness, and Arceneaux’s snarl bared his fangs to the black gums. Garrigue joined him, puzzled but curious, and the two of them stood side by side, panting rapidly, ears flattened against their skulls. And still there was no hint of movement anywhere outside.

Then the howl came, surging up from somewhere very near, soaring

over the trees like some skeletal ancient bird, almost visible in its dreadful ardency. The werewolves went mad, howling their own possessed challenges, even snapping furiously at each other. Arceneaux sprang at the barred windows until they shivered. He was crouching to leap again when he heard the familiar whimper behind him, and simultaneously felt the brief but overwhelming pain, unlike any other, of distorted molecules regaining their natural shape. Coming back always took longer, and hurt worse.

As always afterward, he collapsed to the floor and lay there, quickly human enough to curse the weakness that always overtook a returning loup-garou, old or young. He heard Garrigue gasping, “*Duplessis . . . Duplessis . . .*” but could not yet respond. A face began to form in his mind: dark, clever, handsome in a way that meant no good to anyone who responded to it . . . Still unable to speak, Arceneaux shook his head against the worn, stained floorboards. He had better reason than most to know why that sound, that cold wail of triumph, could not have been uttered by Alexandre Duplessis of Pointe Coupee Parish.

They climbed slowly to their feet, two stiff-jointed old men, looking around them at the usual wreckage of the cabin. Over the years that they had been renting it together, Garrigue and Arceneaux had made it proof, as best they could, against the rage of what would be trapped there every month. Even so, the rugs were in shreds, the refrigerator was on its side, there were deep claw-marks on the log walls to match the ones already there, and they would definitely need a new card table. Arceneaux pointed at the overturned Calvados bottle and said, “Shame, that. Wish I’d got the cap back on.”

“Yeah, yeah.” Garrigue shivered violently—common for most after the return. He said, “Jean-Marc, it was Duplessis, you know and I know. Duplessis *back*.”

“Not in this world.” Arceneaux’s voice was bleak and slow. “Maybe in some other world he back, but ain’t in this one.” He turned from the window to face Garrigue. “I killed Duplessis, man. Ain’t none of us come back from what I done, Duplessis or nobody. You was there, Rene Garrigue! You saw how I done!”

Garrigue was hugging himself to stop the shivering, closing his eyes against the seeing. Abruptly he said in a strangely quiet tone, “He outside

right now. He *there*, Jean-Marc.”

“Naw, man,” Arceneaux said. “Naw, Rene. He gone, Rene, my word. You got my word on it.” But Garrigue was lunging past him to fumble with the locks and throw the door wide. The freezing dawn air rushed in over the body spilled across the path, so near the door that Garrigue almost tripped over it. It was a woman—a vagrant, clearly, wearing what looked like five or six coats, sweaters and undergarments. Her throat had been ripped out, and what remained of her intestines were draped neatly over a tree branch. Even in the cold, there were already flies.

Arceneaux breathed the name of his god, his loa, Damballa Wedo, the serpent. Garrigue whispered, “Women. Always the women, always the belly. Duplessis.”

“He carry her here.” Arceneaux was calming himself, as well as Garrigue. “Killed her somewhere back there, maybe in the city, carry her here, leave her like a business card. You right, Rene. Can’t *be*, but you right.”

“Business card.” Garrigue’s voice was still tranquil, almost dreamy. “He know this place, Jean-Marc. If he know this place, he know everything. *Everything*.”

“Hush you, man, hush now, mind me.” Arceneaux might have been talking to a child wakened out of a nightmare. “Shovel out back, under the crabapple, saw it last time. We got to take her off and bury her, first thing. You go get me that shovel, Rene.”

Garrigue stared at him. Arceneaux said it again, more gently. “Go on, Rene. Find me that shovel, *compe*’.”

Alone, he felt every hair on his own body standing up; his big dark hands were trembling so that he could not even cover the woman’s face or close her eyes. *Alexandre Duplessis, c’est vraiment li, vraiment, vraiment*; but the knowledge frightened the old man far less than the terrible lure of the crumpled thing at his feet, torn open and emptied out, gutted and drained and abandoned, the reek of her terror dominating the hot, musky scent of the beast that had hunted her down in the hours before dawn. *The fear, Damballa, the fear—you once get that smell in you head, you throat, you gut, you never get it out. Better than the meat, the blood even, you smell the fear.* He was shaking badly now, and he knew that he needed to get out of there with Garrigue before he hurled himself upon the pitiful

remains, to roll and wallow in them like the beast he was. *Hold me, Damballa. Hide me, hold me.*

Garrigue returned with the rusty shovel and together they carried the dead woman deeper into the woods. Then he stood by, rubbing his mouth compulsively as he watched Arceneaux hack at the hard earth. In the same small voice as before, he said, “I scare, me, Ti-Jean,” calling Arceneaux by his childhood nickname. “What we do to him.”

“What he did to us.” Arceneaux’s own voice was cold and steady. “What he did to ma Sophie.”

As he had known it would, the mention of Arceneaux’s sister immediately brought Garrigue back from wherever terror and guilt together had taken him. “I ain’t forgot Sophie.” His gray eyes had closed down like the steel shutters whose color they matched. “I ain’t forgot nothing.”

“I know, man,” Arceneaux said gently. He finished his work, patted the new grave as flat as he could make it—*one good rain, two, grass cover it all*—and said, “We come back before next moon, clean up a little. Right now, we going home.” Garrigue nodded eagerly.

In the car, approaching the freeway, Garrigue could not keep from talking about Sophie Arceneaux, as he had not done in a very long while. “So pretty, that girl, that sister of yours. So pretty, so kind, who wouldn’t want to marry such a fine woman like her?” Then he hurriedly added, “Of course, my Elizabeth, Elizabeth was a fine woman, too, I don’t say a word against Elizabeth. But Sophie . . . la Sophie . . .” He fell silent for a time, and then said in a different voice, “I ain’t blame Duplessis for wanting her. Can’t do that, Jean-Marc.”

“She didn’t want him,” Arceneaux said. There was no expression at all in his voice now. “Didn’t want nothing to do with him, no mind what he gave her, where he took her, never mind what he promised. So he killed her.” After a pause, he went on, “You know how he killed her.”

Garrigue folded his hands in his lap and looked at them.

So low he could barely be heard, he answered, “In the wolf . . . in the wolf shape. Hadn’t seen it, I wouldn’t have believed.”

“Ripped her throat out,” Arceneaux said. “Ma colombe, ma pauv’ p’ti, she never had no chance—no more than him with her.” He looked off down the freeway, seeing, not a thousand cars nor a distant city skyline, but

his entire Louisiana family, wolves all, demanding that as oldest male he take immediate vengeance on Duplessis. For once—and it was a rare enough occurrence—he found himself in complete agreement with his blood kin and their ancient notions of honor and retribution. In company with Garrigue, one of Sophie’s more tongue-tied admirers, he had set off on the track of his sister’s murderer.

“Duplessis kill ma Sophie, she never done nothing but good for anyone. Well, I done what I done, and I ain’t sorry for it.” His voice rose as he grew angry all over again, more than he usually allowed himself these days. He said, “Ain’t a bit sorry.”

Garrigue shivered, remembering the hunt. Even with an entire werewolf clan sworn to avenge Sophie Arceneaux, Duplessis had made no attempt to hide himself, or to flee the region, so great was his city man’s contempt for thick-witted backwoods bumpkins. Arceneaux had run him to earth in a single day, and it had been almost too easy for Garrigue to lure him into a moonshiner’s riverside shebeen: empty for the occasion and abandoned forever after, haunted by the stories of what was done there to Alexandre Duplessis.

It had taken them all night, and Garrigue was a different man in the morning.

After the first scream, Garrigue had never heard the others; he could not have done otherwise and held onto his sanity. Sometimes it seemed to him that he had indeed gone mad that night, and that all the rest of his life—the flight north, the jobs, the marriage, the beloved children and grandchildren, the home—had never been anything but a lunatic’s hopeless dream of forgetfulness. More than forty years later, he still shuddered and moaned in his sleep, and at times still whimpered himself awake. *All the blood, all the shit . . . the . . . the . . . sound when Ti-Jean took that old cleaver thing . . . and that man wouldn’t die, wouldn’t die . . . wasn’t nothing left of him but open mouth, awful open mouth, and he wouldn’t die . . .*

“Don’t make *no* sense,” Arceneaux said beside him. “Days burying . . . four, five county lines—”

“Five,” Garrigue whispered. “Evangeline. Joyelle. St. Landry. Acadia. Rapides. Too close together, I *told* you . . .”

Arceneaux shook his head. “Conjure. Conjure in it somewhere, got to

be. Guillory, maybe, he evil enough . . . old Fontenot, over in St. Landry. Got to be conjure.”

They drove the rest of the way in near silence, Arceneaux biting down hard on his own lower lip, Garrigue taking refuge in memories of his wife Elizabeth, and of Arceneaux’s long-gone Pauline. Both women, non-Creoles, raised and encountered in the city, believed neither in werewolves nor in conjure men; neither one had ever known the truth about their husbands. Loups-garoux run in families: Arceneaux and Garrigue, marrying out of their clans, out of their deep back-country world, had both produced children who would go through their lives completely unaware of that part of their ancestry. The choice had been a deliberate one, and Garrigue, for his part, had never regretted it. He doubted very much that Arceneaux had either, but it was always hard to tell with Arceneaux.

Pulling to the curb in front of the frame house where Garrigue lived with Claude and his family, Arceneaux cut the engine, and they sat looking at each other. Garrigue said finally, “Forgot to fish. Grandbabies always wanting to know did we catch anything.”

“Tell them fish wasn’t biting today. We done that before.”

Garrigue smiled for the first time. “Claude, he think we don’t do no fishing, we goes up there to drink, get away from family, get a little wild. Say he might just come with us one time.” Arceneaux grunted without replying. Garrigue said, “I keeps ducking and dodging, you know? Ducking and dodging.” His voice was growing shaky again, but he never took his eyes from Arceneaux’s eyes. He said, “What we going to do, Ti-Jean?”

“Get you some sleep,” Arceneaux said. “Get you a good breakfast, tell Claude you likely be late. We go find Duplessis tomorrow, you and me.”

Garrigue looked, for a moment, more puzzled than frightened. “Why we bothering that? He know right where we live, where the chirrens lives—”

Arceneaux cut him off harshly. “We find him fast, maybe we throw him just that little bit off-balance, could help sometime.” He patted Garrigue’s shoulder lightly. “We use what we got, Rene, and all we got is us. You go on now—my knee biting on me a little bit.”

In fact—as Garrigue understood from the fact that Arceneaux mentioned it at all—the bad knee was hurting him a good deal; he could only pray that it wouldn’t have locked up on him by morning. He brought the car back to

Noelle, who took one look at his gait and insisted on driving him home, lecturing him all the way about his need for immediate surgery. She was his oldest child, his companion from her birth, and the only one who would ever have challenged him, as she did now.

“Dadda, whatever you and Compe’ Rene are up to, I *will* find it out—you know I always do. Simpler tell me now, oui?”

“Ain’t up to one thing,” Arceneaux grumbled. “Ain’t up to nothing, you turning such a suspicious woman. You mamere, she just exactly the same way.”

“Because you’re such a bad liar,” his daughter replied tenderly. She caressed the back of his neck with a warm, work-hardened hand. “Ma’dear and me, we used to laugh so, nights you’d be slipping out to drink, play cards with Compe’ Rene and your old zydeco friends. Make some crazy little-boy story—*whoo*, out the door, gone till morning, come home looking like someone dragged you through a keyhole backwards. Lord, didn’t we *laugh!*”

There had been a few moments through the years when pure loneliness had made him seriously consider turning around on her and telling her to sit herself down and listen to a story. This moment was one of them; but he only muttered something he forgot as soon as he’d said it, and nothing more until she dropped him off at his apartment building. Then she kissed his cheek and told him, “Come by for dinner tomorrow. Antoine will be home early, for a change, and Patrice just *got* to show his gam’pair something he drew in school.”

“Day after,” Arceneaux said. “Busy tomorrow.” He could feel her eyes following him as he limped through the lobby doors.

The knee was still painful the next morning, but it remained functionally flexible. He could manage. He caught the crosstown bus to meet Garrigue in front of Claude’s house, and they set forth together to search for a single man in a large city. Their only advantage lay in possessing, even in human form, a wolf’s sense of smell; that, and a bleak awareness that their quarry shared the very same gift, and undoubtedly already knew where they lived, and—far more frightening—whom they loved. *We ain’t suppose to care, Damballa. Bon Dieu made the loup-garou, he ain’t mean us to care about nothing. The kill only. The blood only . . . the fear only. Maybe Bon Dieu*

*mad at us, me and Rene, disobeying him like we done. Too late now.*

Garrigue had always been the better tracker, since their childhood, so Arceneaux simply stayed just behind his left shoulder and went where he led. Picking up the werewolf scent at the start was a grimly easy matter: Knowing Duplessis as they did, neither was surprised to cross his trail not far from the house where Garrigue's younger son Fernand lived with his own wife and children. Garrigue caught his breath audibly then, but said no word. He plunged along, drawn by the strange, unmistakable aroma as it circled, doubled back on itself, veered off in this direction or that, then inevitably returned to patrolling the streets most dear to two weary old men. Frightened and enraged, stubborn and haunted and lame, they followed. Arceneaux never took his eyes from Garrigue, which was good, because Garrigue was not using his eyes at all, and would have walked into traffic a dozen times over, if not for Arceneaux. People yelled at him.

They found Duplessis in the park, the great Park that essentially divided the two worlds of the city. He wore a long red-leather coat over a gray suit of the Edwardian cut he always favored—*just like the one we tear off him that night, Damballa, just like that suit*—and he was standing under a young willow tree, leaning on a dainty, foppish walking stick, smiling slightly as he watched children playing in a sandbox. When Arceneaux and Garrigue came up with him, one on each side, he did not speak to them immediately, but stood looking calmly from one face to the other, as his smile broadened. He was as handsome as ever, velvet-dark and whip-lean, unscarred in any way that they could see; and he appeared no older than he had on the night they had spent whittling him down to screaming blood, screaming shit, *Damballa . . .*

Duplessis said softly, "My friends."

Arceneaux did not answer him. Garrigue said inanely, "You looking well, Compe' Alexandre."

"Ah, I have my friends to thank for that." Duplessis spoke, not in Creole, but in the Parisian French he had always affected. "There's this to say for hell and death—they do keep a person in trim." He patted Garrigue's arm, an old remembered habit of his. "Yes, I am quite well, Compe' Rene. There were some bad times, as you know, but these days I feel as young and vigorous as . . . oh, say, as any of your grandchildren." And he named them

then, clearly tasting them, as though to eat the name was to have eaten the child. “Sandrine . . . Honore . . . your adorable little Manette . . .” He named them all, grinning at Garrigue around the names.

Arceneaux said, “Sophie.”

Duplessis did not turn his head, but stopped speaking.

Arceneaux said it again. “Sophie, you son of a bitch—père de personne, fils de cent mille. Sophie.”

When Duplessis did turn, he was not smiling, nor was there any bombast or mockery in his voice. He said, “I think you will agree with me, Jean-Marc, that being slashed slowly to pieces alive pays for all. Like it or not, I own your poor dear Sophie just as much as you do now. I’d call that fair and square, wouldn’t you?”

Arceneaux hit him then. Duplessis hadn’t been expecting the blow, and he went over on his back, shattering the fragile walking stick beneath him. The children in the sandbox looked up with some interest, but the passersby only walked faster.

Duplessis got up slowly, running his tongue-tip over a bloody upper lip. He said, “Well, I guess I don’t learn much, do I? That’s exactly how one of you—or was it both?—knocked me unconscious in that filthy little place by the river. And when I came to . . .” He shrugged lightly, and actually winked at Arceneaux. He said softly, “But you haven’t got any rope with you this time, have you, Jean-Marc? And none of your little—ah—sculptor’s tools?” He tasted his bloody mouth again. “A grandfather should be more careful, I’d think.”

The contemptuous lilt in the last words momentarily cost Garrigue his sanity. Only Arceneaux’s swift reaction and strong clutch kept him from knocking Duplessis down a second time. His voice half-muffled against Arceneaux’s chest, Garrigue heard himself raging, “You touch my chirren, you—you touch the *doorknob* on my grandbabies’ house—I cut you up all over again, cut you like Friday morning’s bacon, you hear me?” And he heard Duplessis laughing.

Then the laughter stopped, almost with a machine’s mechanical *click*, and Duplessis said, “No. You hear *me* now.” Garrigue shook himself free of Arceneaux’s preventive embrace, nodded a silent promise, and turned to see Duplessis facing them both, his mouth still bleeding, and his eyes as

freezingly distant as his voice. He said, “I am Alexandre Duplessis. You sent me to hell, you tortured me as no devils could have done—no devils would have conceived of what you did. But in so doing, you have set me free, you have lost all power over me. I will do what I choose to you and yours, and there will be nothing you can do about it, nothing you can threaten me with. Would you like to hear what I choose to do?”

He told them.

He went into detail.

“It will take me some little while, obviously. That suits me—I want it to take a while. I want to watch you go mad as I strip away everything you love and cannot protect, just as you stripped away my fingers, my face, my organs, piece by piece by piece.” The voice never grew any louder, but remained slow and thoughtful, even genial. The soulful eyes—still a curious reddish-brown—seemed to have withdrawn deep under the telltale single brow and contracted to the size of cranberries. Arceneaux could feel their heat on his skin.

“This is where I live at present,” Duplessis said, and told them his address. He said, “I would be delighted if you should follow me there, and anywhere else—it would make things much more amusing. I would even invite you to hunt with me, but you were always too cowardly for that, and by the looks of you I can see you’ve not changed. Wolves—God’s own *wolves* caging themselves come the moon, not even surviving on dogs and cats, mice and squirrels and rabbits, as you did in Joyelle Parish. *Lamisere a deux . . . Misere et Compagnie*—no wonder you have both grown so old, it’s almost pitiful. Now *I*”—a light inward flick of his two hands invited the comparison—“I dine only on the diet that le Bon Dieu meant for me, and it will keep me hunting when you two are long-buried with the humans you love so much.” He clucked his tongue, mimicking a distressed old woman, and repeated, “Pitiful. Truly pitiful. A très—très—tot . . . my friends.”

He bowed gracefully to them then, and turned to stroll away through the trees. Arceneaux said, “Conjure.” Duplessis turned slowly again at the word, waiting. Arceneaux said, “You ain’t come back all by yourself, we took care. You got brought back—take a conjure man to do that. Which one—Guillory? I got to figure Guillory.”

Duplessis smiled, a little smugly, and shook his head. “I’d never trust

Guillory out of my sight—let alone after my death. No, Fontenot was the only sensible choice. Entirely mad, but that’s always a plus in a conjure man, isn’t it? And he hated you with all his wicked old heart, Jean-Marc, as I’m sure you know. What on earth did you *do* to that man—rape his black pig? Only thing in the world he loved, that pig.”

“Stopped him feeding a lil boy to it,” Arceneaux grunted. “What he do for you, and what it cost you? Fontenot, he come high.”

“They all come high. But you can bargain with Fontenot. Remember, Jean-Marc?” Duplessis held out his hands, palms down. The two little fingers were missing, and Arceneaux shivered with sudden memory of that moment when he’d wondered who had already taken them, and why, even as he had prepared to cut into the bound man’s flesh . . .

Duplessis laughed harshly, repeating, “My insurance policy, you could say. Really, you should have thought a bit about those, old friend. There’s mighty conjuring to be done with the fingers of a loup-garou. It was definitely worth Fontenot’s while to witch me home, time-consuming as it turned out to be. I’m sure he never regretted our covenant for a moment.”

Something in his use of the past tense raised Arceneaux’s own single brow, his daughters’ onetime plaything. Duplessis caught the look and grinned with the flash of genuine mischief that had charmed even Arceneaux long ago, *though not ma Sophie, never—she knew*. “Well, let’s be honest, you couldn’t have a man with that kind of power and knowledge running around loose—not a bad, bad man like Hipolyte Fontenot. I was merely doing my duty as a citizen. Au ’voir again, mon ami. Mon assassin.”

Watching him walk away, Arceneaux was praying so hard for counsel and comfort to Damballa Wedo, and to Damballa’s gentle wife, the rainbow Ayida, that he started when Garrigue said beside him, “Let’s go, come *on*. We don’t let that man out of our sight, here on in.”

Arceneaux did not look at him. “No point in it. He *want* us to follow him—he want us going crazy, no sleep, no time to think straight, just wondering *when* . . . I ain’t go play it his way, me, unh-uh.”

“You know another way? You got a better idea?” Garrigue was very nearly crying with impatience and anxiety, all but dancing on his toes, straining to follow Alexandre Duplessis. Arceneaux put his hands on the white man’s arms, trying to take the trembling into himself.

“I don’t know it’s a better idea. I just know he still think we nothing but a couple back-country fools, like he always did, and we got to keep him thinking that thing—*got* to. Because we gone kill him, Rene, you hearing me? We done it before—this time we gone kill him *right*, so he stay dead. Yeah, there’s only two of us, but there’s only one of him, and he ain’t God, man, he just one damn old loup-garou in a fancy suit, talking fancy French. You hear what I’m saying to you?”

Garrigue did not answer. Arceneaux shook him slightly. “Right now, we going on home, both of us. He ain’t go do nothing tonight, he want us to spend it thinking on all that shit he just laid on us. Home, Rene.”

Still no response. Arceneaux looked into Garrigue’s eyes, and could not find Garrigue there, but only frozen, helpless terror. “Listen, Rene, I tell you something my daddy use to say. Daddy, he say to me always, ‘*Di moin qui vous lamein, ma di cous qui vous ye.*’ You tell me who you love, I tell you who you are.” Garrigue began returning slowly to his own eyes, looking back at him: expressionless, but present. Arceneaux said, “You think just maybe we know who we are, Compe’ Rene?”

Garrigue smiled a little, shakily. “Duplessis . . . Duplessis, he don’t love nobody. Never did.”

“So Duplessis ain’t nobody. Duplessis don’t exist. You gone be scared of somebody don’t exist?” Arceneaux slapped his old friend’s shoulder, hard. “Home now. Ti-Jean say.” They did go to their homes then, and they slept well, or at least they told each other so in the morning. Arceneaux judged that Garrigue might actually have slept through the night; for himself, he came and went, turning over a new half-dream of putting an end to Alexandre Duplessis each time he turned in his bed. Much of the waking time he spent simply calling into darkness inside himself, calling on his loa, as he had been taught to do when young, crying out, *Damballa Wedo, great serpent, you got to help us, this on you . . . Bon Dieu can’t be no use here, ain’t his country, he don’t speak the patois . . . Got to be you, Damballa . . .* When he did sleep, he dreamed of his dead wife, Pauline, and asked her for help too, as he had always done.

A revitalized Garrigue was most concerned the next morning with the problem of destroying a werewolf who had already survived being sliced into pieces, themselves buried in five different counties. “We never going to

get another chance like that, not in this city. City, you got to *explain* why you do somebody in—and you definitely better not say it's cause he turn into a wolf some nights. Be way simpler if we could just shoot him next full moon, tell them we hunters. Bring him home strap right across the hood, hey Ti-Jean?" He chuckled, thinking about it.

"Except we be changing, too," Arceneaux pointed out. "We all prisoners of the moon, one way another."

Garrigue nodded. "Yeah, you'd think that'd make us—I don't know—hold together some way, look out for each other. But it don't happen, do it? I mean, here I am, and I'm thinking, I ever do get the chance, I'd kill him wolf to wolf, just like he done Sophie. I would, I just don't give a damn no more."

"Come to that, it come to that. Last night I been trying to work out how we could pour some cement, make him part of a bridge, an underpass—you know, way the Mafia do. Couldn't figure it."

Garrigue said, "You right about one thing, anyway. We can't be waiting on the moon, cause he sure as hell won't be. Next full moon gone be short one loup-garou for certain."

"Maybe two," Arceneaux said quietly. "Maybe three, even. Man ain't going quietly no second time."

"Be worth it." Garrigue put out his hand and Arceneaux took it, roughness meeting familiar lifelong roughness. Garrigue said, "Just so it ain't the little ones. Just so he don't ever get past us to the little ones." Arceneaux nodded, but did not answer him.

For the next few days they pointedly paid no attention to Duplessis's presence in the city—though they caught his scent in both neighborhoods, as he plainly made himself familiar with family routines—but spent the time with their children and grandchildren, delighting the latter and relieving the men of babysitting duties. Garrigue, having only sons, got away without suspicions; but neither Noelle nor Arceneaux's daughter-in-law Athalie were entirely deceived. As Athalie put it, "Women, we are so used to men's stupid lies, we're out of practice for a good one, Papajeau," which was her one-word nickname for him. "I *know* you're lying, some way, but this one's really good."

On Saturday, Arceneaux, along with most of his own family,

accompanied Garrigue's family to the Church of Saints Philip and James for Manette Garrigue's First Communion. The day was unseasonably warm, the group returning for the party large, and at first no one but Arceneaux and Garrigue took any notice of the handsome, well-dressed man walking inconspicuously between them. Alexandre Duplessis said thoughtfully, "What a charming little girl. You must be very proud, Rene."

Garrigue had been coached half the night, or he would have gone for Duplessis's throat on the instant. Instead he answered, mildly enough, "I'm real proud of her, you got that right. You lay a hand on her, all Fontenot's gris-gris be for nothing next time."

Duplessis seemed not to have heard him. "Should she be the first—not Jean-Marc's Patrice or Zelime? It's so hard to decide—"

The strong old arms that blocked Garrigue away also neatly framed Duplessis's throat. Arceneaux said quietly, "You never going to make it to next moon, Compe' Alexandre. You know that, don't you?"

Duplessis looked calmly back at him, the red-brown eyes implacable far beyond human understanding. He said, "Compe' Jean-Marc, I died at your hands forty and more years ago, and by the time you got through with me I was very, very old. You cannot kill such a man twice, not so it matters." He smiled at Arceneaux. "Besides, the moon is perhaps not everything, even for a loup-garou. I'd give that a little thought, if I were you." His canine teeth glittered wetly in the late-autumn sunlight as he turned and walked away.

After a while Noelle dropped back to take her father's arm. She rubbed her cheek lightly against Arceneaux's shoulder and said, "Your knee all right? You're looking tired."

"Been a long morning." Arceneaux hugged her arm under his own. "Don't you worry about the old man."

"I do, though. Gotten so I worry about you a whole lot. Antoine does too." She looked up at him, and he thought, *Her mama's eyes, her mama's mouth, but my complexion—thank God that's all she got from me . . .* She said, "How about you spend the night, hey? I make gumbo, you play with the grandbabies, talk sports with Antoine. Sound fair?"

It sounded more than fair; it sounded such a respite from the futile plans and dreaded memories with which he and Garrigue had been living that he could have wept. "I'm gone need take care some business first. Nothing big,

just a few bits of business. Then I come back, stay the night.” She prompted him with a silent, quizzical tilt of her head, and he added, “Promise.” It was an old ritual between them, dating from her childhood: He rarely used the word at all, but once he did, he could be absolutely relied on to keep it. His grandchildren had all caught onto this somewhat earlier than she had.

He slipped away from the party group without even signaling to Garrigue: a deliberately suspicious maneuver that had the waiting Duplessis behind him before he had gone more than a block from the house. It was difficult to pretend not to notice that he was being followed—this being one of the wolf senses that finds an echo in the human body—but Arceneaux was good at it, and took a certain pleasure in leading Duplessis all over the area, as the latter had done to him and Garrigue. But the motive was not primarily spite. He was actually bound for a certain neighborhood botanica run by an old Cuban couple who had befriended him years before, when he first came to the city. They were kind and brown, and spoke almost no English, and he had always suspected that they knew exactly what he was, had known others like him in Cuba, and simply didn’t care.

He spent some forty-five minutes in the crowded little shop, and left with his arms full of brightly colored packages. Most amounted to herbal and homeopathic remedies of one sort and another; a very few were gifts for Damballa Wedo, whose needs are very simple; and one—the only one with an aroma that would have alerted any loup-garou in the world—was a largish packet of wolfbane.

Still sensing Duplessis on his track, he walked back to Noelle’s house, asked to borrow her car briefly, claiming to have heard an ominous sound from the transmission, and took off northeast, in the direction of the old cabin where he and Garrigue imprisoned themselves one night in every month. The car was as cramped as ever, and the drive as tedious, but he managed it as efficiently as he could. Arriving alone, for the first time ever, he spent some while tidying the cabin, and the yet-raw grave in the woods as well; then carefully measured out all the wolfbane in a circle around the little building, and headed straight back to the city. He bent all his senses, wolf and human alike, to discovering whether or not Duplessis had trailed him the entire way, but the results were inconclusive.

“Way I been figuring it over,” he said to Garrigue the next day, drinking

bitter chicory coffee at the only Creole restaurant whose cook understood the importance of a proper roux, “we lured him into that blind pig back on the river, all them years ago, and he just know he way too smart for us to get him like that no second time. So we gone do just exactly what we done before, cause we ain’t but pure-D country, and that the onliest trick we know.” His sigh turned to a weary grunt as he shook his head. “Which ain’t no lie, far as I’m concerned. But we go on paying him no mind, we keep sneaking up there, no moon, no need . . . he smell the wolfbane, he keep on following us, we got to be planning *something* . . . All I’m hoping, Compe’ Rene, I’m counting on a fool staying a fool. The smart ones, they do sometimes.”

Garrigue rubbed the back of his neck and folded his arms. “So what you saying, same thing, except with the cabin? Man, *I* wouldn’t fall for that, and you *know* I’m a fool.”

“Yeah, but see, see, we know we fools—we used to it, we live with it like everybody, do the best we can. But Duplessis . . .” He smiled, although it felt as though he were lifting a great cold weight with his mouth. “Duplessis *scary*. Duplessis got knowledge you and me couldn’t even spell, never mind understand. He just as smart as he think he is, and we just about what we were back when we never seen a city man before, we so proud to be running with a city man.” He rubbed the bad knee, remembering Sophie’s warnings, not at all comforted by the thought that no one else in the clan had seen through the laughter, the effortless charm, the *newness* of the young loup-garou who came so persistently courting her. He said, “There’s things Duplessis never going to understand.”

He missed Garrigue’s question, because it was mumbled in so low a tone. He said, “Say what?”

Garrigue asked, “It going to be like that time?” Arceneaux did not answer. Garrigue said, “Cause I don’t think I can do that again, Ti-Jean. I don’t think I can watch, even.” His face and voice were embarrassed, but there was no mistaking the set of his eyes, not after seventy years.

“I don’t know, me.” Arceneaux himself had never once been pursued by dreams of what they had done to Alexandre Duplessis in Sophie’s name; but in forty years he had gently shaken Garrigue out of them more than once, and held him afterward. “We get him there—just you, me, and him, like

before—I know then. All I can tell you now, Rene.”

Garrigue made no reply, and they separated shortly afterward. Arceneaux went home, iced his knee, turned on his radio (he had a television set, but rarely watched it), and learned of the discovery of a second homeless woman, eviscerated and partly devoured, her head almost severed from her body by the violence of the attack. The corpse had been found under the Viaduct, barely two blocks from Arceneaux’s apartment, and the police announced that they were taking seriously the disappearance of the woman Arceneaux had buried. Arceneaux sat staring at the radio long after it had switched to broadcasting a college football game.

He called Garrigue, got a busy signal, and waited until his friend called him back a moment later. When he picked up the phone, he said simply, “I know.”

Garrigue was fighting hysteria; Arceneaux could feel it before he spoke the first word. “Can’t be, Ti-Jean. Not full moon. Can’t *be*.”

“Well,” Arceneaux said. “Gone have to ask old Duplessis what else he sold that Fontenot.” He had not expected Garrigue to laugh, and was not surprised. He said, “Don’t be panicking, you hear me, Rene? Not now. Ain’t the time.”

“Don’t know what else to do.” But Garrigue’s voice was slightly steadier. “If he really be changing any damn time he like—”

“Got to be rules. Le Bon Dieu, he wouldn’t let there not be rules—”

“Then we got to tell them, you hear *me*? They got to know what out there, what we dealing with—what coming *after* them—”

“And what we are? What they come from, what they part of? You think your little Manette, my Patrice, you think they ready for that?”

“Not the grandbabies, when I ever said the grandbabies? I’m talking the chirren—yours, mine, they husbands, wives, all them. They old enough, they got a right to know.” There was a pause on the other end, and then Garrigue said flatly, “You don’t tell them, I will. I swear.”

It was Arceneaux’s turn to be silent, listening to Garrigue’s anxious breathing on the phone. He said finally, “Noelle. Noelle got a head on her. We tell her, no one else.”

“She got a husband, too. What about him?”

“Noelle,” Arceneaux said firmly. “Antoine ain’t got no werewolf for a

daddy.”

“Okay.” Garrigue drew the two syllables out with obvious dubiousness. “Noelle.” The voice quavered again, sounding old for the first time in Arceneaux’s memory. “Ti-Jean, he could be anywhere right now, we wouldn’t know. Could be *at* them, be tearing them apart, like that woman —”

Arceneaux stopped him like a traffic cop, literally—and absurdly—with a hand held up. “No, he couldn’t. Think about it, Rene. Back in Louzianne—back *then*—what we do after that big a kill? What *anybody* do?”

“Go off . . . go off somewhere, go to sleep.” Garrigue said it grudgingly, but he said it.

“How long for? How long you ever sleep, you and that full belly?”

“A day, anyway. Slept out two whole days, one time. And old Albert Vaugine . . .” Garrigue was chuckling a bit, in spite of himself. He said, “Okay, so we maybe got a couple of days—*maybe*. What then?”

“Then we get ourselves on up to the cabin. You and me and him.” Arceneaux hung up.

It had long been the centerpiece of Arceneaux’s private understanding of the world that nothing was ever as good as you expected it to be, or as bad. His confession of her ancestry to Noelle fell into the latter category. He had expected her reaction to be one of horrified revulsion, followed by absolute denial and tearful outrage. Instead, after withdrawing into silent thought for a time, and then saying slow, mysterious things like, “So *that’s* why I can never do anything with my hair,” she told him, “You do know there’s no way in the world you’re going without me?”

His response never got much beyond, “The hell you preach, girl!” Noelle set her right forefinger somewhere between his Adam’s apple and his collarbones, and said, “Dadda, this is my fight too. As long as that man’s running around loose”—the irony of her using the words that Alexandre Duplessis had used to justify his murder of the conjure man Fontenot was not lost on Arceneaux—“my children aren’t safe. You know the way I get about the children.”

“This won’t be no PTA meeting. You don’t know.”

“I know you and Uncle Rene, you may both be werewolves, but you’re *old* werewolves, and you’re not exactly in the best shape. Oh, you’re going

to need me, cause right now the both of you couldn't tackle Patrice, never mind Zelime." He was in no state to tackle her, either; he made do with a mental reservation: *Look away for even five minutes and we're out of here, me and Rene. You got to know how to handle daughters, that's all. Specially the pushy ones.*

But on the second day, it didn't matter, because it was Noelle who was gone. And Patrice with her. And her car.

After Antoine had called the police, and the house had begun to fill with terrified family, but before the reporters had arrived, and before Zelime had stopped crying for her mother and little brother, Arceneaux borrowed his son Celestin's car. It was quite a bit like renting it, not because Celestin charged him anything, but because answering all his questions about why the loan was necessary almost amounted to filling out a form. Arceneaux finally roared at him, in a voice Celestin had not heard since his childhood, "Cause I'm your father, me, and I just about to snatch you balder than you already are, you don't hand me them keys." He was on the road five minutes later.

He did not stop to pick up Garrigue. His explanation to himself was that there wasn't time, that every minute was too precious to be taken up with a detour; but even as he made it, he knew better. The truth lay in his pity for Garrigue's endless nightmares, for his lonesome question, "It gone be like that time?" and for his own sense that this was finally between him and the man whom he had carved to obscene fragments alive. *I let him do it all back to me, he lets them two go. Please, Damballa, you hear? Please.*

But he was never certain—and less now than ever before—whether Damballa heard prayers addressed to him in English. So for the entire length of the drive, which seemed to take the rest of his life, he chanted, over and over, a prayer-song that little Ti-Jean Arceneaux, who spoke another language, had learned young, never forgotten, and, until this moment, never needed.

*"Baba yehge, amiwa saba yehge,  
De Damballa e a miwa,  
Danou sewa yehge o, djevo de.  
De Damballa Wedo, Bade miwa . . ."*

Rather than bursting into the cabin like the avenging angel he had

planned to be, he hardly had the strength or the energy to open the car door, once he arrived. The afternoon was cold, and he could smell snow an hour or two away; he noticed a few flakes on the roof of Noelle's car. There was flickering light in the cabin, and smoke curling from the chimney, which he and Garrigue mistrusted enough that they almost never lighted a fire. He moved closer, noticing two sets of footprints leading to the door, *Yeah, she'd have been carrying Patrice, boy'd have been too scared to walk.* The vision of his terrified four-year-old grandson made him grind his teeth, and Duplessis promptly called from within, "No need to bite the door down, Jean-Marc. Half a minute, I'll be right there."

Waiting, Arceneaux moved to the side of the house and ripped down the single power line. The electric light went out inside, and he heard Duplessis laugh. Standing on the doorstep as Arceneaux walked back, he said, "I thought you might do that, so I built a handsome fire for us all—even lit a few candles. But if you imagine that's going to preclude the use of power tools, I feel I should remind you that they all run on batteries these days. Nice *big* batteries. Come in, Jean-Marc, I bid you welcome."

It was not the shock of seeing Noelle tied in a chair that almost caused Arceneaux to lose what control he had and charge the smiling man standing beside her. It was the sight of Patrice, unbound on her lap, lighting up at the sight of him to call "Gam'pair!" He had been crying, but his face made it clear that everything would be all right now. Duplessis said pleasantly, "I wouldn't give it a second thought, old friend. I'm sure you know why."

"Fontenot," Arceneaux said. "Never knowed the old man had *that* much power."

"Oh, it cost me an arm and a leg . . . so to speak." Duplessis laughed softly. "Another reason he had to go. I mean, suppose everyone could change whenever he chose, things might become a bit . . . chaotic, don't you agree? But it certainly does come in handy, those nights when you're suddenly peckish, just like that, and everything's closed."

Noelle's eyes were terrified, but her voice was surprisingly steady. She said, "He broke in in the night, I don't know how. I couldn't fight him, because he had Patrice, and he said if I screamed . . ."

"Yeah, honey," Arceneaux said. "Yeah, baby."

"He made me drive him up here. Poor Patrice was so frightened."

Patrice nodded proudly. “I was *scared*, Gam’pair.”

“He tried to rape me,” Noelle said evenly. “He couldn’t.”

Duplessis looked only mildly abashed. “Everything costs. And it did seem appropriate—you and little Rene working so hard to entice me up here. I thought I’d just take you up on it a bit early.”

Arceneaux took a step, then another; not toward Duplessis, but toward Noelle in the chair. Duplessis said, “I really wouldn’t, Jean-Marc.”

Noelle said, “Dadda, get *out* of here! It’s you he wants!”

Arceneaux said, “He got me. He ain’t getting you.”

Duplessis nodded. “I’ll let them go, you have my word. But they have to watch first. That’s fair. Her and the little one, watching and remembering . . . you know, that might even make up for what you did to me.” His smile brightened even more. “Then we’ll be quits at last, just think, after all the years. I might even leave some of the others alive—lagniappe, don’t you know, our greatest Louzianne tradition. As your folks say down in the swamp, lagniappe c’est bitin qui bon—lagniappe is lawful treasure.”

Arceneaux ignored him. To Patrice he said, “Boy, you get off your mama’s lap now, I got to get those ropes off her. Then we all go get some ice cream, you like that?”

Patrice scrambled down eagerly. Noelle said, “Dadda, *no*. Take Patrice and get *out*—” just as Duplessis’s voice sharpened and tightened, good cheer gone. “Jean-Marc, I’m warning you—”

The ropes were tight for stiff old fingers, and Noelle’s struggling against them didn’t help. Behind him, Arceneaux heard Patrice scream in terror. A moment later, looking past him, Noelle went absolutely rigid, her mouth open but no smallest sound emerging. He turned himself then, knowing better than they what he would see.

Petrifying as the sight of a werewolf obviously is, it is the transformation itself that is the smothering fabric of nightmare. On the average, it lasts no more than ten or fifteen seconds: but to the observing eyes and mind, the process is endless, going on and on and on in everlasting slow-motion, as the grinning mouth twists and lengthens into a fanged snarl, while the body convulses, falls forward, catches itself on long gray legs that were arms a lifetime ago, and the eyes lengthen, literally reseal themselves in the head at a new angle, and take on the beautiful insane glow that particularly

distinguishes the loup-garou. Alexandre Duplessis—cotton-white, except for the dark-shaded neck-ruff and the jagged black slash across the chest—uttered a shattering half-human roar and sprang straight at Arceneaux.

Whether it was caused by the adrenaline of terror or of rage he couldn't guess, but suddenly the ropes fell loose from the chair and his fingers, and Noelle, in one motion, swept up the wailing Patrice and was through the door before the wolf that had been Duplessis even reached her father. The bad knee predictably locked up, and Arceneaux went down, with the wolf Duplessis on him, worrying at his throat. He warded the wide-stretched jaws off with his forearm, bringing the good knee up into the loup-garou's belly, the huge white-and-black body that had become all his sky and all his night. Duplessis threw back his head and bayed in triumph.

Arceneaux made a last desperate attempt to heave Duplessis away and get to his feet. But he was near to suffocation from the weight on his chest—*Saba yehge, amiwa saba yehge, de Damballa e a miwa*—and then the werewolf's jaws were past his guard, the great fangs sank into his shoulder, and he heard himself scream in pain—*Danou sewa yehge o, djevo de, Damballa come to us, they are hurting us, Damballa come quickly . . .*

. . . and heard the scream become a howl of fury in the same moment, as he lunged upward, his changing jaws closing on Duplessis's head, taking out an eye with the first snap. Wolf to wolf—the greatest sin of all—they rose on their hind legs, locked together, fangs clashing, each streaked and blotched with the other's blood. Arceneaux had lost not only who he was, but *what*—he had no grandchildren now, no children either, no lifelong down-home friend, no memories of affection . . . there had never been anything else but this murderous twin, and no joy but in hurting it, killing it, tearing it back once again to shreds, where it belonged. He had never been so happy in his life.

In the wolf form, loups-garoux do not mate; lovemaking is a gift for ordinary animals, ordinary humans. Yet this terrible, transcendent *meshing* was like nothing Arceneaux had ever known, even as he was aware that his left front leg was broken and one side of his throat laid open. Duplessis was down now . . . or was that some other wolf bleeding and panting under him, breath ragged, weakened claws finding no purchase in his fur? It made no difference. There was nothing but battle now, nothing but hunger for

someone's blood.

Most of the lighted candles had been knocked over—some by Noelle's flight to the door, some during the battle. The rag rugs that he and Garrigue had devastated and not yet replaced were catching fire, and spreading the flames to dry furniture and loose paper and kindling. Arceneaux watched the fire with a curious detachment, as intense, in its way, as the ecstasy with which he had he had closed his wolf jaws on Duplessis's wolf flesh. He was aware, with the same disinterest, that he was bleeding badly from a dozen wounds; still, he was on his feet, and Duplessis was sprawled before him, alive but barely breathing, lacking the strength and will to regain the human shape. Arceneaux was in the same condition, which was a pity, for he would have liked to give his thanks to Damballa in words. He considered the helpless Duplessis for a moment longer, as the fire began to find its own tongue, and then he pushed the door open with his head and limped outside.

Noelle cried out at first as he stumbled toward her; but then she knew him, as she would always have known him, and knelt down before him, hugging his torn neck—Duplessis had come very near the throat—and getting blood all over the pajamas in which she had been kidnapped. She had no words either, except for Dadda, but she got plenty of mileage out of that one, even so.

The cabin was just reaching full blaze, and Patrice had worked up the courage to let the strange big dog lick his face, when the police car came barreling up the overgrown little path, very nearly losing an axle to the pothole Garrigue had been warning them about for the last couple of miles. Antoine was with them too, and Garrigue's son Claude, and a police paramedic as well. There was a good deal of embracing among one group, and an equal amount of headscratching, chinrubbing and cell-phone calling by the other.

And Jean-Marc Arceneaux—"Ti-Jean" to a very few old friends—nuzzled his grandson one last time, and then turned and walked back into the blazing cabin and threw himself over the body of the wolf Alexandre Duplessis. Noelle's cry of grief was still echoing when the roof came down.

When Garrigue could talk—when anyone could talk, after the fire engine came—he told Noelle, "The ashes. He done it because of the ashes."

Noelle shook her head weakly. “I don’t understand.”

Garrigue said, “Duplessis come back once, maybe do it again, even from ashes. But not all mixed up together with old Ti-Jean, no, not with their jaws locked on each other in the other world and the loa watching. Not even a really good conjure man out of Sabine, Vernon Parish, pull off that trick. You follow me?”

“No,” she said. “No, Rene. I don’t, I’m trying.”

Garrigue was admirably patient, exhausted as he was. “He just making sure you, the grandbabies, the rest of us, we never going to be bothered by Compe’ Alexandre no more.” His gray eyes were shining with prideful tears. “He thought on things like that, Ti-Jean did. Knew him all my life, that man. All my life.”

Patrice slept between her and Antoine that night: The police psychologist who had examined him said that just because he was showing no sign of trauma didn’t mean that he might not be affected in some fashion that wouldn’t manifest itself for years. For his part, Patrice had talked about the incident in the surprisingly matter-of-fact way of a four-year-old for the rest of the day; but after dinner he spent the evening playing one of Zelime’s mysterious games that seemed, as far as adults could tell, to have no rules whatsoever. It was only when he scrambled into bed beside his mother that he asked seriously, “That man? Not coming back?”

Noelle hugged him. “No, sweetheart. Not coming back. Not ever. You scared him away.”

“Gam’pair come back.” It was not a question.

*You’re not supposed to lie to children about anything. Bad, bad, bad.* Noelle said, “He had to go away, Patrice. He had to make sure that man wouldn’t come here again.”

Patrice nodded solemnly. He wrapped his arms around himself and said, “I hold Gam’pair right here. Gam’pair not going anywhere,” and went to sleep.

## **ABOUT THE AUTHOR**

Peter S. Beagle was born in 1939 and raised in the Bronx, where he grew up surrounded by the arts and education: Both his parents were teachers, three of his uncles were world-renowned gallery painters, and his immigrant grandfather was a respected writer, in Hebrew, of Jewish fiction and folktales. As a child Peter used to sit by himself in the stairwell of apartment building he lived in, staring at the mailboxes across the way and making up stories to entertain himself. Today, thanks to classics like *The Last Unicorn*, *A Fine and Private Place*, and “Two Hearts,” he is a living icon of fantasy fiction. In addition to eight novels and over one hundred pieces of short fiction, Peter has written many teleplays and screenplays (including the animated versions of *The Lord of the Rings* and *The Last Unicorn*); six nonfiction books (among them the classic travel memoir *I See By My Outfit*); the libretto for one opera; and more than seventy published poems and songs. He currently makes his home in Oakland, California.

# NOVELLA



# Griffin's Egg

Michael Swanwick | 31684 words

The sun cleared the mountains. Gunther Weil raised a hand in salute, then winced as the glare hit his eyes in the instant it took his helmet to polarize.

He was hauling fuel rods to Chatterjee Crater industrial park. The Chatterjee B reactor had gone critical forty hours before dawn, taking fifteen remotes and a microwave relay with it, and putting out a power surge that caused collateral damage to every factory in the park. Fortunately, the occasional meltdown was designed into the system. By the time the sun rose over the Rhaeticus highlands, a new reactor had been built and was ready to go online.

Gunther drove automatically, gauging his distance from Bootstrap by the amount of trash lining the Mare Vaporum road. Close by the city, discarded construction machinery and damaged assemblers sat in open-vacuum storage, awaiting possible salvage. Ten kilometers out, a pressurized van had exploded, scattering machine parts and giant worms of insulating foam across the landscape. At twenty-five kilometers, a poorly graded stretch of road had claimed any number of cargo skids and shattered running lights from passing traffic.

Forty kilometers out, though, the road was clear, a straight, clean gash in the dirt. Ignoring the voices at the back of his skull, the traffic chatter and automated safety messages that the truck routinely fed into his transceiver chip, he scrolled up the topographicals on the dash.

Right about here.

Gunther turned off the Mare Vaporum road and began laying tracks over virgin soil. "You've left your prescheduled route," the truck said. "Deviations from schedule may only be made with the recorded permission of your dispatcher."

"Yeah, well." Gunther's voice seemed loud in his helmet, the only physical sound in a babel of ghosts. He'd left the cabin unpressurized, and the insulated layers of his suit stilled even the conduction rumbling from the treads. "You and I both know that so long as I don't fall too far behind

schedule, Beth Hamilton isn't going to care if I stray a little in between."

"You have exceeded this unit's linguistic capabilities."

"That's okay, don't let it bother you." Deftly he tied down the send switch on the truck radio with a twist of wire. The voices in his head abruptly died. He was completely isolated now.

"You said you wouldn't do that again." The words, broadcast directly to his trance chip, sounded as deep and resonant as the voice of God.

"Generation Five policy expressly requires that all drivers maintain constant radio—"

"Don't whine. It's unattractive."

"You have exceeded this unit's linguistic—"

"Oh, shut up." Gunther ran a finger over the topographical maps, tracing the course he'd plotted the night before: thirty kilometers over cherry soil, terrain no human or machine had ever crossed before, and then north on Murchison road. With luck he might even manage to be at Chatterjee early.

He drove into the lunar plain. Rocks sailed by to either side. Ahead, the mountains grew imperceptibly. Save for the trademarks dwindling behind him, there was nothing from horizon to horizon to show that humanity had ever existed. The silence was perfect.

Gunther lived for moments like this. Entering that clean, desolate emptiness, he experienced a vast expansion of being, as if everything he saw, stars, plain, craters and all, were encompassed within himself. Bootstrap City was only a fading dream, a distant island on the gently rolling surface of a stone sea. Nobody will ever be first here again, he thought. Only me.

A memory floated up from his childhood. It was Christmas Eve and he was in his parents' car, on the way to midnight Mass. Snow was falling, thickly and windlessly, rendering all the familiar roads of Dusseldorf clean and pure under sheets of white. His father drove, and he himself leaned over the front seat to stare ahead in fascination into this peaceful, transformed world. The silence was perfect.

He felt touched by solitude and made holy.

The truck plowed through a rainbow of soft greys, submerged hues more hints than colors, as if something bright and festive held itself hidden just beneath a coating of dust. The sun was at his shoulder, and when he

spun the front axle to avoid a boulder, the truck's shadow wheeled and reached for infinity. He drove reflexively, mesmerized by the austere beauty of the passing land.

At a thought, his peecee put music on his chip. "Stormy Weather" filled the universe.

••••

He was coming down a long, almost imperceptible slope when the controls went dead in his hands. The truck powered down and coasted to a stop. "Goddamn you, you asshole machine!" he snarled. "What is it this time?"

"The land ahead is impassible."

Gunther slammed a fist on the dash, making the maps dance. The land ahead was smooth and sloping, any unruly tendencies tamed eons ago by the Mare Imbrium explosion. Sissy stuff. He kicked the door open and clambered down.

The truck had been stopped by a baby rille: a snakelike depression meandering across his intended route, looking for all the world like a dry streambed. He bounded to its edge. It was fifteen meters across, and three meters down at its deepest. Just shallow enough that it wouldn't show up on the topos. Gunther returned to the cab, slamming the door noiselessly behind him.

"Look. The sides aren't very steep. I've been down worse a hundred times. We'll just take it slow and easy, okay?"

"The land ahead is impassible," the truck said. "Please return to the originally scheduled course."

Wagner was on now. *Tannhäuser*. Impatiently, he thought it off.

"If you're so damned heuristic, then why won't you ever listen to reason?" He chewed his lip angrily, gave a quick shake of his head. "No, going back would put us way off schedule. The rille is bound to peter out in a few hundred meters. Let's just follow it until it does, then angle back to Murchison. We'll be at the park in no time."

••••

Three hours later he finally hit the Murchison road. By then he was sweaty and smelly and his shoulders ached with tension. “Where are we?” he asked sourly. Then, before the truck could answer, “Cancel that.” The soil had turned suddenly black. That would be the ejecta fantail from the Sony-Reinpfaltz mine. Their railgun was oriented almost due south in order to avoid the client factories, and so their tailings hit the road first. That meant he was getting close.

Murchison was little more than a confluence of truck treads, a dirt track crudely leveled and marked by blazes of orange paint on nearby boulders. In quick order Gunther passed through a series of landmarks: Harada Industrial fantail, Sea of Storms Macrofacturing fantail, Krupp funfzig fantail. He knew them all. G5 did the robotics for the lot.

A light flatbed carrying a shipped bulldozer sped past him, kicking up a spray of dust that fell as fast as pebbles. The remote driving it waved a spindly arm in greeting. He waved back automatically, and wondered if it was anybody he knew.

The land hereabouts was hacked and gouged, dirt and boulders shoved into careless heaps and hills, the occasional tool station or Oxytank Emergency Storage Platform chopped into a nearby bluff. A sign floated by: TOILET FLUSHING FACILITIES ½ KILOMETER. He made a face. Then he remembered that his radio was still off and slipped the loop of wire from it. Time to rejoin the real world. Immediately his dispatcher’s voice, harsh and staticky, was relayed to his trance chip.

“—ofabitch! Weil! Where the fuck are you?”

“I’m right here, Beth. A little late, but right where I’m supposed to be.”

“Sonofa—” The recording shut off, and Hamilton’s voice came on, live and mean. “You’d better have a real good explanation for this one, honey.”

“Oh, you know how it is.” Gunther looked away from the road, off into the dusty jade highlands. He’d like to climb up into them and never come back. Perhaps he would find caves. Perhaps there were monsters: vacuum trolls and moondragons with metabolisms slow and patient, taking centuries to move one body’s-length, hyperdense beings that could swim through stone as if it were water. He pictured them diving, following lines of magnetic force deep, deep into veins of diamond and plutonium, heads back and singing. “I picked up a hitchhiker, and we kind of got involved.”

“Try telling that to E. Izmailova. She’s mad as hornets at you.”

“Who?”

“Izmailova. She’s the new demolitions jock, shipped up here on a multicorporate contract. Took a hopper in almost four hours ago, and she’s been waiting for you and Siegfried ever since. I take it you’ve never met her?”

“No.”

“Well, I have, and you’d better watch your step with her. She’s exactly the kind of tough broad who won’t be amused by your antics.”

“Aw, come on, she’s just another tech on a retainer, right? Not in my line of command. It’s not like she can do anything to me.”

“Dream on, babe. It wouldn’t take much pull to get a fuckup like you sent down to Earth.”

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The sun was only a finger’s breadth over the highlands by the time Chatterjee A loomed into sight. Gunther glanced at it every now and then, apprehensively. With his visor adjusted to the H-alpha wavelength, it was a blazing white sphere covered with slowly churning black specks: more granular than usual. Sunspot activity seemed high. He wondered that the Radiation Forecast Facility hadn’t posted a surface advisory. The guys at the Observatory were usually right on top of things.

Chatterjee A, B, and C were a triad of simple craters just below Chladni, and while the smaller two were of minimal interest, Chatterjee A was the child of a meteor that had punched through the Imbrian basalts to as sweet a vein of aluminum ore as anything in the highlands. Being so convenient to Bootstrap made it one of management’s darlings, and Gunther was not surprised to see that Kerr-McGee was going all out to get their reactor online again.

The park was crawling with walkers, stalkers, and assemblers. They were all over the blister-domed factories, the smelteries, loading docks, and vacuum garages. Constellations of blue sparks winked on and off as major industrial constructs were dismantled. Fleets of heavily loaded trucks fanned out into the lunar plain, churning up the dirt behind them. Fats

Waller started to sing “The Joint is Jumpin’” and Gunther laughed.

He slowed to a crawl, swung wide to avoid a gas-plater that was being wrangled onto a loader, and cut up the Chatterjee B ramp road. A new landing pad had been blasted from the rock just below the lip, and a cluster of people stood about a hopper resting there. One human and eight remotes.

One of the remotes was speaking, making choppy little gestures with its arms. Several stood inert, identical as so many antique telephones, unclaimed by Earthside management but available should more advisors need to be called online.

Gunther unstrapped Siegfried from the roof of the cab and, control pad in one hand and cable spool in the other, walked him toward the hopper.

The human strode out to meet him. “You! What kept you?” E. Izmailova wore a jazzy red-and-orange Studio Volga boutique suit, in sharp contrast to his own company-issue suit with the G5 logo on the chest. He could not make out her face through the gold visor glass. But he could hear it in her voice: blazing eyes, thin lips.

“I had a flat tire.” He found a good smooth chunk of rock and set down the cable spool, wriggling it to make sure it sat flush. “We got maybe five hundred yards of shielded cable. That enough for you?”

A short, tense nod.

“Okay.” He unholstered his bolt gun. “Stand back.” Kneeling, he anchored the spool to the rock. Then he ran a quick check of the unit’s functions. “Do we know what it’s like in there?”

A remote came to life, stepped forward, and identified himself as Don Sakai, of G5’s crisis management team. Gunther had worked with him before: a decent enough guy, but like most Canadians he had an exaggerated fear of nuclear energy. “Ms. Lang here, of Sony-Reinpfaltz, walked her unit in but the radiation was so strong she lost control after a preliminary scan.” A second remote nodded confirmation, but the relay time to Toronto was just enough that Sakai missed it. “The remote just kept on walking.” He coughed nervously, then added unnecessarily, “The autonomous circuits were too sensitive.”

“Well, that’s not going to be a problem with Siegfried. He’s as dumb as a rock. On the evolutionary scale of machine intelligence he ranks closer to a crowbar than a computer.” Two and a half seconds passed, and then Sakai

laughed politely. Gunther nodded to Izmailova. “Walk me through this. Tell me what you want.”

Izmailova stepped to his side, their suits pressing together briefly as she jacked a patch cord into his control pad. Vague shapes flickered across the outside of her visor like the shadows of dreams. “Does he know what he’s doing?” she asked.

“Hey, I—”

“Shut up, Weil,” Hamilton growled on a private circuit. Openly, she said, “He wouldn’t be here if the company didn’t have full confidence in his technical skills.”

“I’m sure there’s never been any question—” Sakai began. He lapsed into silence as Hamilton’s words belatedly reached him.

“There’s a device on the hopper,” Izmailova said to Gunther. “Go pick it up.”

He obeyed, reconfiguring Siegfried for a small, dense load. The unit bent low over the hopper, wrapping large, sensitive hands about the device. Gunther applied gentle pressure. Nothing happened. Heavy little bugger. Slowly, carefully, he upped the power. Siegfried straightened.

“Up the road, then down inside.”

The reactor was unrecognizable, melted, twisted, and folded in upon itself, a mound of slag with twisting pipes sprouting from the edges. There had been a coolant explosion early in the incident, and one wall of the crater was bright with sprayed metal. “Where is the radioactive material?” Sakai asked. Even though he was a third of a million kilometers away, he sounded tense and apprehensive.

“It’s all radioactive,” Izmailova said.

They waited. “I mean, you know. The fuel rods?”

“Right now, your fuel rods are probably three hundred meters down and still going. We are talking about fissionable material that has achieved critical mass. Very early in the process the rods will have all melted together in a sort of superhot puddle, capable of burning its way through rock. Picture it as a dense, heavy blob of wax, slowly working its way toward the lunar core.”

“God, I love physics,” Gunther said.

Izmailova’s helmet turned toward him, abruptly blank. After a long

pause, it switched on again and turned away. “The road down is clear at least. Take your unit all the way to the end. There’s an exploratory shaft to one side there. Old one. I want to see if it’s still open.”

“Will the one device be enough?” Sakai asked. “To clean up the crater, I mean.”

The woman’s attention was fixed on Siegfried’s progress. In a distracted tone she said, “Mr. Sakai, putting a chain across the access road would be enough to clean up this site. The crater walls would shield anyone working nearby from the gamma radiation, and it would take no effort at all to reroute hopper overflights so their passengers would not be exposed. Most of the biological danger of a reactor meltdown comes from alpha radiation emitted by particulate radioisotopes in the air or water. When concentrated in the body, alpha-emitters can do considerable damage; elsewhere, no. Alpha particles can be stopped by a sheet of paper. So long as you keep a reactor out of your ecosystem, it’s as safe as any other large machine. Burying a destroyed reactor just because it is radioactive is unnecessary and, if you will forgive me for saying so, superstitious. But I don’t make policy. I just blow things up.”

“Is this the shaft you’re looking for?” Gunther asked.

“Yes. Walk it down to the bottom. It’s not far.”

Gunther switched on Siegfried’s chestlight, and sank a roller relay so the cable wouldn’t snag. They went down. Finally Izmailova said, “Stop. That’s far enough.” He gently set the device down and then, at her direction, flicked the arming toggle. “That’s done,” Izmailova said. “Bring your unit back. I’ve given you an hour to put some distance between the crater and yourself.” Gunther noticed that the remotes, on automatic, had already begun walking away.

“Um . . . I’ve still got fuel rods to load.”

“Not today you don’t. The new reactor has been taken back apart and hauled out of the blasting zone.”

Gunther thought now of all the machinery being disassembled and removed from the industrial park, and was struck for the first time by the operation’s sheer extravagance of scale. Normally only the most sensitive devices were removed from a blasting area. “Wait a minute. Just what kind of monster explosive are you planning to use?”

There was a self-conscious cockiness to Izmailova's stance. "Nothing I don't know how to handle. This is a diplomat-class device, the same design as saw action five years ago. Nearly one hundred individual applications without a single mechanical failure. That makes it the most reliable weapon in the history of warfare. You should feel privileged having the chance to work with one."

Gunther felt his flesh turn to ice. "Jesus Mother of God," he said. "You had me handling a briefcase nuke."

"Better get used to it. Westinghouse Lunar is putting these little babies into mass production. We'll be cracking open mountains with them, blasting roads through the highlands, smashing apart the rille walls to see what's inside." Her voice took on a visionary tone. "And that's just the beginning. There are plans for enrichment fields in Sinus Aestum. Explode a few bombs over the regolith, then extract plutonium from the dirt. We're going to be the fuel dump for the entire solar system."

His dismay must have shown in his stance, for Izmailova laughed. "Think of it as weapons for peace."

• • • •

"You should've been there!" Gunther said. "It was unfuckable. The one side of the crater just disappeared. It dissolved into nothing. Smashed to dust. And for a real long time everything glowed! Craters, machines, everything. My visor was so close to overload it started flickering. I thought it was going to burn out. It was nuts." He picked up his cards. "Who dealt this mess?"

Krishna grinned shyly and ducked his head. "I'm in."

Hiro scowled down at his cards. "I've just died and gone to Hell."

"Trade you," Anya said.

"No, I deserve to suffer."

They were in Noguchi Park by the edge of the central lake, seated on artfully scattered boulders that had been carved to look water-eroded. A knee-high forest of baby birches grew to one side, and somebody's toy sailboat floated near the impact cone at the center of the lake. Honeybees mazelily browsed the clover.

“And then, just as the wall was crumbling, this crazy Russian bitch—” Anya ditched a Trey. “Watch what you say about crazy Russian bitches.” “—goes zooming up on her hopper . . .”

“I saw it on television,” Hiro said. “We all did. It was news. This guy who works for Nissan told me the BBC gave it thirty seconds.” He’d broken his nose in karate practice, when he’d flinched into his instructor’s punch, and the contrast of square white bandage with shaggy black eyebrows gave him a surly, piratical appearance.

Gunther discarded one. “Hit me. Man, you didn’t see anything. You didn’t feel the ground shake afterwards.”

“Just what was Izmailova’s connection with the Briefcase War?” Hiro asked. “Obviously not a courier. Was she in the supply end or strategic?”

Gunther shrugged.

“You do remember the Briefcase War?” Hiro said sarcastically. “Half of Earth’s military elites taken out in a single day? The world pulled back from the brink of war by bold action? Suspected terrorists revealed as global heroes?”

Gunther remembered the Briefcase War quite well. He had been nineteen at the time, working on a Finlandia Geothermal project when the whole world had gone into spasm and very nearly destroyed itself. It had been a major factor in his decision to ship off the planet. “Can’t we ever talk about anything but politics? I’m sick and tired of hearing about Armageddon.”

“Hey, aren’t you supposed to be meeting with Hamilton?” Anya asked suddenly.

He glanced up at the Earth. The east coast of South America was just crossing the dusk terminator. “Oh, hell, there’s enough time to play out the hand.”

Krishna won with three queens. The deal passed to Hiro. He shuffled quickly, and slapped the cards down with angry little punches of his arm. “Okay,” Anya said, “what’s eating you?”

He looked up angrily, then down again and in a muffled voice, as if he had abruptly gone bashful as Krishna, said, “I’m shipping home.”

“Home?”

“You mean to Earth?”

“Are you crazy? With everything about to go up in flames? Why?”

“Because I am so fucking tired of the Moon. It has to be the ugliest place in the universe.”

“Ugly?” Anya looked elaborately about at the terraced gardens, the streams that began at the top level and fell in eight misty waterfalls before reaching the central pond to be recirculated again, the gracefully winding pathways. People strolled through great looping rosebushes and past towers of forsythia with the dreamlike skimming stride that made moonwalking so like motion underwater. Others popped in and out of the office tunnels, paused to watch the finches loop and fly, tended to beds of cucumbers. At the midlevel straw market, the tents where off-duty hobby capitalists sold factory systems, grass baskets, orange glass paperweights, and courses in postinterpretive dance and the meme analysis of Elizabethan poetry were a jumble of brave silks, turquoise, scarlet and aquamarine. “I think it looks nice. A little crowded, maybe, but that’s the pioneer aesthetic.”

“It looks like a shopping mall, but that’s not what I’m talking about. It’s —” He groped for words. “It’s like—it’s what we’re doing to this world that bothers me. I mean, we’re digging it up, scattering garbage about, ripping the mountains apart, and for what?”

“Money,” Anya said. “Consumer goods, raw materials, a future for our children. What’s wrong with that?”

“We’re not building a future, we’re building weapons.”

“There’s not so much as a handgun on the Moon. It’s an intercorporate development zone. Weapons are illegal here.”

“You know what I mean. All those bomber fuselages, detonation systems, and missile casings that get built here, and shipped to low Earth orbit. Let’s not pretend we don’t know what they’re for.”

“So?” Anya said sweetly. “We live in the real world, we’re none of us naïve enough to believe you can have governments without armies. Why is it worse that these things are being built here rather than elsewhere?”

“It’s the short-sighted, egocentric greed of what we’re doing that gripes me! Have you peeked out on the surface lately and seen the way it’s being ripped open, torn apart and scattered about? There are still places where you can gaze upon a harsh beauty unchanged since the days our ancestors were swinging in trees. But we’re trashing them. In a generation, two at most, there will be no more beauty to the Moon than there is to any other garbage

dump.”

“You’ve seen what Earthbound manufacturing has done to the environment,” Anya said. “Moving it off the planet is a good thing, right?”

“Yes, but the Moon—”

“Doesn’t even have an ecosphere. There’s nothing here to harm.”

They glared at each other. Finally Hiro said, “I don’t want to talk about it,” and sullenly picked up his cards.

••••

Five or six hands later, a woman wandered up and plumped to the grass by Krishna’s feet. Her eye shadow was vivid electric purple, and a crazy smile burned on her face. “Oh hi,” Krishna said. “Does everyone here know Sally Chang? She’s a research component of the Center for Self-Replicating Technologies, like me.”

The others nodded. Gunther said, “Gunther Weil. Blue collar component of Generation Five.”

She giggled.

Gunther blinked. “You’re certainly in a good mood.” He rapped the deck with his knuckles. “I’ll stand.”

“I’m on psilly,” she said.

“One card.”

“Psilocybin?” Gunther said. “I might be interested in some of that. Did you grow it or microfactory it? I have a couple of factories back in my room, maybe I could divert one if you’d like to license the software?”

Sally Chang shook her head, laughing helplessly. Tears ran down her cheeks.

“Well, when you come down, we can talk about it.” Gunther squinted at his cards. “This would make a great hand for chess.”

“Nobody plays chess,” Hiro said scornfully. “It’s a game for computers.”

Gunther took the pot with two pair. He shuffled, Krishna declined the cut, and he began dealing out cards. “So anyway, this crazy Russian lady—”

Out of nowhere, Chang howled. Wild gusts of laughter knocked her back on her heels and bent her forward again. The delight of discovery dancing in her eyes, she pointed a finger straight at Gunther. “You’re a

robot!” she cried.

“Beg pardon?”

“You’re nothing but a robot,” she repeated. “You’re a machine, an automaton. Look at yourself! Nothing but stimulus-response. You have no free will at all. There’s nothing there. You couldn’t perform an original act to save your life.”

“Oh yeah?” Gunther glanced around, looking for inspiration. A little boy—it might be Pyotr Nahfees, though it was hard to tell from here—was by the edge of the water, feeding scraps of shrimp loaf to the carp. “Suppose I pitched you into the lake? That would be an original act.”

Laughing, she shook her head. “Typical primate behavior. A perceived threat is met with a display of mock aggression.”

Gunther laughed.

“Then, when that fails, the primate falls back to a display of submission. Appeasal. The monkey demonstrates his harmlessness—you see?”

“Hey, this really isn’t funny,” Gunther said warningly. “In fact, it’s kind of insulting.”

“And so back to a display of aggression.”

Gunther sighed and threw up both his hands. “How am I supposed to react? According to you, anything I say or do is wrong.”

“Submission again. Back and forth, back and forth from aggression to submission and back again.” She pumped her arm as if it were a piston. “Just like a little machine—you see? It’s all automatic behavior.”

“Hey, Kreesh—you’re the neurobiowhatever here, right? Put in a good word for me. Get me out of this conversation.”

Krishna reddened. He would not meet Gunther’s eyes. “Ms. Chang is very highly regarded at the Center, you see. Anything she thinks about thinking is worth thinking about.” The woman watched him avidly, eyes glistening, pupils small. “I think maybe what she means, though, is that we’re all basically cruising through life. Like we’re on autopilot. Not just you specifically, but all of us.” He appealed to her directly. “Yes?”

“No, no, no, no.” She shook her head. “Him specifically.”

“I give up.” Gunther put his cards down, and lay back on the granite slab so he could stare up through the roof glass at the waning Earth. When he closed his eyes, he could see Izmailova’s hopper, rising. It was a skimpy

device, little more than a platform-and-chair atop a cluster of four bottles of waste-gas propellant, and a set of smart legs. He saw it lofting up as the explosion blossomed, seeming briefly to hover high over the crater, like a hawk atop a thermal. Hands by side, the red-suited figure sat, watching with what seemed inhuman calm. In the reflected light she burned as bright as a star. In an appalling way, she was beautiful.

Sally Chang hugged her knees, rocking back and forth. She laughed and laughed.

• • • •

Beth Hamilton was wired for telepresence. She flipped up one lens when Gunther entered her office, but kept on moving her arms and legs. Dreamy little ghost motions that would be picked up and magnified in a factory somewhere over the horizon. “You’re late again,” she said with no particular emphasis.

Most people would have experienced at least a twinge of reality sickness dealing with two separate surrounds at once. Hamilton was one of the rare few who could split her awareness between two disparate realities without loss of efficiency in either. “I called you in to discuss your future with Generation Five. Specifically, to discuss the possibility of your transfer to another plant.”

“You mean Earthside.”

“You see?” Hamilton said. “You’re not as stupid as you like to make yourself out to be.” She flipped the lens down again, stood very still, then lifted a metal-gauntleted hand and ran through a complex series of finger movements. “Well?”

“Well what?”

“Tokyo, Berlin, Buenos Aires—do any of these hold magic for you? How about Toronto? The right move now could be a big boost to your career.”

“All I want is to stay here, do my job, and draw down my salary,” Gunther said carefully. “I’m not looking for a shot at promotion, or a big raise, or a lateral career-track transfer. I’m happy right where I am.”

“You’ve sure got a funny way of showing it.” Hamilton powered down

her gloves, and slipped her hands free. She scratched her nose. To one side stood her work table, a polished cube of black granite. Her peecce rested there, alongside a spray of copper crystals. At her thought, it put Izmailova's voice onto Gunther's chip.

"It is with deepest regret that I must alert you to the unprofessional behavior of one of your personnel components," it began. Listening to the complaint, Gunther experienced a totally unexpected twinge of distress and, more, of resentment that Izmailova had dared judge him so harshly. He was careful not to let it show.

"Irresponsible, insubordinate, careless, and possessed of a bad attitude." He faked a grin. "She doesn't seem to like me much." Hamilton said nothing. "But this isn't enough to . . ." His voice trailed off. "Is it?"

"Normally, Weil, it would be. A demo jock isn't 'just a tech on retainer,' as you so quaintly put it; those government licenses aren't easy to get. And you may not be aware of it, but you have very poor efficiency ratings to begin with. Lots of potential, no follow-through. Frankly, you've been a disappointment. However, lucky for you, this Izmailova dame humiliated Don Sakai, and he's let us know that we're under no particular pressure to accommodate her."

"Izmailova humiliated Sakai?"

Hamilton stared at him. "Weil, you're oblivious, you know that?"

Then he remembered Izmailova's rant on nuclear energy. "Right, okay. I got it now."

"So here's your choice. I can write up a reprimand, and it goes into your permanent file, along with Izmailova's complaint. Or you can take a lateral Earthside, and I'll see to it that these little things aren't logged into the corporate system."

It wasn't much of a choice. But he put a good face on it. "In that case it looks like you're stuck with me."

"For the moment, Weil. For the moment."

• • • •

He was back on the surface the next two days running. The first day he was once again hauling fuel rods to Chatterjee C. This time he kept to the

road, and the reactor was refueled exactly on schedule. The second day he went all the way out to Triesnecker to pick up some old rods that had been in temporary storage for six months while the Kerr-McGee people argued over whether they should be reprocessed or dumped. Not a bad deal for him, because although the sunspot cycle was on the wane, there was a surface advisory in effect and he was drawing hazardous duty pay.

When he got there, a tech rep telepresented in from somewhere in France to tell him to forget it. There'd been another meeting, and the decision had once again been delayed. He started back to Bootstrap with the new a capella version of *The Threepenny Opera* playing in his head. It sounded awfully sweet and reedy for his tastes, but that was what they were listening to up home.

Fifteen kilometers down the road, the UV meter on the dash jumped.

Gunther reached out to tap the meter with his finger. It did not respond. With a freezing sensation at the back of his neck, he glanced up at the roof of the cab and whispered, "Oh, no."

"The Radiation Forecast Facility has just intensified its surface warning to a Most Drastic status," the truck said calmly. "This is due to an unanticipated flare storm, onset immediately. Everyone currently on the surface is to proceed with all haste to shelter. Repeat: Proceed immediately to shelter."

"I'm eighty kilometers from—"

The truck was slowing to a stop. "Because this unit is not hardened, excessive fortuitous radiation may cause it to malfunction. To ensure the continued safe operation of this vehicle, all controls will be frozen in manual mode and this unit will now shut off."

With the release of the truck's masking functions, Gunther's head filled with overlapping voices. Static washed through them, making nonsense of what they were trying to say:

\*\*astic Status\*\*repeat: We\*\*\*\*\*his is Beth.  
The\*\*\*\*\*hail\*\*\*\*\*yo\*\*\*\*\*ere?\*C Su\*\*ace adv\*\*\*ry \*as\*\*\*\*\*ve  
jus\*\*issued\*\*\*\*ost\*\*\*om\*\*on\*\*good\*\*uddy\*\*\*\*\*ve up\*\*\*\*\*to  
Most\*\*rast rastic ad\*isory\*\*Get\*off me a\*\*oot\*\*\*Miko, Sabra\* ic Sta\*\*s.  
All unit\* and the surfac\*\*\*\*\*ddamn\*\*ou, Kangmei\*\*\*\*\*your asse\*\*  
personn\*I are to find sh are you list\*\*\*ng? Find undergrou\*\*\*right

now\*\* elter immediately. Maxim shelter. Don\*t try to ge don't want\*to  
hear you'\* um exposure twenty minut back to Bootstrap. Too tayed behind  
to turn off es. Repeat: Maximum exp far, it'll fry you. List\*\*\*f the lights.  
Who else\*\*\* os\*re twenty m\*nutes. Fi\* en, ther\* are thr\*e facto\*\*\*is  
out\*ther\*? Come in ri\*\*\*\*\*helter im\*\*\*iatel\*\*\*\*\*ries no\*\*\*\*\*r from\*\*\*ur  
pr ght n\*w\*\*Ev\*\*yone! Anybo\* \*\*Th\*\*\*\*\*h\*\*\*eco\*ded\*voi  
\*\*ent\*\*ocat\*on\*\*\*Are\*\*\*u \* dy k\*ow w\*\*re\*Mikhail is\*\*\*ce of t\*\*\*  
Radiati\*\*\*Fore li\*\*\*ning\*y\*\*\*gooff\* \*\*\*\*\*C\*mon, Misha\*\*\*on't  
yo\*\*\*\*\*cast Fa\*\*lity. Due\*\*o an\* Weisskopf\*AG\*is one, Niss\*\*\*\*\*et coy  
on us\*\*\*ound u\*\*\*unpre\*\*c\*ed solar  
flar\*\*\*\*\*and\*\*unar\*\*acrostruct \*\*\*your voice, hea\*\*\*We g\*\*\*\*  
th\*\*\*urfa\*\*\*adviso\*\*\*\*as\* \*\*ural\*\*\*Weil\*\*\*\*\*me kn\*\*\*\*\*ot word  
Ezra's dug\*nt\*\*\* \*\*\*\*\*upgrad\*\*\*\*\*Most Dr\*\*if\*\*\*\*'re  
listeni\*\*\*\*\*ome a factory out Chladn\*\*\*\*\*

“Beth! The nearest shelter is back at Weisskopf—that’s half an hour at top speed and I’ve got an advisory here of twenty minutes. Tell me what to do!”

But the first sleet of hard particles was coming in too hard to make out anything more. A hand, his apparently, floated forward and flicked off the radio relay. The voices in his head died.

The crackling static went on and on. The truck sat motionless, half an hour from nowhere, invisible death sizzling and popping down through the cab roof. He put his helmet and gloves on, doublechecked their seals, and unlatched the door.

It slammed open. Pages from the op manual flew away, and a glove went tumbling gaily across the surface, chasing the pink fuzzy-dice that Eurydice had given him that last night in Sweden. A handful of wheat biscuits in an open tin on the dash turned to powder and were gone, drawing the tin after them. Explosive decompression. He’d forgotten to depressurize. Gunther froze in dismayed astonishment at having made so basic—so dangerous—a mistake.

Then he was on the surface, head tilted back, staring up at the sun. It was angry with sunspots, and one enormous and unpredicted solar flare.

I’m going to die, he thought.

For a long, paralyzing instant, he tasted the chill certainty of that thought.

He was going to die. He knew that for a fact, knew it more surely than he had ever known anything before.

In his mind, he could see Death sweeping across the lunar plain toward him. Death was a black wall, featureless, that stretched to infinity in every direction. It sliced the universe in half. On this side were life, warmth, craters and flowers, dreams, mining robots, thought, everything that Gunther knew or could imagine. On the other side . . . Something? Nothing? The wall gave no hint. It was unreadable, enigmatic, absolute. But it was bearing down on him. It was so close now that he could almost reach out and touch it. Soon it would be here. He would pass through, and then he would know.

With a start he broke free of that thought, and jumped for the cab. He scrabbled up its side. His trance chip hissing, rattling, and crackling, he yanked the magnetic straps holding Siegfried in place, grabbed the spool and control pad, and jumped over the edge.

He landed jarringly, fell to his knees, and rolled under the trailer. There was enough shielding wrapped around the fuel rods to stop any amount of hard radiation—no matter what its source. It would shelter him as well from the sun as from his cargo. The trance chip fell silent, and he felt his jaws relaxing from a clenched tension.

Safe.

It was dark beneath the trailer, and he had time to think. Even kicking his rebreather up to full, and offlining all his suit peripherals, he didn't have enough oxygen to sit out the storm. So okay. He had to get to a shelter. Weisskopf was closest, only fifteen kilometers away and there was a shelter in the G5 assembly plant there. That would be his goal.

Working by feel, he found the steel supporting struts, and used Siegfried's magnetic straps to attach himself to the underside of the trailer. It was clumsy, difficult work, but at last he hung face-down over the road. He fingered the walker's controls, and sat Siegfried up.

Twelve excruciating minutes later, he finally managed to get Siegfried down from the roof unbroken. The interior wasn't intended to hold anything half so big. To get the walker in he had first to cut the door free, and then rip the chair out of the cab. Discarding both items by the roadside, he squeezed Siegfried in. The walker bent over double, reconfigured,

reconfigured again, and finally managed to fit itself into the space. Gently, delicately, Siegfried took the controls and shifted into first.

With a bump, the truck started to move.

It was a hellish trip. The truck, never fast to begin with, wallowed down the road like a cast-iron pig. Siegfried's optics were bent over the controls, and couldn't be raised without jerking the walker's hands free. He couldn't look ahead without stopping the truck first.

He navigated by watching the road pass under him. To a crude degree he could align the truck with the treadmarks scrolling by. Whenever he wandered off the track, he worked Siegfried's hand controls to veer the truck back, so that it drifted slowly from side to side, zig-zagging its way down the road.

Shadows bumping and leaping, the road flowed toward Gunther with dangerous monotony. He jiggled and vibrated in his makeshift sling. After a while his neck hurt with the effort of holding his head back to watch the glaring road disappearing into shadow by the front axle, and his eyes ached from the crawling repetitiveness of what they saw.

The truck kicked up dust in passing, and the smaller particles carried enough of a static charge to cling to his suit. At irregular intervals he swiped at the fine grey film on his visor with his glove, smearing it into long, thin streaks.

He began to hallucinate. They were mild visuals, oblong patches of colored light that moved in his vision and went away when he shook his head and firmly closed his eyes for a concentrated moment. But every moment's release from the pressure of vision tempted him to keep his eyes closed longer, and that he could not afford to do.

It put him in mind of the last time he had seen his mother, and what she had said then. That the worst part of being a widow was that every day her life began anew, no better than the day before, the pain still fresh, her husband's absence a physical fact she was no closer to accepting than ever. It was like being dead, she said, in that nothing ever changed.

Ah God, he thought, this isn't worth doing. Then a rock the size of his head came bounding toward his helmet. Frantic hands jerked at the controls, and Siegfried skewed the truck wildly, so that the rock jumped away and missed him. Which put an end to that line of thought.

He cued his peecee. “Saint James Infirmary” came on. It didn’t help.

Come on, you bastard, he thought. You can do it. His arms and shoulders ached, and his back, too, when he gave it any thought. Perversely enough, one of his legs had gone to sleep. At the angle he had to hold his head to watch the road, his mouth tended to hang open. After a while, a quivering motion alerted him that a small puddle of saliva had gathered in the curve of his faceplate. He was drooling. He closed his mouth, swallowing back his spit, and stared forward. A minute later he found that he was doing it again.

Slowly, miserably, he drove toward Weisskopf.

• • • •

The G5 Weisskopf plant was typical of its kind: a white blister-dome to moderate temperature swings over the long lunar day, a microwave relay tower to bring in supervisory presence, and a hundred semiautonomous units to do the work.

Gunther overshot the access road, wheeled back to catch it, and ran the truck right up to the side of the factory. He had Siegfried switch off the engine, and then let the control pad fall to the ground. For well over a minute he simply hung there, eyes closed, savoring the end of motion. Then he kicked free of the straps, and crawled out from under the trailer.

Static skatting and stuttering inside his head, he stumbled into the factory.

In the muted light that filtered through the dome covering, the factory was dim as an undersea cavern. His helmet light seemed to distort as much as it illumined. Machines loomed closer in the center of its glare, swelling up as if seen through a fisheye lens. He turned it off, and waited for his eyes to adjust.

After a bit, he could see the robot assemblers, slender as ghosts, moving with unearthly delicacy. The flare storm had activated them. They swayed like seaweed, lightly out of sync with each other. Arms raised, they danced in time to random radio input.

On the assembly lines lay the remains of half-built robots, looking flayed and eviscerated. Their careful frettings of copper and silver nerves had been exposed to view and randomly operated upon. A long arm jointed down,

electric fire at its tip, and made a metal torso twitch.

They were blind mechanisms, most of them, powerful things bolted to the floor in assembly logic paths. But there were mobile units as well, overseers and jacks-of-all-trades, weaving drunkenly through the factory with sun-maddened eyes.

A sudden motion made Gunther turn just in time to see a metal puncher swivel toward him, slam down an enormous arm and put a hole in the floor by his feet. He felt the shock through his soles.

He danced back. The machine followed him, the diamond-tipped punch sliding nervously in and out of its sheath, its movements as trembling and dainty as a newborn colt's.

"Easy there, baby," Gunther whispered. To the far end of the factory, green arrows supergrafted on the crater wall pointed to an iron door. The shelter. Gunther backed away from the punch, edging into a service aisle between two rows of machines that rippled like grass in the wind.

The punch press rolled forward on its trundle. Then, confused by that field of motion, it stopped, hesitantly scanning the ranks of robots. Gunther froze.

At last, slowly, lumberingly, the metal puncher turned away.

Gunther ran. Static roared in his head. Grey shadows swam among the distant machines, like sharks, sometimes coming closer, sometimes receding. The static loudened. Up and down the factory, welding arcs winked on at the assembler tips, like tiny stars. Ducking, running, spinning, he reached the shelter and seized the airlock door. Even through his glove, the handle felt cold.

He turned it.

The airlock was small and round. He squeezed through the door and fit himself into the inadequate space within, making himself as small as possible. He yanked the door shut.

Darkness.

He switched his helmet lamp back on. The reflected glare slammed at his eyes, far too intense for such a confined area. Folded knees-to-chin into the roundness of the lock he felt a wry comradeship with Siegfried back in the truck.

The inner lock controls were simplicity itself. The door hinged inward,

so that air pressure held it shut. There was a yank bar which, when pulled, would bleed oxygen into the airlock. When pressure equalized, the inner door would open easily. He yanked the bar.

The floor vibrated as something heavy went by.

••••

The shelter was small, just large enough to hold a cot, a chemical toilet, and a rebreather with spare oxytanks. A single overhead unit provided light and heat. For comfort there was a blanket. For amusement, there were pocket-sized editions of the Bible and the Koran, placed there by impossibly distant missionary societies. Even empty, there was not much space in the shelter.

It wasn't empty.

A woman, frowning and holding up a protective hand, cringed from his helmet lamp. "Turn that thing off," she said.

He obeyed. In the soft light that ensued he saw: stark white flattop, pink scalp visible through the sides. High cheekbones. Eyelids lifted slightly, like wings, by carefully sculpted eye shadow. Dark lips, full mouth. He had to admire the character it took to make up a face so carefully, only to hide it beneath a helmet. Then he saw her red and orange Studio Volga suit.

It was Izmailova.

To cover his embarrassment, he took his time removing his gloves and helmet. Izmailova moved her own helmet from the cot to make room, and he sat down beside her. Extending a hand, he stiffly said, "We've met before. My name is—"

"I know. It's written on your suit."

"Oh yeah. Right."

For an uncomfortably long moment, neither spoke. At last Izmailova cleared her throat and briskly said, "This is ridiculous. There's no reason we should—"

CLANG.

Their heads jerked toward the door in unison. The sound was harsh, loud, metallic. Gunther slammed his helmet on, grabbed for his gloves. Izmailova, also suiting up as rapidly as she could, tensely subvocalized into

her trance chip: “What is it?”

Methodically snapping his wrist latches shut one by one, Gunther said, “I think it’s a metal punch.” Then, because the helmet muffled his words, he repeated them over the chip.

CLANG. This second time, they were waiting for the sound. Now there could be no doubt. Something was trying to break open the outer airlock door.

“A what?!”

“Might be a hammer of some type, or a blacksmith unit. Just be thankful it’s not a laser jig.” He held up his hands before him. “Give me a safety check.”

She turned his wrists one way, back, took his helmet in her hands and gave it a twist to test its seal. “You pass.” She held up her own wrists. “But what is it trying to do?”

Her gloves were sealed perfectly. One helmet dog had a bit of give in it, but not enough to breach integrity. He shrugged. “It’s deranged—it could want anything. It might even be trying to repair a weak hinge.”

CLANG.

“It’s trying to get in here!”

“That’s another possibility, yes.”

Izmailova’s voice rose slightly. “But even scrambled, there can’t possibly be any programs in its memory to make it do that. How can random input make it act this way?”

“It doesn’t work like that. You’re thinking of the kind of robotics they had when you were a kid. These units are state of the art: They don’t manipulate instructions, they manipulate concepts. See, that makes them more flexible. You don’t have to program in every little step when you want one to do something new. You just give it a goal—”

CLANG.

“—like, to Disassemble a Rotary Drill. It’s got a bank of available skills, like Cutting and Unbolting and Gross Manipulation, which it then fits together in various configurations until it has a path that will bring it to the goal.” He was talking for the sake of talking now, talking to keep himself from panic. “Which normally works out fine. But when one of these things malfunctions, it does so on the conceptual level. See? So that—”

“So that it decides we’re rotary drills that need to be disassembled.”

“Uh . . . yeah.”

CLANG.

“So what do we do when it gets in here?” They had both involuntarily risen to their feet, and stood facing the door. There was not much space, and what little there was they filled. Gunther was acutely aware that there was not enough room here to either fight or flee. “I don’t know about you,” he said, “but I’m going to hit that sucker over the head with the toilet.”

She turned to look at him.

CLA—The noise was cut in half by a breathy, whooshing explosion. Abrupt, total silence. “It’s through the outer door,” Gunther said flatly.

They waited.

Much later, Izmailova said, “Is it possible it’s gone away?”

“I don’t know.” Gunther undogged his helmet, knelt, and put an ear to the floor. The stone was almost painfully cold. “Maybe the explosion damaged it.” He could hear the faint vibrations of the assemblers, the heavier rumblings of machines roving the factory floor. None of it sounded close. He silently counted to a hundred. Nothing. He counted to a hundred again.

Finally he straightened. “It’s gone.”

They both sat down. Izmailova took off her helmet, and Gunther clumsily began undoing his gloves. He fumbled at the latches. “Look at me.” He laughed shakily. “I’m all thumbs. I can’t even handle this, I’m so unnerved.”

“Let me help you with that.” Izmailova flipped up the latches, tugged at his glove. It came free. “Where’s your other hand?”

Then, somehow, they were each removing the other’s suit, tugging at the latches, undoing the seals. They began slowly but sped up with each latch undogged, until they were yanking and pulling with frantic haste. Gunther opened up the front of Izmailova’s suit, revealing a red silk camisole. He slid his hands beneath it, and pushed the cloth up over her breasts. Her nipples were hard. He let her breasts fill his hands and squeezed.

Izmailova made a low, groaning sound in the back of her throat. She had Gunther’s suit open. Now she pushed down his leggings and reached within to seize his cock. He was already erect. She tugged it out and impatiently

shoved him down on the cot. Then she was kneeling on top of him, and guiding him inside her.

Her mouth met his, warm and moist.

Half in and half out of their suits, they made love. Gunther managed to struggle one arm free, and reached within Izmailova's suit to run a hand up her long back and over the back of her head. The short hairs of her buzz cut stung and tickled his palm.

She rode him roughly, her flesh slippery with sweat against his. "Are you coming yet?" she murmured. "Are you coming yet? Tell me when you're about to come." She bit his shoulder, the side of his neck, his chin, his lower lip. Her nails dug into his flesh.

"Now," he whispered. Possibly he only subvocalized it, and she caught it on her trance chip. But then she clutched him tighter than ever, as if she were trying to crack his ribs, and her whole body shuddered with orgasm. Then he came, too, riding her passion down into spiraling desperation, ecstasy, and release.

It was better than anything he had ever experienced before.

Afterward, they finally kicked free of their suits. They shoved and pushed the things off the cot. Gunther pulled the blanket out from beneath them, and with Izmailova's help wrapped it about the both of them. They lay together, relaxed, not speaking.

He listened to her breathe for a while. The noise was soft. When she turned her face toward him, he could feel it, a warm little tickle in the hollow of his throat. The smell of her permeated the room. This stranger beside him.

••••

Gunther felt weary, warm, at ease. "How long have you been here?" he asked. "Not here in the shelter, I mean, but . . ."

"Five days."

"That little." He smiled. "Welcome to the Moon, Ms. Izmailova."

"Ekatarina," she said sleepily. "Call me Ekatarina."

••••

Whooping, they soared high and south, over Herschel. The Ptolemaeus road bent and doubled below them, winding out of sight, always returning. “This is great!” Hiro crowed. “This is—I should’ve talked you into taking me out here a year ago.”

Gunther checked his bearings and throttled down, sinking eastward. The other two hoppers, slaved to his own, followed in tight formation. Two days had passed since the flare storm and Gunther, still on mandatory recoop, had promised to guide his friends into the highlands as soon as the surface advisory was dropped. “We’re coming in now. Better triplecheck your safety harnesses. You doing okay back there, Kreesh?”

“I am quite comfortable, yes.”

Then they were down on the Seething Bay Company landing pad.

Hiro was the second down and the first on the surface. He bounded about like a collie off its leash, chasing upslope and down, looking for new vantage points. “I can’t believe I’m here! I work out this way every day, but you know what? This is the first time I’ve actually been out here. Physically, I mean.”

“Watch your footing,” Gunther warned. “This isn’t like telepresence—if you break a leg, it’ll be up to Krishna and me to carry you out.”

“I trust you. Man, anybody who can get caught out in a flare storm, and end up nailing—”

“Hey, watch your language, okay?”

“Everybody’s heard the story. I mean, we all thought you were dead, and then they found the two of you asleep. They’ll be talking about it a hundred years from now.” Hiro was practically choking on his laughter. “You’re a legend!”

“Just give it a rest.” To change the subject, Gunther said, “I can’t believe you want to take a photo of this mess.” The Seething Bay operation was a strip mine. Robot bulldozers scooped up the regolith and fed it to a processing plant that rested on enormous skids. They were after the thorium here, and the output was small enough that it could be transported to the breeder reactor by hopper. There was no need for a railgun and the tailings were piled in artificial mountains in the wake of the factory.

“Don’t be ridiculous.” Hiro swept an arm southward, toward Ptolemaeus. “There!” The crater wall caught the sun, while the lowest parts

of the surrounding land were still in shadow. The gentle slopes seemed to tower; the crater itself was a cathedral, blazing white.

“Where is your camera?” Krishna asked.

“Don’t need one. I’ll just take the data down on my helmet.”

“I’m not too clear on this mosaic project of yours,” Gunther said.

“Explain to me one more time how it’s supposed to work.”

“Anya came up with it. She’s renting an assembler to cut hexagonal floor tiles in black, white, and fourteen intermediate shades of grey. I provide the pictures. We choose the one we like best, scan it in black and white, screen for values of intensity, and then have the assembler lay the floor, one tile per pixel. It’ll look great—come by tomorrow and see.”

“Yeah, I’ll do that.”

Chattering like a squirrel, Hiro led them away from the edge of the mine. They bounded westward, across the slope.

Krishna’s voice came over Gunther’s trance chip. It was an old ground-rat trick. The chips had an effective transmission radius of fifteen yards—you could turn off the radio and talk chip-to-chip, if you were close enough. “You sound troubled, my friend.”

He listened for a second carrier tone, heard nothing. Hiro was out of range. “It’s Izmailova. I sort of—”

“Fell in love with her.”

“How’d you know that?”

They were spaced out across the rising slope, Hiro in the lead. For a time neither spoke. There was a calm, confidential quality to that shared silence, like the anonymous stillness of the confessional. “Please don’t take this wrong,” Krishna said.

“Take what wrong?”

“Gunther, if you take two sexually compatible people, place them in close proximity, isolate them, and scare the hell out of them, they will fall in love. That’s a given. It’s a survival mechanism, something that was wired into your basic makeup long before you were born. When billions of years of evolution say it’s bonding time, your brain doesn’t have much choice but to obey.”

“Hey, come on over here!” Hiro cried over the radio. “You’ve got to see this.”

“We’re coming,” Gunther said. Then, over his chip, “You make me out to be one of Sally Chang’s machines.”

“In some ways, we are machines. That’s not so bad. We feel thirsty when we need water, adrenalin pumps into the bloodstream when we need an extra boost of aggressive energy. You can’t fight your own nature. What would be the point of it?”

“Yeah, but . . .”

“Is this great or what?” Hiro was clambering over a boulder field. “It just goes on and on. And look up there!” Upslope, they saw that what they were climbing over was the spillage from a narrow cleft entirely filled with boulders. They were huge, as big as hoppers, some of them large as prefab oxsheds. “Hey, Krishna, I been meaning to ask you—just what is it that you do out there at the Center?”

“I can’t talk about it.”

“Aw, come on.” Hiro lifted a rock the size of his head to his shoulder and shoved it away, like a shot-putter. The rock soared slowly, landed far downslope in a white explosion of dust. “You’re among friends here. You can trust us.”

Krishna shook his head. Sunlight flashed from the visor. “You don’t know what you’re asking.”

Hiro hoisted a second rock, bigger than the first. Gunther knew him in this mood, nasty-faced and grinning. “My point exactly. The two of us know zip about neurobiology. You could spend the next ten hours lecturing us, and we couldn’t catch enough to compromise security.” Another burst of dust.

“You don’t understand. The Center for Self-Replicating Technologies is here for a reason. The lab work could be done back on Earth for a fraction of what a lunar facility costs. Our sponsors only move projects here that they’re genuinely afraid of.”

“So what can you tell us about? Just the open stuff, the video magazine stuff. Nothing secret.”

“Well . . . okay.” Now it was Krishna’s turn. He picked up a small rock, wound up like a baseball player and threw. It dwindled and disappeared in the distance. A puff of white sprouted from the surface. “You know Sally Chang? She has just finished mapping the neurotransmitter functions.”

They waited. When Krishna added nothing further, Hiro dryly said, “Wow.”

“Details, Kreesh. Some of us aren’t so fast to see the universe in a grain of sand as you are.”

“It should be obvious. We’ve had a complete genetic map of the brain for almost a decade. Now add to that Sally Chang’s chemical map, and it’s analogous to being given the keys to the library. No, better than that. Imagine that you’ve spent your entire life within an enormous library filled with books in a language you neither read nor speak, and that you’ve just found the dictionary and a picture reader.”

“So what are you saying? That we’ll have complete understanding of how the brain operates?”

“We’ll have complete control over how the brain operates. With chemical therapy, it will be possible to make anyone think or feel anything we want. We will have an immediate cure for all nontraumatic mental illness. We’ll be able to fine-tune aggression, passion, creativity—bring them up, damp them down, it’ll be all the same. You can see why our sponsors are so afraid of what our research might produce.”

“Not really, no. The world could use more sanity,” Gunther said.

“I agree. But who defines sanity? Many governments consider political dissent grounds for mental incarceration. This would open the doors of the brain, allowing it to be examined from the outside. For the first time, it would be possible to discover unexpressed rebellion. Modes of thought could be outlawed. The potential for abuse is not inconsiderable.

“Consider also the military applications. This knowledge combined with some of the new nanoweaponry might produce a berserker gas, allowing you to turn the enemy’s armies upon their own populace. Or, easier, to throw them into a psychotic frenzy and let them turn on themselves. Cities could be pacified by rendering the citizenry catatonic. A secondary, internal reality could then be created, allowing the conqueror to use the masses as slave labor. The possibilities are endless.”

They digested this in silence. At last Hiro said, “Jeeze, Krishna, if that’s the open goods, what the hell kind of stuff do you have to hide?”

“I can’t tell you.”

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A minute later, Hiro was haring off again. At the foot of a nearby hill he found an immense boulder standing atilt on its small end. He danced about, trying to get good shots past it without catching his own footprints in them.

“So what’s the problem?” Krishna said over his chip.

“The problem is, I can’t arrange to see her. Ekatarina. I’ve left messages, but she won’t answer them. And you know how it is in Bootstrap—it takes a real effort to avoid somebody who wants to see you. But she’s managed it.”

Krishna said nothing.

“All I want to know is, just what’s going on here?”

“She’s avoiding you.”

“But why? I fell in love and she didn’t, is that what you’re telling me? I mean, is that a crock or what?”

“Without hearing her side of the story, I can’t really say how she feels. But the odds are excellent she fell every bit as hard as you did. The difference is that you think it’s a good idea, and she doesn’t. So of course she’s avoiding you. Contact would just make it more difficult for her to master her feelings for you.”

“Shit!”

An unexpected touch of wryness entered Krishna’s voice. “What do you want? A minute ago you were complaining that Sally Chang thinks you’re a machine. Now you’re unhappy that Izmailova thinks she’s not.”

“Hey, you guys! Come over here. I’ve found the perfect shot. You’ve got to see this.”

They turned to see Hiro waving at them from the hilltop. “I thought you were leaving,” Gunther grumbled. “You said you were sick of the Moon, and going away and never coming back. So how come you’re upgrading your digs all of a sudden?”

“That was yesterday! Today, I’m a pioneer, a builder of worlds, a founder of dynasties!”

“This is getting tedious. What does it take to get a straight answer out of you?”

Hiro bounded high and struck a pose, arms wide and a little ridiculous.

He staggered a bit on landing. “Anya and I are getting married!”

Gunther and Krishna looked at each other, blank visor to blank visor. Forcing enthusiasm into his voice, Gunther said, “Hey, no shit? Really! Congratu—”

A scream of static howled up from nowhere. Gunther winced and cut down the gain. “My stupid radio is—”

One of the other two—they had moved together and he couldn’t tell them apart at this distance—was pointing upward. Gunther tilted back his head, to look at the Earth. For a second he wasn’t sure what he was looking for. Then he saw it: a diamond pinprick of light in the middle of the night. It was like a small, bright hole in reality, somewhere in continental Asia. “What the hell is that?” he asked.

Softly, Hiro said, “I think it’s Vladivostok.”

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By the time they were back over the Sinus Medii, that first light had reddened and faded away, and two more had blossomed. The news jockey at the Observatory was working overtime splicing together reports from the major news feeds into a montage of rumor and fear. The radio was full of talk about hits on Seoul and Buenos Aires. Those seemed certain. Strikes against Panama, Iraq, Denver, and Cairo were disputed. A stealth missile had flown low over Hokkaido and been deflected into the Sea of Japan. The Swiss Orbitals had lost some factories to fragmentation satellites. There was no agreement as to the source aggressor, and though most suspicions trended in one direction, Tokyo denied everything.

Gunther was most impressed by the sound feed from a British video essayist, who said that it did not matter who had fired the first shot, or why. “Who shall we blame? The Southern Alliance, Tokyo, General Kim, or possibly some Grey terrorist group that nobody has ever heard of before? In a world whose weapons were wired to hair triggers, the question is irrelevant. When the first device exploded, it activated autonomous programs which launched what is officially labeled ‘a measured response.’ Gorshov himself could not have prevented it. His tactical programs chose this week’s three most likely aggressors—at least two of which were

certainly innocent—and launched a response. Human beings had no say over it.

“Those three nations in turn had their own reflexive ‘measured responses.’ The results of which we are just beginning to learn. Now we will pause for five days, while all concerned parties negotiate. How do we know this? Abstracts of all major defense programs are available on any public data net. They are no secret. Openness is in fact what deterrence is all about.

“We have five days to avert a war that literally nobody wants. The question is, in five days, can the military and political powers seize control of their own defense programming? Will they? Given the pain and anger involved, the traditional hatreds, national chauvinism, and the natural reactions of those who number loved ones among the already dead, can those in charge overcome their own natures in time to pull back from final and total war? Our best informed guess is no. No, they cannot.

“Good night, and may God have mercy on us all.”

They flew northward in silence. Even when the broadcast cut off in mid-word, nobody spoke. It was the end of the world, and there was nothing they could say that did not shrink to insignificance before that fact. They simply headed home.

The land about Bootstrap was dotted with graffiti, great block letters traced out in boulders: KARL OPS—EINDHOVEN '49 and LOUISE MCTIGHE ALBUQUERQUE N.M. An enormous eye in a pyramid. ARSENAL WORLD RUGBY CHAMPS with a crown over it. CORNPONE. Pi Lambda Phi. MOTORHEADS. A giant with a club. Coming down over them, Gunther reflected that they all referred to places and things in the world overhead, not a one of them indigenous to the Moon. What had always seemed pointless now struck him as unspeakably sad.

It was only a short walk from the hopper pad to the vacuum garage. They didn't bother to summon a jitney.

The garage seemed strangely unfamiliar to Gunther now, though he had passed through it a thousand times. It seemed to float in its own mystery, as if everything had been removed and replaced by its exact double, rendering it different and somehow unknowable. Row upon row of parked vehicles were slanted by type within painted lines. Ceiling lights strained to reach the

floor, and could not.

“Boy, is this place still!” Hiro’s voice seemed unnaturally loud.

It was true. In all the cavernous reaches of the garage, not a single remote or robot service unit stirred. Not so much as a pressure leak sniffer moved.

“Must be because of the news,” Gunther muttered. He found he was not ready to speak of the war directly. To the back of the garage, five airlocks stood all in a row. Above them a warm, yellow strip of window shone in the rock. In the room beyond, he could see the overseer moving about.

Hiro waved an arm, and the small figure within leaned forward to wave back. They trudged to the nearest lock and waited.

Nothing happened.

After a few minutes, they stepped back and away from the lock to peer up through the window. The overseer was still there, moving unhurriedly. “Hey!” Hiro shouted over open frequency. “You up there! Are you on the job?”

The man smiled, nodded, and waved again.

“Then open the goddamned door!” Hiro strode forward, and with a final, nodding wave, the overseer bent over his controls.

“Uh, Hiro,” Gunther said, “There’s something odd about . . .”

The door exploded open.

It slammed open so hard and fast the door was half torn off its hinges. The air within blasted out like a charge from a cannon. For a moment the garage was filled with loose tools, parts of vacuum suits and shreds of cloth. A wrench struck Gunther a glancing blow on his arm, spinning him around and knocking him to the floor.

He stared up in shock. Bits and pieces of things hung suspended for a long, surreal instant. Then, the air fled, they began to slowly shower down. He got up awkwardly, massaging his arm through the suit. “Hiro, are you all right? Kreesh?”

“Oh my God,” Krishna said.

Gunther spun around. He saw Krishna crouched in the shadow of a flatbed, over something that could not possibly be Hiro, because it bent the wrong way. He walked through shimmering unreality and knelt beside Krishna. He stared down at Hiro’s corpse.

Hiro had been standing directly before the door when the overseer opened the door without depressurizing the corridor within first. He had caught the blast straight on. It had lifted him and smashed him against the side of a flatbed, snapping his spine and shattering his helmet visor with the backlash. He must have died instantaneously.

“Who’s there?” a woman said.

A jitney had entered the garage without Gunther’s noticing it. He looked up in time to see a second enter, and then a third. People began piling out. Soon there were some twenty individuals advancing across the garage. They broke into two groups. One headed straight toward the locks and the smaller group advanced on Gunther and his friends. It looked for all the world like a military operation. “Who’s there?” the woman repeated.

Gunther lifted his friend’s corpse in his arms and stood. “It’s Hiro,” he said flatly. “Hiro.”

They floated forward cautiously, a semicircle of blank-visored suits like so many kachinas. He could make out the corporate logos. Mitsubishi. Westinghouse. Holst Orbital. Izmailova’s red-and-orange suit was among them, and a vivid Mondrian pattern he didn’t recognize. The woman spoke again, tensely, warily. “Tell me how you’re feeling, Hiro.”

It was Beth Hamilton.

“That’s not Hiro,” Krishna said. “It’s Gunther. That’s Hiro. That he’s carrying. We were out in the highlands and—” His voice cracked and collapsed in confusion.

“Is that you, Krishna?” someone asked. “There’s a touch of luck. Send him up front, we’re going to need him when we get in.” Somebody else slapped an arm over Krishna’s shoulders and led him away.

Over the radio, a clear voice spoke to the overseer. “Dmitri, is that you? It’s Signe. You remember me, don’t you, Dmitri? Signe Ohmstede. I’m your friend.”

“Sure I remember you, Signe. I remember you. How could I ever forget my friend? Sure I do.”

“Oh, good. I’m so happy. Listen carefully, Dmitri. Everything’s fine.”

Indignantly, Gunther chinned his radio to send. “The hell it is! That fool up there—!”

A burly man in a Westinghouse suit grabbed Gunther’s bad arm and

shook him. “Shut the fuck up!” he growled. “This is serious, damn you. We don’t have the time to baby you.”

Hamilton shoved between them. “For God’s sake, Posner, he’s just seen —” She stopped. “Let me take care of him. I’ll get him calmed down. Just give us half an hour, okay?”

The others traded glances, nodded, and turned away.

To Gunther’s surprise, Ekatarina spoke over his trance chip. “I’m sorry, Gunther,” she murmured. Then she was gone.

He was still holding Hiro’s corpse. He found himself staring down at his friend’s ruined face. The flesh was bruised and as puffy-looking as an overboiled hot dog. He couldn’t look away.

“Come on.” Beth gave him a little shove to get him going. “Put the body in the back of that pick-up and give us a drive out to the cliff.”

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At Hamilton’s insistence, Gunther drove. He found it helped, having something to do. Hands afloat on the steering wheel, he stared ahead looking for the Mausoleum road cut-off. His eyes felt scratchy, and inhumanly dry.

“There was a preemptive strike against us,” Hamilton said. “Sabotage. We’re just now starting to put the pieces together. Nobody knew you were out on the surface or we would’ve sent somebody out to meet you. It’s all been something of a shambles here.”

He drove on in silence, cushioned and protected by all those miles of hard vacuum wrapped about him. He could feel the presence of Hiro’s corpse in the back of the truck, a constant psychic itch between his shoulder blades. But so long as he didn’t speak, he was safe; he could hold himself aloof from the universe that held the pain. It couldn’t touch him. He waited, but Beth didn’t add anything to what she’d already said.

Finally he said, “Sabotage?”

“A software meltdown at the radio station. Explosions at all the railguns. Three guys from Microspacecraft Applications bought it when the Boitsovij Kot railgun blew. I suppose it was inevitable. All the military industry up here, it’s not surprising somebody would want to knock us out of the

equation. But that's not all. Something's happened to the people in Bootstrap. Something really horrible. I was out at the Observatory when it happened. The newsjay called back to see if there was any backup software to get the station going again, and she got nothing but gibberish. Crazy stuff. I mean, really crazy. We had to disconnect the Observatory's remotes, because the operators were . . ." She was crying now, softly and insistently, and it was a minute before she could speak again. "Some sort of biological weapon. That's all we know."

"We're here."

As he pulled up to the foot of the Mausoleum cliff, it occurred to Gunther that they hadn't thought to bring a drilling rig. Then he counted ten black niches in the rockface, and realized that somebody had been thinking ahead.

"The only people who weren't hit were those who were working at the Center or the Observatory, or out on the surface. Maybe a hundred of us all told."

They walked around to the back of the pick-up. Gunther waited, but Hamilton didn't offer to carry the body. For some reason that made him feel angry and resentful. He unlatched the gate, hopped up on the treads, and hoisted the suited corpse. "Let's get this over with."

Before today, only six people had ever died on the Moon. They walked past the caves in which their bodies awaited eternity. Gunther knew their names by heart: Heisse, Yasuda, Spehalski, Dubinin, Mikami, Castillo. And now Hiro. It seemed incomprehensible that the day should ever come when there would be too many dead to know them all by name.

Daisies and tiger lilies had been scattered before the vaults in such profusion that he couldn't help crushing some underfoot.

They entered the first empty niche, and he laid Hiro down upon a stone table cut into the rock. In the halo of his helmet lamp, the body looked piteously twisted and uncomfortable. Gunther found that he was crying, large hot tears that crawled down his face and got into his mouth when he inhaled. He cut off the radio until he had managed to blink the tears away. "Shit." He wiped a hand across his helmet. "I suppose we ought to say something."

Hamilton took his hand and squeezed.

“I’ve never seen him as happy as he was today. He was going to get married. He was jumping around, laughing and talking about raising a family. And now he’s dead, and I don’t even know what his religion was.” A thought occurred to him, and he turned helplessly toward Hamilton. “What are we going to tell Anya?”

“She’s got problems of her own. Come on, say a prayer and let’s go. You’ll run out of oxygen.”

“Yeah, okay.” He bowed his head. “*The Lord is my shepherd, I shall not want . . .*”

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Back at Bootstrap, the surface party had seized the airlocks and led the overseer away from the controls. The man from Westinghouse, Posner, looked down on them from the observation window. “Don’t crack your suits,” he warned. “Keep them sealed tight at all times. Whatever hit the bastards here is still around. Might be in the water, might be in the air. One whiff and you’re out of here! You got that?”

“Yeah, yeah,” Gunther grumbled. “Keep your shirt on.”

Posner’s hand froze on the controls. “Let’s get serious here. I’m not letting you in until you acknowledge the gravity of the situation. This isn’t a picnic outing. If you’re not prepared to help, we don’t need you. Is that understood?”

“We understand completely, and we’ll cooperate to the fullest,” Hamilton said quickly. “Won’t we, Weil?”

He nodded miserably.

Only the one lock had been breached, and there were five more sets of pressurized doors between it and the bulk of Bootstrap’s air. The city’s designers had been cautious.

Overseen by Posner, they passed through the corridors, locks, and changing rooms and up the cargo escalators. Finally they emerged into the city interior.

They stood blinking on the lip of Hell.

At first, it was impossible to pinpoint any source for the pervasive sense of wrongness nattering at the edge of consciousness. The parks were dotted

with people, the fill lights at the juncture of crater walls and canopy were bright, and the waterfalls still fell gracefully from terrace to terrace. Button quail bobbed comically in the grass.

Then small details intruded. A man staggered about the fourth level, head jerking, arms waving stiffly. A plump woman waddled by, pulling an empty cart made from a wheeled microfactory stand, quacking like a duck. Someone sat in the knee-high forest by Noguchi Park, tearing out the trees one by one.

But it was the still figures that were on examination more profoundly disturbing. Here a man lay half in and half out of a tunnel entrance, as unselfconscious as a dog. There, three women stood in extreme postures of lassitude, bordering on despair. Everywhere, people did not touch or speak or show in any way that they were aware of one other. They shared an absolute and universal isolation.

“What shall we—” Something slammed onto Gunther’s back. He was knocked forward, off his feet. Tumbling, he became aware that fists were striking him, again and again, and then that a lean man was kneeling atop his chest, hysterically shouting, “Don’t do it! Don’t do it!”

Hamilton seized the man’s shoulders, and pulled him away. Gunther got to his knees. He looked into the face of madness: eyes round and fearful, expression full of panic. The man was terrified of Gunther.

With an abrupt wrench, the man broke free. He ran as if pursued by demons. Hamilton stared after him. “You okay?” she asked.

“Yeah, sure.” Gunther adjusted his tool harness. “Let’s see if we can find the others.”

They walked toward the lake, staring about at the self-absorbed figures scattered about the grass. Nobody attempted to speak to them. A woman ran by, barefooted. Her arms were filled with flowers. “Hey!” Hamilton called after her. She smiled fleetingly over her shoulder, but did not slow. Gunther knew her vaguely, an executive supervisor for Martin Marietta.

“Is everybody here crazy?” he asked.

“Sure looks that way.”

The woman had reached the shore and was flinging the blossoms into the water with great sweeps of her arm. They littered the surface.

“Damned waste.” Gunther had come to Bootstrap before the flowers; he

knew the effort involved getting permission to plant them and rewriting the city's ecologies. A man in a blue-striped Krupp suit was running along the verge of the lake.

The woman, flowers gone, threw herself into the water.

At first it appeared she'd suddenly decided to take a dip. But from the struggling, floundering way she thrashed deeper into the water it was clear that she could not swim.

In the time it took Gunther to realize this, Hamilton had leaped forward, running for the lake. Belatedly, he started after her. But the man in the Krupp suit was ahead of them both. He splashed in after the woman. An outstretched hand seized her shoulder and then he fell, pulling her under. She was red-faced and choking when he emerged again, arm across her chest.

By then Gunther and Beth were wading into the lake, and together they three got the woman to shore. When she was released, the woman calmly turned and walked away, as if nothing had happened.

"Gone for more flowers," the Krupp component explained. "This is the third time fair Ophelia there's tried to drown herself. She's not the only one. I've been hanging around, hauling 'em out when they stumble in."

"Do you know where everybody else is? Is there anyone in charge? Somebody giving out orders?"

"Do you need any help?" Gunther asked.

The Krupp man shrugged. "I'm fine. No idea where the others are, though. My friends were going on to the second level when I decided I ought to stay here. If you see them, you might tell 'em I'd appreciate hearing back from them. Three guys in Krupp suits."

"We'll do that," Gunther said.

Hamilton was already walking away.

On a step just beneath the top of the stairs sprawled one of Gunther's fellow G5 components. "Sidney," he said carefully. "How's it going?"

Sidney giggled. "I'm making the effort, if that's what you mean. I don't see that the 'how' of it makes much difference."

"Okay."

"A better way of phrasing that might be to ask why I'm not at work." He stood, and in a very natural manner accompanied Gunther up the steps.

“Obviously I can’t be two places at once. You wouldn’t want to perform major surgery in your own absence, would you?” He giggled again. “It’s an oxymoron. Like horses: those classically beautiful Praxitelesian bodies excreting these long surreal turds.”

“Okay.”

“I’ve always admired them for squeezing so much art into a single image.”

“Sidney,” Hamilton said. “We’re looking for our friends. Three people in blue-striped work suits.”

“I’ve seen them. I know just where they went.” His eyes were cool and vacant; they didn’t seem to focus on anything in particular.

“Can you lead us to them?”

“Even a flower recognizes its own face.” A gracefully winding gravel path led through private garden plots and croquet malls. They followed him down it.

There were not many people on the second terrace; with the fall of madness, most seemed to have retreated into the caves. Those few who remained either ignored or cringed away from them. Gunther found himself staring obsessively into their faces, trying to analyze the deficiency he felt in each. Fear nested in their eyes, and the appalled awareness that some terrible thing had happened to them coupled with a complete ignorance of its nature.

“God, these people!”

Hamilton grunted.

He felt he was walking through a dream. Sounds were muted by his suit, and colors less intense seen through his helmet visor. It was as if he had been subtly removed from the world, there and not-there simultaneously, an impression that strengthened with each new face that looked straight through him with mad, unseeing indifference.

Sidney turned a corner, broke into a trot and jogged into a tunnel entrance. Gunther ran after him. At the mouth of the tunnel, he paused to let his helmet adjust to the new light levels. When it cleared he saw Sidney dart down a side passage. He followed.

At the intersection of passages, he looked and saw no trace of their guide. Sidney had disappeared. “Did you see which way he went?” he asked

Hamilton over the radio. There was no answer. “Beth?”

He started down the corridor, halted, and turned back. These things went deep. He could wander around in them forever. He went back out to the terraces. Hamilton was nowhere to be seen.

For lack of any better plan, he followed the path. Just beyond an ornamental holly bush he was pulled up short by a vision straight out of William Blake.

The man had discarded shirt and sandals, and wore only a pair of shorts. He squatted atop a boulder, alert, patient, eating a tomato. A steel pipe slanted across his knees like a staff or scepter, and he had woven a crown of sorts from platinum wire with a fortune’s worth of hyperconductor chips dangling over his forehead. He looked every inch a kingly animal.

He stared at Gunther, calm and unblinking.

Gunther shivered. The man seemed less human than anthropoid, crafty in its way, but unthinking. He felt as if he were staring across the eons at Grandfather Ape, crouched on the edge of awareness. An involuntary thrill of superstitious awe seized him. Was this what happened when the higher mental functions were scraped away? Did Archetype lie just beneath the skin, waiting for the opportunity to emerge?

“I’m looking for my friend,” he said. “A woman in a G5 suit like mine? Have you seen her? She was looking for three—” He stopped. The man was staring at him blankly. “Oh, never mind.”

He turned away and walked on.

After a time, he lost all sense of continuity. Existence fragmented into unconnected images: A man bent almost double, leering and squeezing a yellow rubber duckie. A woman leaping up like a jack-in-the-box from behind an air monitor, shrieking and flapping her arms. An old friend sprawled on the ground, crying, with a broken leg. When he tried to help her, she scabbled away from him in fear. He couldn’t get near to her without doing more harm. “Stay here,” he said, “I’ll find help.” Five minutes later he realized that he was lost, with no slightest notion of how to find his way back to her again. He came to the stairs leading back down to the bottom level. There was no reason to go down them. There was no reason not to. He went down.

He had just reached the bottom of the stairs when someone in a lavender

boutique suit hurried by.

Gunther chinned on his helmet radio.

“Hello!” The lavender suit glanced back at him, its visor a plate of obsidian, but did not turn back. “Do you know where everyone’s gone? I’m totally lost. How can I find out what I should be doing?” The lavender suit ducked into a tunnel.

Faintly, a voice answered, “Try the city manager’s office.”

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The city manager’s office was a tight little cubby an eighth of a kilometer deep within the tangled maze of administrative and service tunnels. It had never been very important in the scheme of things. The city manager’s prime duties were keeping the air and water replenished and scheduling airlock inspections, functions any computer could handle better than a man, had they dared trust them to a machine. The room had probably never been as crowded as it was now. Dozens of people suited for full vacuum spilled out into the hall, anxiously listening to Ekatarina confer with the city’s Crisis Management Program. Gunther pushed in as close as he could; even so, he could barely see her.

“—the locks, the farms and utilities, and we’ve locked away all the remotes. What comes next?”

Ekatarina’s peecee hung from her work harness, amplifying the CMP’s silent voice. “Now that elementary control has been established, second priority must go to the industrial sector. The factories must be locked down. The reactors must be put to sleep. There is not sufficient human supervisory presence to keep them running. The factories have mothballing programs available upon request.

“Third, the farms cannot tolerate neglect. Fifteen minutes without oxygen, and all the tilapia will die. The calamari are even more delicate. Three experienced agricultural components must be assigned immediately. Double that number, if you only have inexperienced components. Advisory software is available. What are your resources?”

“Let me get back to you on that. What else?”

“What about the people?” a man asked belligerently. “What the hell are

you worrying about factories for, when our people are in the state they're in?"

Izmailova looked up sharply. "You're one of Chang's research components, aren't you? Why are you here? Isn't there enough for you to do?" She looked about, as if abruptly awakened from sleep. "All of you! What are you waiting for?"

"You can't put us off that easily! Who made you the little brass-plated general? We don't have to take orders from you."

The bystanders shuffled uncomfortably, not leaving, waiting to take their cue from each other. Their suits were as good as identical in this crush, their helmets blank and expressionless. They looked like so many ambulatory eggs.

The crowd's mood balanced on the instant, ready to fall into acceptance or anger with a featherweight's push. Gunther raised an arm. "General!" he said loudly. "Private Weil here! I'm awaiting my orders. Tell me what to do."

Laughter rippled through the room, and the tension eased. Ekatarina said, "Take whoever's nearest you, and start clearing the afflicted out of the administrative areas. Guide them out toward the open, where they won't be so likely to hurt themselves. Whenever you get a room or corridor emptied, lock it up tight. Got that?"

"Yes, ma'am." He tapped the suit nearest him, and its helmet dipped in a curt nod. But when they turned to leave, their way was blocked by the crush of bodies.

"You!" Ekatarina jabbed a finger. "Go to the farmlocks and foam them shut; I don't want any chance of getting them contaminated. Anyone with experience running factories—that's most of us, I think—should find a remote and get to work shutting the things down. The CMP will help direct you. If you have nothing else to do, buddy up and work at clearing out the corridors. I'll call a general meeting when we've put together a more comprehensive plan of action." She paused. "What have I left out?"

Surprisingly, the CMP answered her: "There are twenty-three children in the city, two of them seven-year-old prelegals and the rest five years of age or younger, offspring of registered-permanent lunar components. Standing directives are that children be given special care and protection. The third-

level chapel can be converted to a care center. Word should be spread that as they are found, the children are to be brought there. Assign one reliable individual to oversee them.”

“My God, yes.” She turned to the belligerent man from the Center, and snapped, “Do it.”

He hesitated, then saluted ironically and turned to go.

That broke the logjam. The crowd began to disperse. Gunther and his co-worker—it turned out to be Liza Nagenda, another ground-rat like himself—set to work.

• • • •

In after years, Gunther was to remember this period as a time when his life entered a dark tunnel. For long, nightmarish hours, he and Liza shuffled from office to storage room, struggling to move the afflicted out of the corporate areas and into the light.

The afflicted did not cooperate.

The first few rooms they entered were empty. In the fourth, a distraught-looking woman was furiously going through drawers and files and flinging their contents away. Trash covered the floor. “It’s in here somewhere, it’s in here somewhere,” she said frantically.

“What’s in there, darling?” Gunther said soothingly. He had to speak loudly so he could be heard through his helmet. “What are you looking for?”

She tilted her head up with a smile of impish delight. Using both hands, she smoothed back her hair, elbows high, pushing it straight over her skull, then tucking in stray strands behind her ears. “It doesn’t matter, because I’m sure to find it now. Two scarabs appear, and between them the blazing disk of the sun, that’s a good omen, not to mention being an analogy for sex. I’ve had sex, all the sex anyone could want, bugged behind the outhouse by the lizard king when I was nine. What did I care? I had wings then and thought that I could fly.”

Gunther edged a little closer. “You’re not making any sense at all.”

“You know, Tolstoy said there was a green stick in the woods behind his house that, once found, would cause all men to love one another. I believe

in that green stick as a basic principle of physical existence. The universe exists in a matrix of four dimensions which we can perceive and seven which we cannot, which is why we experience peace and brotherhood as a seven-dimensional greenstick phenomenon.”

“You’ve got to listen to me.”

“Why? You gonna tell me Hitler is dead? I don’t believe in that kind of crap.”

“Oh hell,” Nagenda said. “You can’t reason with a flick. Just grab her arms and we’ll chuck her out.”

It wasn’t that easy, though. The woman was afraid of them. Whenever they approached her, she slipped fearfully away.

If they moved slowly, they could not corner her, and when they both rushed her, she leaped up over a desk and then down into the knee-hole. Nagenda grabbed her legs and pulled. The woman wailed, and clutched at the knees of her suit. “Get offa me,” Liza snarled. “Gunther, get this crazy woman off my damn legs.”

“Don’t kill me!” the woman screamed. “I’ve always voted twice—you know I did. I told them you were a gangster, but I was wrong. Don’t take the oxygen out of my lungs!””

They got the woman out of the office, then lost her again when Gunther turned to lock the door. She went fluttering down the corridor with Nagenda in hot pursuit. Then she dove into another office, and they had to start all over again.

It took over an hour to drive the woman from the corridors and release her into the park. The next three went quickly enough by contrast. The one after that was difficult again, and the fifth turned out to be the first woman they had encountered, wandered back to look for her office. When they’d brought her to the open again, Liza Nagenda said, “That’s four flicks down and three thousand, eight hundred fifty-eight to go.”

“Look—” Gunther began. And then Krishna’s voice sounded over his trance chip, stiffly and with exaggerated clarity. “Everyone is to go to the central lake immediately for an organizational meeting. Repeat: Go to the lake immediately. Go to the lake now.” He was obviously speaking over a jury-rigged transmitter. The sound was bad and his voice boomed and popped on the chip.

“All right, okay, I got that,” Liza said. “You can shut up now.”

“Please go to the lake immediately. Everyone is to go directly to the central—”

“Sheesh.”

By the time they got out to the parklands again, the open areas were thick with people. Not just the suited figures of the survivors, either. All the afflicted were emerging from the caves and corridors of Bootstrap. They walked blindly, uncertainly, toward the lake, as if newly called from the grave. The ground level was filling with people.

“Sonofabitch,” Gunther said wonderingly.

“Gunther?” Nagenda asked. “What’s going on?”

“It’s the trance chips! Sonofabitch, all we had to do was speak to them over the chips. They’ll do whatever the voice in their heads tells them to do.”

The land about the lake was so crowded that Gunther had trouble spotting any other suits.

Then he saw a suited figure standing on the edge of the second level waving broadly. He waved back and headed for the stairs.

By the time he got to level two, a solid group of the unafflicted had gathered. More and more came up, drawn by the concentration of suits. Finally Ekatarina spoke over the open channel of her suit radio.

“There’s no reason to wait for us all to gather. I think everyone is close enough to hear me. Sit down, take a little rest, you’ve all earned it.” People eased down on the grass. Some sprawled on their backs or stomachs, fully suited. Most just sat.

“By a fortunate accident, we’ve discovered a means of controlling our afflicted friends.” There was light applause. “But there are still many problems before us, and they won’t all be solved so easily. We’ve all seen the obvious. Now I must tell you of worse. If the war on Earth goes full thermonuclear, we will be completely and totally cut off, possibly for decades.”

A murmur passed through the crowd.

“What does this mean? Beyond the immediate inconveniences—no luxuries, no more silk shirts, no new seed stock, no new videos, no way home for those of us who hadn’t already decided to stay—we will be losing

much that we require for survival. All our microfacturing capability comes from the Swiss Orbitals. Our water reserves are sufficient for a year, but we lose minute quantities of water vapor to rust and corrosion and to the vacuum every time somebody goes in or out an airlock, and those quantities are necessary for our existence.

“But we can survive. We can process raw hydrogen and oxygen from the regolith, and burn them to produce water. We already make our own air. We can do without most nanoelectronics. We can thrive and prosper and grow, even if Earth . . . even if the worst happens. But to do so we’ll need our full manufacturing capability, and full supervisory capability as well. We must not only restore our factories, but find a way to restore our people. There’ll be work and more for all of us in the days ahead.”

Nagenda touched helmets with Gunther and muttered, “What a crock.”

“Come on, I want to hear this.”

“Fortunately, the Crisis Management Program has contingency plans for exactly this situation. According to its records, which may be incomplete, I have more military command experience than any other functional. Does anyone wish to challenge this?” She waited, but nobody said anything. “We will go to a quasimilitary structure for the duration of the emergency. This is strictly for organizational purposes. There will be no privileges afforded the officers, and the military structure will be dismantled immediately upon resolution of our present problems. That’s paramount.”

She glanced down at her peecee. “To that purpose, I am establishing beneath me a triumvirate of subordinate officers, consisting of Carlos Diaz-Rodrigues, Miiko Ezumi, and Will Posner. Beneath them will be nine officers, each responsible for a cadre of no more than ten individuals.”

She read out names. Gunther was assigned to Cadre Four, Beth Hamilton’s group. Then Ekatarina said, “We’re all tired. The gang back at the Center have rigged up a decontamination procedure, a kitchen, and sleeping spaces of sorts. Cadres One, Two, and Three will put in four more hours here, then pull down a full eight hours sleep. Cadres Four through Nine may return now to the Center for a meal and four hours rest.” She stopped. “That’s it. Go get some shut-eye.”

A ragged cheer arose, fell flat and died. Gunther stood. Liza Nagenda gave him a friendly squeeze on the butt and when he started to the right

yanked his arm and pointed him left, toward the service escalators. With easy familiarity, she slid an arm around his waist.

He'd known guys who'd slept with Liza Nagenda, and they all agreed that she was bad news, possessive, hysterical, ludicrously emotional. But what the hell. It was easier than not.

They trudged off.

••••

There was too much to do. They worked to exhaustion—it was not enough. They rigged a system of narrow-band radio transmissions for the CMP and ran a microwave patch back to the Center, so it could direct their efforts more efficiently—it was not enough. They organized and rearranged constantly. But the load was too great and accidents inevitably happened.

Half the surviving railguns—small units used to deliver raw and semiprocessed materials over the highlands and across the bay—were badly damaged when the noonday sun buckled their aluminum rails; the sunscreens had not been put in place in time. An unknown number of robot bulldozers had wandered off from the strip mines and were presumably lost. It was hard to guess how many because the inventory records were scrambled. None of the food stored in Bootstrap could be trusted; the Center's meals had to be harvested direct from the farms and taken out through the emergency locks. An inexperienced farmer mishandled her remote, and ten aquaculture tanks boiled out into vacuum, geysering nine thousand fingerlings across the surface. On Posner's orders, the remote handler rigs were hastily packed and moved to the Center. When uncrated, most were found to have damaged rocker arms.

There were small victories. On his second shift, Gunther found fourteen bales of cotton in vacuum storage and set an assembler to sewing futons for the Center. That meant an end to sleeping on bare floors and made him a local hero for the rest of that day. There were not enough toilets in the Center; Diaz-Rodrigues ordered the flare storm shelters in the factories stripped of theirs. Huriel Garza discovered a talent for cooking with limited resources.

But they were losing ground. The afflicted were unpredictable, and they

were everywhere. A demented systems analyst, obeying the voices in his head, dumped several barrels of lubricating oil in the lake. The water filters clogged, and the streams had to be shut down for repairs. A doctor somehow managed to strangle herself with her own diagnostic harness. The city's ecologies were badly stressed by random vandalism.

Finally somebody thought to rig up a voice loop for continuous transmission. "I am calm," it said. "I am tranquil. I do not want to do anything. I am happy where I am."

Gunther was working with Liza Nagenda trying to get the streams going again when the loop came on. He looked up and saw an uncanny quiet spread over Bootstrap. Up and down the terraces, the flicks stood in postures of complete and utter impassivity. The only movement came from the small number of suits scurrying like beetles among the newly catatonic.

Liza put her hands on her hips. "Terrific. Now we've got to *feed* them."

"Hey, cut me some slack, okay? This is the first good news I've heard since I don't know when."

"It's not good anything, sweetbuns. It's just more of the same."

She was right. Relieved as he was, Gunther knew it. One hopeless task had been traded for another.

••••

He was wearily suiting up for his third day when Hamilton stopped him and said, "Weil! You know any electrical engineering?"

"Not really, no. I mean, I can do the wiring for a truck, or maybe rig up a microwave relay, stuff like that, but . . ."

"It'll have to do. Drop what you're on, and help Krishna set up a system for controlling the flicks. Some way we can handle them individually."

They set up shop in Krishna's old lab. The remnants of old security standards still lingered, and nobody had been allowed to sleep there. Consequently, the room was wonderfully neat and clean, all crafted-in-orbit laboratory equipment with smooth, anonymous surfaces. It was a throwback to a time before clutter and madness had taken over. If it weren't for the new-tunnel smell, the raw tang of cut rock the air carried, it would be possible to pretend nothing had happened.

Gunther stood in a telepresence rig, directing a remote through Bootstrap's apartments. They were like so many unconnected cells of chaos. He entered one and found the words BUDDHA = COSMIC INERTIA scrawled on its wall with what looked to be human feces. A woman sat on the futon tearing handfuls of batting from it and flinging them in the air. Cotton covered the room like a fresh snowfall. The next apartment was empty and clean, and a microfactory sat gleaming on a ledge. "I hereby nationalize you in the name of the People's Provisional Republic of Bootstrap, and of the oppressed masses everywhere," he said dryly. The remote gingerly picked it up. "You done with that chip diagram yet?"

"It will not be long now," Krishna said.

They were building a prototype controller. The idea was to code each peecee, so the CMP could identify and speak to its owner individually. By stepping down the voltage, they could limit the peecee's transmission range to a meter and a half so that each afflicted person could be given individualized orders. The existing chips, however, were high-strung Swiss Orbital thoroughbreds, and couldn't handle oddball power yields. They had to be replaced.

"I don't see how you can expect to get any useful work out of these guys, though. I mean, what we need are supervisors. You can't hope to get coherent thought out of them."

Bent low over his peecee, Krishna did not answer at first. Then he said, "Do you know how a yogi stops his heart? We looked into that when I was in grad school. We asked Yogi Premanand if he would stop his heart while wired up to our instruments, and he graciously consented. We had all the latest brain scanners, but it turned out the most interesting results were recorded by the EKG.

"We found that the yogi's heart did not, as we had expected, slow down, but rather went faster and faster, until it reached its physical limits and began to fibrillate. He had not slowed his heart; he had sped it up. It did not stop, but went into spasm.

"After our tests, I asked him if he had known these facts. He said no, that they were most interesting. He was polite about it, but clearly did not think our findings very significant."

"So you're saying . . .?"

“The problem with schizophrenics is that they have too much going on in their heads. Too many voices. Too many ideas. They can’t focus their attention on a single chain of thought. But it would be a mistake to think them incapable of complex reasoning. In fact, they’re thinking brilliantly. Their brains are simply operating at such peak efficiencies that they can’t organize their thoughts coherently.

“What the trance chip does is to provide one more voice, but a louder, more insistent one. That’s why they obey it. It breaks through that noise, provides a focus, serves as a matrix along which thought can crystallize.”

The remote unlocked the door into a conference room deep in the administrative tunnels. Eight microfactories waited in a neat row atop the conference table. It added the ninth, turned, and left, locking the door behind it. “You know,” Gunther said, “all these elaborate precautions may be unnecessary. Whatever was used on Bootstrap may not be in the air anymore. It may never have been in the air. It could’ve been in the water or something.”

“Oh, it’s there all right, in the millions. We’re dealing with an airborne schizomimetic engine. It’s designed to hang around in the air indefinitely.”

“A schizomimetic engine? What the hell is that?”

In a distracted monotone, Krishna said, “A schizomimetic engine is a strategic nonlethal weapon with high psychological impact. It not only incapacitates its target vectors, but places a disproportionately heavy burden on the enemy’s manpower and material support caring for the victims. Due to the particular quality of the effect, it has a profoundly demoralizing influence on those exposed to the victims, especially those involved in their care. Thus, it is particularly desirable as a strategic weapon.” He might have been quoting from an operations manual.

Gunther pondered that. “Calling the meeting over the chips wasn’t a mistake, was it? You knew it would work. You knew they would obey a voice speaking inside their heads.”

“Yes.”

“This shit was brewed up at the Center, wasn’t it? This is the stuff that you couldn’t talk about.”

“Some of it.”

Gunther powered down his rig and flipped up the lens. “God damn you,

Krishna! God damn you straight to Hell, you stupid fucker!”

Krishna looked up from his work, bewildered. “Have I said something wrong?”

“No! No, you haven’t said a damned thing wrong—you’ve just driven four thousand people out of their fucking minds, is all! Wake up and take a good look at what you maniacs have done with your weapons research!”

“It wasn’t weapons research,” Krishna said mildly. He drew a long, involuted line on the schematic. “But when pure research is funded by the military, the military will seek out military applications for the research. That’s just the way it is.”

“What’s the difference? It happened. You’re responsible.”

Now Krishna actually set his peecee aside. He spoke with uncharacteristic fire. “Gunther, we need this information. Do you realize that we are trying to run a technological civilization with a brain that was evolved in the Neolithic? I am perfectly serious. We’re all trapped in the old hunter-gatherer programs, and they are of no use to us anymore. Take a look at what’s happening on Earth. They’re hip-deep in a war that nobody meant to start and nobody wants to fight and it’s even money that nobody can stop. The type of thinking that put us in this corner is not to our benefit. It has to change. And that’s what we are working toward—taming the human brain. Harnessing it. Reining it in.

“Granted, our research has been turned against us. But what’s one more weapon among so many? If neuroprogrammers hadn’t been available, something else would have been used. Mustard gas maybe, or plutonium dust. For that matter, they could’ve just blown a hole in the canopy and let us all strangle.”

“That’s self-justifying bullshit, Krishna! Nothing can excuse what you’ve done.”

Quietly, but with conviction, Krishna said, “You will never convince me that our research is not the most important work we could possibly be doing today. We must seize control of this monster within our skulls. We must change our ways of thinking.” His voice dropped. “The sad thing is that we cannot change unless we survive. But in order to survive, we must first change.”

They worked in silence after that.

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Gunther awoke from restless dreams to find that the sleep shift was only half over. Liza was snoring. Careful not to wake her, he pulled his clothes on and padded barefoot out of his niche and down the hall. The light was on in the common room and he heard voices.

Ekatarina looked up when he entered. Her face was pale and drawn. Faint circles had formed under her eyes. She was alone.

“Oh, hi. I was just talking with the CMP.” She thought off her peecee. “Have a seat.”

He pulled up a chair and hunched down over the table. Confronted by her, he found it took a slight but noticeable effort to draw his breath. “So. How are things going?”

“They’ll be trying out your controllers soon. The first batch of chips ought to be coming out of the factories in an hour or so. I thought I’d stay up to see how they work out.”

“It’s that bad, then?” Ekatarina shook her head, would not look at him. “Hey, come on, here you are waiting up on the results, and I can see how tired you are. There must be a lot riding on this thing.”

“More than you know,” she said bleakly. “I’ve just been going over the numbers. Things are worse than you can imagine.”

He reached out and took her cold, bloodless hand. She squeezed him so tightly it hurt. Their eyes met and he saw in hers all the fear and wonder he felt.

Wordlessly, they stood.

“I’m niching alone,” Ekatarina said. She had not let go of his hand, held it so tightly, in fact, that it seemed she would never let it go.

Gunther let her lead him away.

• • • •

They made love, and talked quietly about inconsequential things, and made love again. Gunther had thought she would nod off immediately after the first time, but she was too full of nervous energy for that.

“Tell me when you’re about to come,” she murmured. “Tell me when

you're coming."

He stopped moving. "Why do you always say that?"

Ekatarina looked up at him dazedly, and he repeated the question. Then she laughed a deep, throaty laugh. "Because I'm frigid."

"Hah?"

She took his hand, and brushed her cheek against it. Then she ducked her head, continuing the motion across her neck and up the side of her scalp. He felt the short, prickly hair against his palm and then, behind her ear, two bumps under the skin where biochips had been implanted. One of those would be her trance chip and the other . . . "It's a prosthetic," she explained. Her eyes were grey and solemn. "It hooks into the pleasure centers. When I need to, I can turn on my orgasm at a thought. That way we can always come at the same time." She moved her hips slowly beneath him as she spoke.

"But that means you don't really need to have any kind of sexual stimulation at all, do you? You can trigger an orgasm at will. While you're riding on a bus. Or behind a desk. You could just turn that thing on and come for hours at a time."

She looked amused. "I'll tell you a secret. When it was new, I used to do stunts like that. Everybody does. One outgrows that sort of thing quickly."

With more than a touch of stung pride, Gunther said, "Then what am I doing here? If you've got that thing, what the hell do you need me for?" He started to draw away from her.

She pulled him down atop her again. "You're kind of comforting," she said. "In an argumentative way. Come here."

••••

He got back to his futon and began gathering up the pieces of his suit. Liza sat up sleepily and gawked at him. "So," she said. "It's like that, is it?"

"Yeah, well. I kind of left something unfinished. An old relationship." Warily, he extended a hand. "No hard feelings, huh?"

Ignoring his hand, she stood, naked and angry. "You got the nerve to stand there without even wiping my smile off your dick first and say no hard feelings? Asshole!"

“Aw, come on now, Liza, it’s not like that.”

“Like hell it’s not! You got a shot at that white-assed Russian ice queen, and I’m history. Don’t think I don’t know all about her.”

“I was hoping we could still be, you know, friends.”

“Nice trick, shithead.” She balled her fist and hit him hard in the center of his chest. Tears began to form in her eyes. “You just slink away. I’m tired of looking at you.”

He left.

••••

But did not sleep. Ekatarina was awake and ebullient over the first reports coming in of the new controller system. “They’re working!” she cried. “They’re working!” She’d pulled on a silk camisole, and strode back and forth excitedly, naked to the waist. Her pubic hair was a white flame, with almost invisible trails of smaller hairs reaching for her navel and caressing the sweet insides of her thighs. Tired as he was, Gunther felt new desire for her. In a weary, washed-out way, he was happy.

“Whooh!” She kissed him hard, not sexually, and called up the CMP. “Rerun all our earlier projections. We’re putting our afflicted components back to work. Adjust all work schedules.”

“As you direct.”

“How does this change our long-range prospects?”

The program was silent for several seconds, processing. Then it said, “You are about to enter a necessary but very dangerous stage of recovery. You are going from a low-prospects high-stability situation to a high-prospects high-instability one. With leisure your unafflicted components will quickly grow dissatisfied with your government.”

“What happens if I just step down?”

“Prospects worsen drastically.”

Ekatarina ducked her head. “All right, what’s likely to be our most pressing new problem?”

“The unafflicted components will demand to know more about the war on Earth. They’ll want the media feeds restored immediately.”

“I could rig up a receiver easily enough,” Gunther volunteered. “Nothing

fancy, but . . .”

“Don’t you dare!”

“Huh? Why not?”

“Gunther, let me put it to you this way: What two nationalities are most heavily represented here?”

“Well, I guess that would be Russia and—oh.”

“Oh is right. For the time being, I think it’s best if nobody knows for sure who’s supposed to be enemies with whom.” She asked the CMP, “How should I respond?”

“Until the situation stabilizes, you have no choice but distraction. Keep their minds occupied. Hunt down the saboteurs and then organize war crime trials.”

“That’s out. No witch hunts, no scapegoats, no trials. We’re all in this together.”

Emotionlessly, the CMP said, “Violence is the left hand of government. You are rash to dismiss its potentials without serious thought.”

“I won’t discuss it.”

“Very well. If you wish to postpone the use of force for the present, you could hold a hunt for the weapon used on Bootstrap. Locating and identifying it would involve everyone’s energies without necessarily implicating anybody. It would also be widely interpreted as meaning an eventual cure was possible, thus boosting the general morale without your actually lying.”

Tiredly, as if this were something she had gone over many times already, she said, “Is there really no hope of curing them?”

“Anything is possible. In light of present resources, though, it cannot be considered likely.”

Ekatarina thought the preece off, dismissing the CMP. She sighed. “Maybe that’s what we ought to do. Donkey up a hunt for the weapon. We ought to be able to do something with that notion.”

Puzzled, Gunther said, “But it was one of Chang’s weapons, wasn’t it? A schizomimetic engine, right?”

“Where did you hear that?” she demanded sharply.

“Well, Krishna said . . . He didn’t act like . . . I thought it was public knowledge.”

Ekatarina's face hardened. "Program!" she thought.

The CMP came back to life. "Ready."

"Locate Krishna Narasimhan, unafflicted, Cadre Five. I want to speak with him immediately." Ekatarina snatched up her panties and shorts, and furiously began dressing. "Where are my damned sandals? Program! Tell him to meet me in the common room. Right away."

"Received."

• • • •

To Gunther's surprise, it took over an hour for Ekatarina to browbeat Krishna into submission. Finally, though, the young research component went to a lockbox, identified himself to it, and unsealed the storage areas. "It's not all that secure," he said apologetically. "If our sponsors knew how often we just left everything open so we could get in and out, they'd—well, never mind."

He lifted a flat, palm-sized metal rectangle from a cabinet. "This is the most likely means of delivery. It's an aerosol bomb. The biological agents are loaded here, and it's triggered by snapping this back here. It's got enough pressure in it to spew the agents fifty feet straight up. Air currents do the rest." He tossed it to Gunther who stared down at the thing in horror. "Don't worry, it's not armed."

He slid out a slim drawer holding row upon gleaming row of slim chrome cylinders. "These contain the engines themselves. They're off-the-shelf nanoweaponry. State of the art stuff, I guess." He ran a fingertip over them. "We've programmed each to produce a different mix of neurotransmitters. Dopamine, phencyclidine, norepinephrine, acetylcholine, met-enkephalin, substance P, serotonin—there's a hefty slice of Heaven in here, and—" he tapped an empty space—"right here is our missing bit of Hell." He frowned, and muttered, "That's curious. Why are there two cylinders missing?"

"What's that?" Ekatarina said. "I didn't catch what you just said."

"Oh, nothing important. Um, listen, it might help if I yanked a few biological pathways charts and showed you the chemical underpinnings of these things."

“Never mind that. Just keep it sweet and simple. Tell us about these schizomimetic engines.”

It took over an hour to explain.

The engines were molecule-sized chemical factories, much like the assemblers in a microfactory. They had been provided by the military, in the hope Chang’s group would come up with a misting weapon that could be sprayed in an army’s path to cause them to change their loyalty. Gunther dozed off briefly while Krishna was explaining why that was impossible, and woke up sometime after the tiny engines had made their way into the brain.

“It’s really a false schizophrenia,” Krishna explained. “True schizophrenia is a beautifully complicated mechanism. What these engines create is more like a bargain-basement knockoff. They seize control of the brain chemistry, and start pumping out dopamine and a few other neuromediators. It’s not an actual disorder, per se. They just keep the brain hopping.” He coughed. “You see.”

“Okay,” Ekatarina said. “Okay. You say you can reprogram these things. How?”

“We use what are technically called messenger engines. They’re like neuromodulators—they tell the schizomimetic engines what to do.” He slid open another drawer, and in a flat voice said, “They’re gone.”

“Let’s keep to the topic, if we may. We’ll worry about your inventory later. Tell us about these messenger engines. Can you brew up a lot of them, to tell the schizomimetics to turn themselves off?”

“No, for two reasons. First, these molecules were handcrafted in the Swiss Orbitals; we don’t have the industrial plant to create them. Secondly, you can’t tell the schizomimetics to turn themselves off. They don’t have off switches. They’re more like catalysts than actual machines. You can reconfigure them to produce different chemicals, but . . .” He stopped, and a distant look came into his eyes. “Damn.” He grabbed up his peecee, and a chemical pathways chart appeared on one wall. Then beside it, a listing of major neurofunctions. Then another chart covered with scrawled behavioral symbols. More and more data slammed up on the wall.

“Uh, Krishna . . .?”

“Oh, go away,” he snapped. “This is important.”

“You think you might be able to come up with a cure?”

“Cure? No. Something better. Much better.”

Ekatarina and Gunther looked at each other. Then she said, “Do you need anything? Can I assign anyone to help you?”

“I need the messenger engines. Find them for me.”

“How? How do we find them? Where do we look?”

“Sally Chang,” Krishna said impatiently. “She must have them. Nobody else had access.” He snatched up a light pen, and began scrawling crabbed formulae on the wall.

“I’ll get her for you. Program! Tell—”

“Chang’s a flick,” Gunther reminded her. “She was caught by the aerosol bomb.” Which she must surely have set herself. A neat way of disposing of evidence that might’ve led to whatever government was running her. She’d have been the first to go mad.

Ekatarina pinched her nose, wincing. “I’ve been awake too long,” she said. “All right, I understand. Krishna, from now on you’re assigned permanently to research. The CMP will notify your cadre leader. Let me know if you need any support. Find me a way to turn this damned weapon off.” Ignoring the way he shrugged her off, she said to Gunther, “I’m yanking you from Cadre Four. From now on, you report directly to me. I want you to find Chang. Find her, and find those messenger engines.”

Gunther was bone-weary. He couldn’t remember when he’d last had a good eight hours’ sleep. But he managed what he hoped was a confident grin. “Received.”

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A madwoman should not have been able to hide herself. Sally Chang could. Nobody should have been able to evade the CMP’s notice, now that it was hooked into a growing number of afflicted individuals. Sally Chang did. The CMP informed Gunther that none of the flicks were aware of Chang’s whereabouts. It accepted a directive to have them all glance about for her once every hour until she was found.

In the west tunnels, walls had been torn out to create a space as large as any factory interior. The remotes had been returned, and were now manned

by almost two hundred flicks spaced so that they did not impinge upon each other's fields of instruction. Gunther walked by them, through the CMP's whispering voices: "Are all bulldozers accounted for? If so . . . Clear away any malfunctioning machines; they can be placed . . . for vacuum-welded dust on the upper surfaces of the rails . . . reduction temperature, then look to see that the oxygen feed is compatible . . ." At the far end, a single suit sat in a chair, overseer unit in its lap.

"How's it going?" Gunther asked.

"Absolutely top-notch." He recognized Takayuni's voice. "Most of the factories are up and running, and we're well on our way to having the railguns operative too. You wouldn't believe the kind of efficiencies we're getting here."

"Good, huh?"

Takayuni grinned; Gunther could hear it in his voice. "Industrious little buggers!"

Takayuni hadn't seen Chang. Gunther moved on.

Some hours later he found himself sitting wearily in Noguchi Park, looking at the torn-up dirt where the knee-high forest had been. Not a seedling had been spared; the silver birch was extinct as a lunar species. Dead carp floated belly-up in the oil-slicked central lake; a chain-link fence circled it now, to keep out the flicks. There hadn't been the time yet to begin cleaning up the litter, and when he looked about, he saw trash everywhere. It was sad. It reminded him of Earth.

He knew it was time to get going, but he couldn't. His head sagged, touched his chest, and jerked up. Time had passed.

A flicker of motion made him turn. Somebody in a pastel lavender boutique suit hurried by. The woman who had directed him to the city controller's office the other day. "Hello!" he called. "I found everybody just where you said. Thanks. I was starting to get a little spooked."

The lavender suit turned to look at him. Sunlight glinted on black glass. A still, long minute later, she said, "Don't mention it," and started away.

"I'm looking for Sally Chang. Do you know her? Have you seen her? She's a flick, kind of a little woman, flamboyant, used to favor bright clothes, electric makeup, that sort of thing."

"I'm afraid I can't help you." Lavender was carrying three oxytanks in

her arms. “You might try the straw market, though. Lots of bright clothes there.” She ducked into a tunnel opening and disappeared within.

Gunther stared after her distractedly, then shook his head. He felt so very, very tired.

• • • •

The straw market looked as though it had been through a storm. The tents had been torn down, the stands knocked over, the goods looted. Shards of orange and green glass crunched underfoot. Yet a rack of Italian scarfs worth a year’s salary stood untouched amid the rubble. It made no sense at all.

Up and down the market, flicks were industriously cleaning up. They stooped and lifted and swept. One of them was being beaten by a suit.

Gunther blinked. He could not react to it as a real event. The woman cringed under the blows, shrieking wildly and scuttling away from them. One of the tents had been re-erected, and within the shadow of its rainbow silks, four other suits lounged against the bar. Not a one of them moved to help the woman.

“Hey!” Gunther shouted. He felt hideously self-conscious, as if he’d been abruptly thrust into the middle of a play without memorized lines or any idea of the plot or notion of what his role in it was. “Stop that!”

The suit turned toward him. It held the woman’s slim arm captive in one gloved hand. “Go away,” a male voice growled over the radio.

“What do you think you’re doing? Who are you?” The man wore a Westinghouse suit, one of a dozen or so among the unafflicted. But Gunther recognized a brown, kidney-shaped scorch mark on the abdomen panel. “Posner—is that you? Let that woman go.”

“She’s not a woman,” Posner said. “Hell, look at her—she’s not even human. She’s a flick.”

Gunther set his helmet to record. “I’m taping this,” he warned. “You hit that woman again, and Ekatarina will see it all. I promise.”

Posner released the woman. She stood dazed for a second or two, and then the voice from her peecee reasserted control. She bent to pick up a broom, and returned to work.

Switching off his helmet, Gunther said, “Okay. What did she do?”

Indignantly, Posner extended a foot. He pointed sternly down at it. “She peed all over my boot!”

The suits in the tent had been watching with interest. Now they roared. “Your own fault, Will!” one of them called out. “I told you you weren’t scheduling in enough time for personal hygiene.”

“Don’t worry about a little moisture. It’ll boil off next time you hit vacuum!”

But Gunther was not listening. He stared at the flick Posner had been mistreating and wondered why he hadn’t recognized Anya earlier. Her mouth was pursed, her face squinched up tight with worry, as if there were a key in the back of her head that had been wound three times too many. Her shoulders cringed forward now, too. But still.

“I’m sorry, Anya,” he said. “Hiro is dead. There wasn’t anything we could do.”

She went on sweeping, oblivious, unhappy.

••••

He caught the shift’s last jitney back to the Center. It felt good to be home again. Miiko Ezumi had decided to loot the outlying factories of their oxygen and water surpluses, then carved a shower room from the rock. There was a long line for only three minutes’ use, and no soap, but nobody complained. Some people pooled their time, showering two and three together. Those waiting their turns joked rowdily.

Gunther washed, grabbed some clean shorts and a Glavkosmos t-shirt, and padded down the hall. He hesitated outside the common room, listening to the gang sitting around the table, discussing the more colorful flicks they’d encountered.

“Have you seen the Mouse Hunter?”

“Oh yeah, and Ophelia!”

“The Pope!”

“The Duck Lady!”

“Everybody knows the Duck Lady!”

They were laughing and happy. A warm sense of community flowed

from the room, what Gunther's father would have in his sloppy-sentimental way called Gemutlichkeit. Gunther stepped within.

Liza Nagenda looked up, all gums and teeth, and froze. Her jaw snapped shut. "Well, if it isn't Izmailova's personal spy!"

"What?" The accusation took Gunther's breath away. He looked helplessly about the room. Nobody would meet his eye. They had all fallen silent.

Liza's face was grey with anger. "You heard me! It was you that ratted on Krishna, wasn't it?"

"Now that's way out of line! You've got a lot of fucking gall if—" He controlled himself with an effort. There was no sense in matching her hysteria with his own. "It's none of your business what my relationship with Izmailova is or is not." He looked around the table. "Not that any of you deserve to know, but Krishna's working on a cure. If anything I said or did helped put him back in the lab, well then, so be it."

She smirked. "So what's your excuse for snitching on Will Posner?"

"I never—"

"We all heard the story! You told him you were going to run straight to your precious Izmailova with your little helmet vids."

"Now, Liza," Takayuni began. She slapped him away.

"Do you know what Posner was doing?" Gunther shook a finger in Liza's face. "Hah? Do you? He was beating a woman—Anya! He was beating Anya right out in the open!"

"So what? He's one of us, isn't he? Not a zoned-out, dead-eyed, ranting, drooling flick!"

"You bitch!" Outraged, Gunther lunged at Liza across the table. "I'll kill you, I swear it!" People jerked back from him, rushed forward, a chaos of motion. Posner thrust himself in Gunther's way, arms spread, jaw set and manly. Gunther punched him in the face. Posner looked surprised, and fell back. Gunther's hand stung, but he felt strangely good anyway; if everyone else was crazy, then why not him?

"You just try it!" Liza shrieked. "I knew you were that type all along!"

Takayuni grabbed Liza away one way. Hamilton seized Gunther and yanked him the other. Two of Posner's friends were holding him back as well.

“I’ve had about all I can take from you!” Gunther shouted. “You cheap cunt!”

“Listen to him! Listen what he calls me!”

Screaming, they were shoved out opposing doors.

• • • •

“It’s all right, Gunther.” Beth had flung him into the first niche they’d come to. He slumped against a wall, shaking, and closed his eyes. “It’s all right now.”

But it wasn’t. Gunther was suddenly struck with the realization that, with the exception of Ekatarina, he no longer had any friends. Not real friends, close friends. How could this have happened? It was as if everyone had been turned into werewolves. Those who weren’t actually mad were still monsters. “I don’t understand.”

Hamilton sighed. “What don’t you understand, Weil?”

“The way people—the way we all treat the flicks. When Posner was beating Anya, there were four other suits standing nearby, and not a one of them so much as lifted a finger to stop him. Not one! And I felt it, too, there’s no use pretending I’m superior to the rest of them. I wanted to walk on and pretend I hadn’t seen a thing. What’s happened to us?”

Hamilton shrugged. Her hair was short and dark about her plain round face. “I went to a pretty expensive school when I was a kid. One year we had one of those exercises that’re supposed to be personally enriching. You know? A life experience. We were divided into two groups—Prisoners and Guards. The Prisoners couldn’t leave their assigned areas without permission from a guard, the Guards got better lunches, stuff like that. Very simple set of rules. I was a Guard.

“Almost immediately, we started to bully the Prisoners. We pushed ’em around, yelled at ’em, kept ’em in line. What was amazing was that the Prisoners let us do it. They outnumbered us five to one. We didn’t even have authority for the things we did. But not a one of them complained. Not a one of them stood up and said *No, you can’t do this*. They played the game.

“At the end of the month, the project was dismantled and we had some

study seminars on what we'd learned: the roots of fascism, and so on. Read some Hannah Arendt. And then it was all over. Except that my best girlfriend never spoke to me again. I couldn't blame her either. Not after what I'd done.

“What did I really learn? That people will play whatever role you put them in. They'll do it without knowing that that's what they're doing. Take a minority, tell them they're special, and make them guards—they'll start playing Guard.”

“So what's the answer? How do we keep from getting caught up in the roles we play?”

“Damned if I know, Weil. Damned if I know.”

Ekatarina had moved her niche to the far end of a new tunnel. Hers was the only room the tunnel served, and consequently she had a lot of privacy. As Gunther stepped in, a staticky voice swam into focus on his trance chip. “. . . reported shock. In Cairo, government officials pledged . . .” It cut off.

“Hey! You've restored—” He stopped. If radio reception had been restored, he'd have known. It would have been the talk of the Center. Which meant that radio contact had never really been completely broken. It was simply being controlled by the CMP.

Ekatarina looked up at him. She'd been crying, but she'd stopped. “The Swiss Orbitals are gone!” she whispered. “They hit them with everything from softbombs to brilliant pebbles. They dusted the shipyards.”

The scope of all those deaths obscured what she was saying for a second. He sank down beside her. “But that means—”

“There's no spacecraft that can reach us, yes. Unless there's a ship in transit, we're stranded here.”

He took her in his arms. She was cold and shivering. Her skin felt clammy and mottled with gooseflesh. “How long has it been since you've had any sleep?” he asked sharply.

“I can't—”

“You're wired, aren't you?”

“I can't afford to sleep. Not now. Later.”

“Ekatarina. The energy you get from wire isn't free. It's only borrowed from your body. When you come down, it all comes due. If you wire yourself up too tightly, you'll crash yourself right into a coma.”

“I haven’t been—” She stalled, and a confused, uncertain look entered her eyes. “Maybe you’re right. I could probably use a little rest.”

The CMP came to life. “Cadre Nine is building a radio receiver. Ezumi gave them the go-ahead.”

“Shit!” Ekatarina sat bolt upright. “Can we stop it?”

“Moving against a universally popular project would cost you credibility you cannot afford to lose.”

“Okay, so how can we minimize the—”

“Ekatarina,” Gunther said. “Sleep, remember?”

“In a sec, babe.” She patted the futon. “You just lie down and wait for me. I’ll have this wrapped up before you can nod off.” She kissed him gently, lingeringly. “All right?”

“Yeah, sure.” He lay down and closed his eyes, just for a second.

••••

When he awoke, it was time to go on shift, and Ekatarina was gone.

It was only the fifth day since Vladivostok. But everything was so utterly changed that times before then seemed like memories of another world. In a previous life I was Gunther Weil, he thought. I lived and worked and had a few laughs. Life was pretty good then.

He was still looking for Sally Chang, though with dwindling hope. Now, whenever he talked to suits, he’d ask if they needed his help. Increasingly, they did not.

The third-level chapel was a shallow bowl facing the terrace wall. Tiger lilies grew about the chancel area at the bottom, and turquoise lizards skittered over the rock. The children were playing with a ball in the chancel. Gunther stood at the top, chatting with a sad-voiced Ryohei Iomato.

The children put away the ball and began to dance. They were playing London Bridge. Gunther watched them with a smile. From above, they were so many spots of color, a flower unfolding and closing in on itself. Slowly, the smile faded. They were dancing too well. Not one of the children moved out of step, lost her place, or walked away sulking. Their expressions were intense, self-absorbed, inhuman. Gunther had to turn away.

“The CMP controls them,” Iomato said. “I don’t have much to do, really.

I go through the vids and pick out games for them to play, songs to sing, little exercises to keep them healthy. Sometimes I have them draw.”

“My God, how can you stand it?”

Iomato sighed. “My old man was an alcoholic. He had a pretty rough life, and at some point he started drinking to blot out the pain. You know what?”

“It didn’t work.”

“Yah. Made him even more miserable. So then he had twice the reason to get drunk. He kept on trying, though, I’ve got to give him that. He wasn’t the sort of man to give up on something he believed in just because it wasn’t working the way it should.”

Gunther said nothing.

“I think that memory is the only thing keeping me from just taking off my helmet and joining them.”

• • • •

The Corporate Video Center was a narrow run of offices in the farthest tunnel reaches, where raw footage for adverts and incidental business use was processed before being squirted to better-equipped vid centers on Earth. Gunther passed from office to office, slapping off flatscreens left flickering since the disaster.

It was unnerving going through the normally busy rooms and finding no one. The desks and cluttered work stations had been abandoned in purposeful disarray, as though their operators had merely stepped out for a break and would be back momentarily. Gunther found himself spinning around to confront his shadow, and flinching at unexpected noises. With each machine he turned off, the silence at his back grew. It was twice as lonely as being out on the surface.

He doused a last light and stepped into the gloomy hall. Two suits with interwoven H-and-A logos loomed up out of the shadows. He jumped in shock. The suits did not move. He laughed wryly at himself, and pushed past. They were empty, of course—there were no Hyundai Aerospace components among the unafflicted. Someone had simply left these suits here in temporary storage before the madness.

The suits grabbed him.

“Hey!” He shouted in terror as they seized him by the arms and lifted him off his feet. One of them hooked the peecee from his harness and snapped it off. Before he knew what was happening he’d been swept down a short flight of stairs and through a doorway.

“Mr. Weil.”

He was in a high-ceilinged room carved into the rock to hold air-handling equipment that hadn’t been constructed yet. A high string of temporary work lamps provided dim light. To the far side of the room a suit sat behind a desk, flanked by two more, standing. They all wore Hyundai Aerospace suits. There was no way he could identify them.

The suits that had brought him in crossed their arms.

“What’s going on here?” Gunther asked. “Who are you?”

“You are the last person we’d tell that to.” He couldn’t tell which one had spoken. The voice came over his radio, made sexless and impersonal by an electronic filter. “Mr. Weil, you stand accused of crimes against your fellow citizens. Do you have anything to say in your defense?”

“What?” Gunther looked at the suits before him and to either side. They were perfectly identical, indistinguishable from each other, and he was suddenly afraid of what the people within might feel free to do, armored as they were in anonymity. “Listen, you’ve got no right to do this. There’s a governmental structure in place, if you’ve got any complaints against me.”

“Not everyone is pleased with Izmailova’s government,” the judge said.

“But she controls the CMP, and we could not run Bootstrap without the CMP controlling the flicks,” a second added.

“We simply have to work around her.” Perhaps it was the judge; perhaps it was yet another of the suits. Gunther couldn’t tell.

“Do you wish to speak on your own behalf?”

“What exactly am I charged with?” Gunther asked desperately. “Okay, maybe I’ve done something wrong, I’ll entertain that possibility. But maybe you just don’t understand my situation. Have you considered that?”

Silence.

“I mean, just what are you angry about? Is it Posner? Because I’m not sorry about that. I won’t apologize. You can’t mistreat people just because they’re sick. They’re still people, like anybody else. They have their rights.”

Silence.

“But if you think I’m some kind of a spy or something, that I’m running around and ratting on people to Ek—to Izmailova, well that’s simply not true. I mean, I talk to her, I’m not about to pretend I don’t, but I’m not her spy or anything. She doesn’t have any spies. She doesn’t need any! She’s just trying to hold things together, that’s all.

“Jesus, you don’t know what she’s gone through for you! You haven’t seen how much it takes out of her! She’d like nothing better than to quit. But she has to hang in there because—” An eerie dark electronic gabble rose up on his radio, and he stopped as he realized that they were laughing at him.

“Does anyone else wish to speak?”

One of Gunther’s abductors stepped forward. “Your honor, this man says that flicks are human. He overlooks the fact that they cannot live without our support and direction. Their continued well-being is bought at the price of our unceasing labor. He stands condemned out of his own mouth. I petition the court to make the punishment fit the crime.”

The judge looked to the right, to the left. His two companions nodded, and stepped back into the void. The desk had been set up at the mouth of what was to be the air intake duct. Gunther had just time enough to realize this when they reappeared, leading someone in a G5 suit identical to his own.

“We could kill you, Mr. Weil,” the artificial voice crackled. “But that would be wasteful. Every hand, every mind is needed. We must all pull together in our time of need.”

The G5 suit stood alone and motionless in the center of the room.

“Watch.”

Two of the Hyundai suits stepped up to the G5 suit. Four hands converged on the helmet seals. With practiced efficiency, they flicked the latches and lifted the helmet. It happened so swiftly the occupant could not have stopped it if he’d tried.

Beneath the helmet was the fearful, confused face of a flick.

“Sanity is a privilege, Mr. Weil, not a right. You are guilty as charged. However, we are not cruel men. This once, we will let you off with a warning. But these are desperate times. At your next offense—be it only so minor a thing as reporting this encounter to the Little General—we may be

forced to dispense with the formality of a hearing.” The judge paused. “Do I make myself clear?”

Reluctantly, Gunther nodded.

“Then you may leave.”

On the way out, one of the suits handed him back his peecee.

• • • •

Five people. He was sure there weren't any more involved than that. Maybe one or two more, but that was it. Posner had to be hip-deep in this thing, he was certain of that. It shouldn't be too hard to figure out the others.

He didn't dare take the chance.

At shift's end, he found Ekatarina already asleep. She looked haggard and unhealthy. He knelt by her, and gently brushed her cheek with the back of one hand.

Her eyelids fluttered open.

“Oh, hey. I didn't mean to wake you. Just go back to sleep, huh?”

She smiled. “You're sweet, Gunther, but I was only taking a nap anyway. I've got to be up in another fifteen minutes.” Her eyes closed again. “You're the only one I can really trust anymore. Everybody's lying to me, feeding me misinformation, keeping silent when there's something I need to know. You're the only one I can count on to tell me things.”

You have enemies, he thought. They call you the Little General, and they don't like how you run things. They're not ready to move against you directly, but they have plans. And they're ruthless.

Aloud, he said, “Go back to sleep.”

“They're all against me,” she murmured. “Bastard sons of bitches.”

• • • •

The next day he spent going through the service spaces for the new air-handling system. He found a solitary flick's nest made of shredded vacuum suits, but after consultation with the CMP concluded that nobody had lived there for days. There was no trace of Sally Chang.

If it had been harrowing going through the sealed areas before his trial, it was far worse today. Ekatarina's enemies had infected him with fear. Reason told him they were not waiting for him, that he had nothing to worry about until he displeased them again. But the hindbrain did not listen.

Time crawled. When he finally emerged into daylight at the end of his shift, he felt light-headedly out of phase with reality from the hours of isolation. At first he noticed nothing out of the ordinary. Then his suit radio was full of voices, and people were hurrying about every which way. There was a happy buzz in the air. Somebody was singing.

He snagged a passing suit and asked, "What's going on?"

"Haven't you heard? The war is over. They've made peace. And there's a ship coming in!"

• • • •

The *Lake Geneva* had maintained television silence through most of the long flight to the Moon for fear of long-range beam weapons. With peace, however, they opened direct transmission to Bootstrap.

Ezumi's people had the flicks sew together an enormous cotton square and hack away some hanging vines so they could hang it high on the shadowed side of the crater. Then, with the fill lights off, the video image was projected. Swiss spacejacks tumbled before the camera, grinning, all denim and red cowboy hats. They were talking about their escape from the hunter-seeker missiles, brash young voices running one over the other.

The top officers were assembled beneath the cotton square. Gunther recognized their suits. Ekatarina's voice boomed from newly erected loudspeakers. "When are you coming in? We have to make sure the spaceport field is clear. How many hours?"

Holding up five fingers, a blond woman said, "Forty-five!"

"No, forty-three!"

"Nothing like that!"

"Almost forty-five!"

Again Ekatarina's voice cut into the tumult. "What's it like in the orbitals? We heard they were destroyed."

"Yes, destroyed!"

“Very bad, very bad, it’ll take years to—”

“But most of the people are—”

“We were given six orbits warning; most went down in lifting bodies, there was a big evacuation.”

“Many died, though. It was very bad.”

Just below the officers, a suit had been directing several flicks as they assembled a camera platform. Now it waved broadly, and the flicks stepped away. In the *Lake Geneva* somebody shouted, and several heads turned to stare at an offscreen television monitor. The suit turned the camera, giving them a slow, panoramic scan.

One of the spacejacks said, “What’s it like there? I see that some of you are wearing space suits, and the rest are not. Why is that?”

Ekatarina took a deep breath. “There have been some changes here.”

••••

There was one hell of a party at the Center when the Swiss arrived. Sleep schedules were juggled, and save for a skeleton crew overseeing the flicks, everyone turned out to welcome the dozen newcomers to the Moon. They danced to skiffle, and drank vacuum-distilled vodka. Everyone had stories to tell, rumors to swap, opinions on the likelihood that the peace would hold.

Gunther wandered away midway through the party. The Swiss depressed him. They all seemed so young and fresh and eager. He felt battered and cynical in their presence. He wanted to grab them by the shoulders and shake them awake.

Depressed, he wandered through the locked-down laboratories. Where the Viral Computer Project had been, he saw Ekatarina and the captain of the *Lake Geneva* conferring over a stack of crated bioflops. They bent low over Ekatarina’s peecee, listening to the CMP.

“Have you considered nationalizing your industries?” the captain asked. “That would give us the plant needed to build the New City. Then, with a few hardwired utilities, Bootstrap could be managed without anyone having to set foot inside it.”

Gunther was too distant to hear the CMP’s reaction, but he saw both

women laugh. “Well,” said Ekatarina. “At the very least we will have to renegotiate terms with the parent corporations. With only one ship functional, people can’t be easily replaced. Physical presence has become a valuable commodity. We’d be fools not to take advantage of it.”

He passed on, deeper into shadow, wandering aimlessly. Eventually, there was a light ahead, and he heard voices. One was Krishna’s, but spoken faster and more forcefully than he was used to hearing it. Curious, he stopped just outside the door.

Krishna was in the center of the lab. Before him, Beth Hamilton stood nodding humbly. “Yes, sir,” she said. “I’ll do that. Yes.” Dumbfounded, Gunther realized that Krishna was giving her orders.

Krishna glanced up. “Weil! You’re just the man I was about to come looking for.”

“I am?”

“Come in here, don’t dawdle.” Krishna smiled and beckoned, and Gunther had no choice but to obey. He looked like a young god now. The force of his spirit danced in his eyes like fire. It was strange that Gunther had never noticed before how tall he was. “Tell me where Sally Chang is.”

“I don’t—I mean, I can’t, I—” He stopped and swallowed. “I think Chang must be dead.” Then, “Krishna? What’s happened to you?”

“He’s finished his research,” Beth said.

“I rewrote my personality from top to bottom,” Krishna said. “I’m not half-crippled with shyness anymore—have you noticed?” He put a hand on Gunther’s shoulder, and it was reassuring, warm, comforting. “Gunther, I won’t tell you what it took to scrape together enough messenger engines from traces of old experiments to try this out on myself. But it works. We’ve got a treatment that among other things will serve as a universal cure for everyone in Bootstrap. But to do that, we need the messenger engines, and they’re not here. Now tell me why you think Sally Chang is dead.”

“Well, uh, I’ve been searching for her for four days. And the CMP has been looking too. You’ve been holed up here all that time, so maybe you don’t know the flicks as well as the rest of us do. But they’re not very big on planning. The likelihood one of them could actively evade detection that long is practically zilch. The only thing I can think is that somehow she made it to the surface before the effects hit her, got into a truck and told it to

drive as far as her oxygen would take her.”

Krishna shook his head and said, “No. It is simply not consistent with Sally Chang’s character. With all the best will in the world, I cannot picture her killing herself.” He slid open a drawer: row upon row of gleaming canisters. “This may help. Do you remember when I said there were canisters of mimetic engines missing, not just the schizomimetic?”

“Vaguely.”

“I’ve been too busy to worry about it, but wasn’t that odd? Why would Chang have taken a canister and not used it?”

“What was in the second canister?” Hamilton asked.

“Paranoia,” Krishna said. “Or rather a good enough chemical analog. Now, paranoia is a rare disability, but a fascinating one. It’s characterized by an elaborate but internally consistent delusional system. The paranoid patient functions well intellectually, and is less fragmented than a schizophrenic. Her emotional and social responses are closer to normal. She’s capable of concerted effort. In a time of turmoil, it’s quite possible that a paranoid individual could elude our detection.”

“Okay, let’s get this straight,” Hamilton said. “War breaks out on Earth. Chang gets her orders, keys in the software bombs, and goes to Bootstrap with a canister full of madness and a little syringe of paranoia—no, it doesn’t work. It all falls apart.”

“How so?”

“Paranoia wouldn’t inoculate her against schizophrenia. How does she protect herself from her own aerosols?”

Gunther stood transfixed. “Lavender!”

• • • •

They caught up with Sally Chang on the topmost terrace of Bootstrap. The top level was undeveloped. Someday—so the corporate brochures promised—fallow deer would graze at the edge of limpid pools, and otters frolic in the streams. But the soil hadn’t been built up yet, the worms brought in or the bacteria seeded. There were only sand, machines, and a few unhappy opportunistic weeds.

Chang’s camp was to one side of a streamhead, beneath a fill light. She

started to her feet at their approach, glanced quickly to the side, and decided to brazen it out.

A sign reading EMERGENCY CANOPY MAINTENANCE STATION had been welded to a strut supporting the stream's valve stem. Under it were a short, stacked pyramid of oxytanks and an aluminum storage crate the size of a coffin. "Very clever," Beth muttered over Gunther's trance chip. "She sleeps in the storage crate, and anybody stumbling across her thinks it's just spare equipment."

The lavender suit raised an arm and casually said, "Hiya, guys. How can I help you?"

Krishna strode forward and took her hands. "Sally, it's me —Krishna!"

"Oh, thank God!" She slumped in his arms. "I've been so afraid."

"You're all right now."

"I thought you were an Invader at first, when I saw you coming up. I'm so hungry—I haven't eaten since I don't know when." She clutched at the sleeve of Krishna's suit. "You do know about the Invaders, don't you?"

"Maybe you'd better bring me up to date."

They began walking toward the stairs. Krishna gestured quietly to Gunther and then toward Chang's worksuit harness. A canister the size of a hip flask hung there. Gunther reached over and plucked it off. The messenger engines! He held them in his hand.

To the other side, Beth Hamilton plucked up the near-full cylinder of paranoia-inducing engines and made it disappear.

Sally Chang, deep in the explication of her reasonings, did not notice. ". . . obeyed my orders, of course. But they made no sense. I worried and worried about that until finally I realized what was really going on. A wolf caught in a trap will gnaw off its leg to get free. I began to look for the wolf. What kind of enemy justified such extreme actions? Certainly nothing human."

"Sally," Krishna said, "I want you to entertain the notion that the conspiracy—for want of a better word—may be more deeply rooted than you suspect. That the problem is not an external enemy, but the workings of our own brains. Specifically that the Invaders are an artifact of the psychotomimetics you injected into yourself back when this all began."

"No. No, there's too much evidence. It all fits together! The Invaders

needed a way to disguise themselves both physically, which was accomplished by the vacuum suits, and psychologically, which was achieved by the general madness. Thus, they can move undetected among us. Would a human enemy have converted all of Bootstrap to slave labor? Unthinkable! They can read our minds like a book. If we hadn't protected ourselves with the schizomimetics, they'd be able to extract all our knowledge, all our military research secrets . . .”

Listening, Gunther couldn't help imagining what Liza Nagenda would say to all of this wild talk. At the thought of her, his jaw clenched. Just like one of Chang's machines, he realized, and couldn't help being amused at his own expense.

••••

Ekatarina was waiting at the bottom of the stairs. Her hands trembled noticeably, and there was a slight quaver in her voice when she said, “What's all this the CMP tells me about messenger engines? Krishna's supposed to have come up with a cure of some kind?”

“We've got them,” Gunther said quietly, happily. He held up the canister. “It's over now, we can heal our friends.”

“Let me see,” Ekatarina said. She took the canister from his hand.

“No, wait!” Hamilton cried, too late. Behind her, Krishna was arguing with Sally Chang about her interpretations of recent happenings.

Neither had noticed yet that those in front had stopped.

“Stand back.” Ekatarina took two quick steps backward. Edgily, she added, “I don't mean to be difficult. But we're going to sort this all out, and until we do, I don't want anybody too close to me. That includes you, too, Gunther.”

Flicks began gathering. By ones and twos they wandered up the lawn, and then by the dozen. By the time it was clear that Ekatarina had called them up via the CMP, Krishna, Chang, and Hamilton were separated from her and Gunther by a wall of people.

Chang stood very still. Somewhere behind her unseen face, she was revising her theories to include this new event. Suddenly, her hands slapped at her suit, grabbing for the missing canisters. She looked at Krishna and

with a trill of horror said, “You’re one of them!”

“Of course I’m not—” Krishna began. But she was turning, stumbling, fleeing back up the steps.

“Let her go,” Ekatarina ordered. “We’ve got more serious things to talk about.” Two flicks scurried up, lugging a small industrial kiln between them. They set it down, and a third plugged in an electric cable. The interior began to glow. “This canister is all you’ve got, isn’t it? If I were to autoclave it, there wouldn’t be any hope of replacing its contents.”

“Izmailova, listen,” Krishna said.

“I am listening. Talk.”

Krishna explained, while Izmailova listened with arms folded and shoulders tilted skeptically. When he was done, she shook her head. “It’s a noble folly, but folly is all it is. You want to reshape our minds into something alien to the course of human evolution. To turn the seat of thought into a jet pilot’s couch. This is your idea of a solution? Forget it. Once this particular box is opened, there’ll be no putting its contents back in again. And you haven’t advanced any convincing arguments for opening it.”

“But the people in Bootstrap!” Gunther objected. “They—”

She cut him off. “Gunther, nobody likes what’s happened to them. But if the rest of us must give up our humanity to pay for a speculative and ethically dubious rehabilitation . . . Well, the price is simply too high. Mad or not, they’re at least human now.”

“Am I inhuman?” Krishna asked. “If you tickle me, do I not laugh?”

“You’re in no position to judge. You’ve rewired your neurons and you’re stoned on the novelty. What tests have you run on yourself? How thoroughly have you mapped out your deviations from human norms? Where are your figures?” These were purely rhetorical questions; the kind of analyses she meant took weeks to run. “Even if you check out completely human—and I don’t concede you will!—who’s to say what the long-range consequences are? What’s to stop us from drifting, step by incremental step, into madness? Who decides what madness is? Who programs the programmers? No, this is impossible. I won’t gamble with our minds.” Defensively, almost angrily, she repeated, “I won’t gamble with our minds.”

“Ekatarina,” Gunther said gently, “how long have you been up? Listen to

yourself. The wire is doing your thinking for you.”

She waved a hand dismissively, without responding.

“Just as a practical matter,” Hamilton said, “how do you expect to run Bootstrap without it? The setup now is turning us all into baby fascists. You say you’re worried about madness—what will we be like a year from now?”

“The CMP assures me—”

“The CMP is only a program!” Hamilton cried. “No matter how much interactivity it has, it’s not flexible. It has no hope. It cannot judge a new thing. It can only enforce old decisions, old values, old habits, old fears.”

Abruptly Ekatarina snapped. “Get out of my face!” she screamed. “Stop it, stop it, stop it! I won’t listen to any more.”

“Ekatarina—” Gunther began.

But her hand had tightened on the canister. Her knees bent as she began a slow genuflection to the kiln. Gunther could see that she had stopped listening. Drugs and responsibility had done this to her, speeding her up and bewildering her with conflicting demands, until she stood trembling on the brink of collapse. A good night’s sleep might have restored her, made her capable of being reasoned with. But there was no time. Words would not stop her now. And she was too far distant for him to reach before she destroyed the engines. In that instant he felt such a strong outwelling of emotion toward her as would be impossible to describe.

“Ekatarina,” he said. “I love you.”

She half-turned her head toward him and in a distracted, somewhat irritated tone said, “What are you—”

He lifted the bolt gun from his work harness, leveled it, and fired.

Ekatarina’s helmet shattered.

She fell.

••••

“I should have shot to just breach the helmet. That would have stopped her. But I didn’t think I was a good enough shot. I aimed right for the center of her head.”

“Hush,” Hamilton said. “You did what you had to. Stop tormenting yourself. Talk about more practical things.”

He shook his head, still groggy. For the longest time, he had been kept on beta endorphins, unable to feel a thing, unable to care. It was like being swathed in cotton batting. Nothing could reach him. Nothing could hurt him. “How long have I been out of it?”

“A day.”

“A day!” He looked about the austere room. Bland rock walls and laboratory equipment with smooth, noncommittal surfaces. To the far end, Krishna and Chang were hunched over a swipeboard, arguing happily and impatiently overwriting each other’s scrawls. A Swiss spacejack came in and spoke to their backs. Krishna nodded distractedly, not looking up. “I thought it was much longer.”

“Long enough. We’ve already salvaged everyone connected with Sally Chang’s group, and gotten a good start on the rest. Pretty soon it will be time to decide how you want yourself rewritten.”

He shook his head, feeling dead. “I don’t think I’ll bother, Beth. I just don’t have the stomach for it.”

“We’ll give you the stomach.”

“Naw, I don’t . . .” He felt a black nausea come welling up again. It was cyclic; it returned every time he was beginning to think he’d finally put it down. “I don’t want the fact that I killed Ekatarina washed away in a warm flood of self-satisfaction. The idea disgusts me.”

“We don’t want that either.” Posner led a delegation of seven into the lab. Krishna and Chang rose to face them, and the group broke into swirling halves. “There’s been enough of that. It’s time we all started taking responsibility for the consequences of—” Everyone was talking at once. Hamilton made a face.

“Started taking responsibility for—”

Voices rose.

“We can’t talk here,” she said. “Take me out on the surface.”

They drove with the cabin pressurized, due west on the Seething Bay road. Ahead, the sun was almost touching the weary walls of Sommering crater. Shadow crept down from the mountains and cratertops, yearning toward the radiantly lit Sinus Medii. Gunther found it achingly beautiful. He did not want to respond to it, but the harsh lines echoed the lonely hurt within him in a way that he found oddly comforting.

Hamilton touched her peecee. "Puttin' on the Ritz" filled their heads.

"What if Ekatarina was right?" he said sadly. "What if we're giving up everything that makes us human? The prospect of being turned into some kind of big-domed emotionless superman doesn't appeal to me much."

Hamilton shook her head. "I asked Krishna about that, and he said *No*. He said it was like . . . Were you ever nearsighted?"

"Sure, as a kid."

"Then you'll understand. He said it was like the first time you came out of the doctor's office after being lased. How everything seemed clear and vivid and distinct. What had once been a blur that you called 'tree' resolved itself into a thousand individual and distinct leaves. The world was filled with unexpected detail. There were things on the horizon that you'd never seen before. Like that."

"Oh." He stared ahead. The disk of the sun was almost touching Sommering. "There's no point in going any farther."

He powered down the truck.

Beth Hamilton looked uncomfortable. She cleared her throat and with brusque energy said, "Gunther, look. I had you bring me out here for a reason. I want to propose a merger of resources."

"A what?"

"Marriage."

It took Gunther a second to absorb what she had said. "Aw, no . . . I don't . . ."

"I'm serious. Gunther, I know you think I've been hard on you, but that's only because I saw a lot of potential in you, and that you were doing nothing with it. Well, things have changed. Give me a say in your rewrite, and I'll do the same for you."

He shook his head. "This is just too weird for me."

"It's too late to use that as an excuse. Ekatarina was right—we're sitting on top of something very dangerous, the most dangerous opportunity humanity faces today. It's out of the bag, though. Word has gotten out. Earth is horrified and fascinated. They'll be watching us. Briefly, very briefly, we can control this thing. We can help to shape it now, while it's small. Five years from now, it will be out of our hands.

"You have a good mind, Gunther, and it's about to get better. I think we

agree on what kind of a world we want to make. I want you on my side.”

“I don’t know what to say.”

“You want true love? You got it. We can make the sex as sweet or nasty as you like. Nothing easier. You want me quieter, louder, gentler, more assured? We can negotiate. Let’s see if we can come to terms.”

He said nothing.

Hamilton eased back in the seat. After a time, she said, “You know? I’ve never watched a lunar sunset before. I don’t get out on the surface much.”

“We’ll have to change that,” Gunther said.

Hamilton stared hard into his face. Then she smiled. She wriggled closer to him. Clumsily, he put an arm over her shoulder. It seemed to be what was expected of him. He coughed into his hand, then pointed a finger. “There it goes.”

Lunar sunset was a simple thing. The crater wall touched the bottom of the solar disk. Shadows leaped from the slopes and raced across the lowlands. Soon half the sun was gone. Smoothly, without distortion, it dwindled. A last brilliant sliver of light burned atop the rock, then ceased to be. In the instant before the windshield adjusted and the stars appeared, the universe filled with darkness.

The air in the cab cooled. The panels snapped and popped with the sudden shift in temperature.

Now Hamilton was nuzzling the side of his neck. Her skin was slightly tacky to the touch, and exuded a faint but distinct odor. She ran her tongue up the line of his chin and poked it in his ear. Her hand fumbled with the latches of his suit.

Gunther experienced no arousal at all, only a mild distaste that bordered on disgust. This was horrible, a defilement of all he had felt for Ekatarina.

But it was a chore he had to get through. Hamilton was right. All his life, his hindbrain had been in control, driving him with emotions chemically derived and randomly applied. He had been lashed to the steed of consciousness and forced to ride it wherever it went, and that nightmare gallop had brought him only pain and confusion. Now that he had control of the reins, he could make this horse go where he wanted.

He was not sure what he would demand from his reprogramming. Contentment, perhaps. Sex and passion, almost certainly. But not love. He

was done with the romantic illusion. It was time to grow up.

He squeezed Beth's shoulder. One more day, he thought, and it won't matter. I'll feel whatever is best for me to feel. Beth raised her mouth to his. Her lips parted. He could smell her breath.

They kissed.

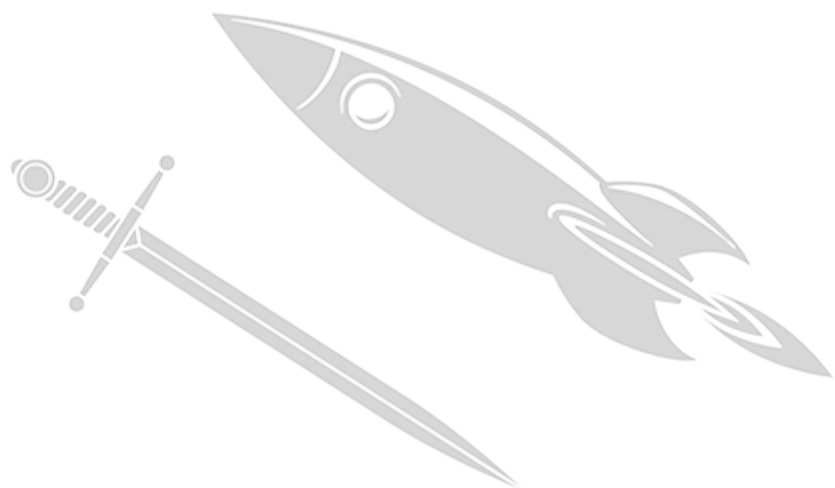
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## **ABOUT THE AUTHOR**

Michael Swanwick is one of the most acclaimed and prolific science fiction and fantasy writers of his generation. He has received a Hugo Award for fiction in an unprecedented five out of six years and has been honored with the Nebula, Theodore Sturgeon, World Fantasy and five Hugo Awards as well as receiving nominations for the British Science Fiction Award and the Arthur C. Clarke Award. His short fiction has appeared in *Asimov's Science Fiction*, *Analog*, *The Magazine of Fantasy & Science Fiction*, and in numerous anthologies, and has been collected in *Cigar-Box Faust*, *A Geography of Unknown Lands*, *Gravity's Angels*, *Moon Dogs*, *Puck Aleshire's Abecedary*, *Tales of Old Earth*, and *The Dog Said Bow-Wow*. Michael's latest novel is *Dancing With Bears*, a post-Utopian adventure featuring confidence artists Darger and Surplus. He is currently at work on two new novels. He lives in Philadelphia with his wife, Marianne Porter.

# NOVEL EXCERPTS



# NOVEL EXCERPT: *Barsk: The Elephants' Graveyard* (Tor Books)

Lawrence M. Schoen | 2884 words

## One A Death Detoured

Rüsul traveled to meet his death. The current had carried him away from his home island as if it understood his purpose. He lost sight of the archipelago before dusk, as much a function of the falling rain as the southerly wind that pushed him onward. In the days since, the sun had risen and set unseen, a slightly brighter spot that eased itself across the overcast sky. Nor had it cleared at night to permit a glimpse of the heavens. The clouds changed color as the rain ebbed and flowed, and the wind drove him across the water of its own accord toward an unvisited destination. Rüsul didn't care. He had no need to hurry. He could feel the increasing proximity in his bones and that was enough. More than enough. An aged Fant on a raft alone and at sea, the wind filling his makeshift sail and carrying him toward the last bit of land he would ever stand upon. His father and mother had each left in the same manner, and their parents before them. That's how it had been, going back generation upon generation to the very founding of Barsk.

He'd felt it coming on all season. His every perception called out to him, less clairaudience than common sense. It was part of the way of things. One felt the change in pressure that signaled the nearness of a lull in a storm. One smelled the sweetness of *tevetl* long before the berries actually ripened so as not to miss their brief span for picking. And one knew when it was time to die. Rüsul could no more fail to recognize his coming death than he could be surprised by a pause in the rain or sour berries.

The certainty came to him one morning. He'd never been the type to awaken easily, always struggling to cross that daily border between slumber and the responsibilities of the wide awake world. But that day he had opened his eyes and known. Death had announced itself, named a time and place, and left him instantly alert. Rüsul had risen and gone about his day

with a wistful smile, a bit sad that his time was ending but also relieved to know for sure. That knowledge signaled the start of the final rite of passage for every Fant.

His assistant had seen the change in him at the workshop that day, acknowledging it with a simple question. “You know?”

Rüsul had smiled. “I do. The last lesson I need to learn. No sadness from you, Yeft. It’s long overdue. Besides, I know you’ve wanted my tools since the day you ended your apprenticeship.”

The younger Fant ignored the barb and instead asked, “Is there anything I can do to help? Do you have enough time for everything?”

Rüsul had been thinking it through since breakfast. Time enough to complete the game board and pieces he’d promised to his elder daughter’s husband after drinking too much beer on the night of their Bonding. Time enough to finish the lintel for the great window in his son’s new home. And time also to build a stout raft and gather together the supplies he would need for the voyage. He had no goodbyes to say. Yeft had seen the knowledge on his face as much because they’d worked side by side for thirty years as because it had been so fresh. The rest of his loved ones would realize what had happened after he’d left. None would come seeking him. Until the day they each woke to their own invitations, they wouldn’t even know where to look.

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He’d been on the open water for five days, seated comfortably enough at the front third of a raft, his back against the short mast that held the only sail. A tarpaulin covered a jumbled pile that occupied most of the other two-thirds. Beneath it lay jugs of fresh water and beer to quench his thirst, assorted fresh fruit to enjoy before it spoiled, and dried fruit for after if the wind died or the current slowed and delayed his journey. There was grain and salt for making cold porridge, and an assortment of succulent leaves as much for dessert as for late night snacking. Rüsul had also packed a scattering of various soft woods and, despite his promise, held onto his favorite knife. At the last moment he’d been unable to part with it, though of course he wouldn’t need it when he reached his death.

For the last five mornings he'd eased leisurely from sleep as usual. His daily ritual consisted of breaking his fast and then tending to his ablutions over the back end of his raft. He'd raise the sail and often as not tack in the direction that felt right. That done, he would take a chock of wood and his knife from under the tarpaulin and settle in with his back once more against the mast and spend the day carving. His hands and trunk did the work with the familiarity of experience, freeing his mind to wander at will through a lifetime of pleasant memories. When he grew thirsty he'd stop for some midday beer, and when hungry for an early supper. By dusk he'd set aside his knife and furl the raft's sail. As the last of the day's light fled, Rüsul would examine the statuette he'd made, the face of some old friend or relative gazing up from the wood as clearly as it had from his memory. His talent at carving had brought him a modicum of fame and security. His work had become quite collectible, but these pieces would never be admired by anyone else. Before laying himself down for sleep, he made a point of saying farewell to the day's effort and pitching it over the side for the ocean to claim.

This sixth day had gone much like the others. Rüsul's left hand had all day long guided the knife slowly back and forth across the chock in his right. The constant rain created the illusion that the outer layers of wood were being washed away to reveal the figurine beneath. Later, as the sky began to lose its glow and he sat finishing his porridge and fruit, the rain faded entirely. For the briefest of moments the heavy clouds parted and Rüsul enjoyed the unfamiliar sight of sunset and felt the red light of Ekkja on his skin. Deftly than the touch of a loved one's nubs, warmth flooded through the folds and wrinkles of his naked body, relieving all weariness while reminding him of just how weary he'd been. Then it passed. The clouds closed again and the rain resumed. He took down the sail.

Rüsul finished his dinner and leaned over the edge of his raft to rinse his bowl and spoon before tucking them away under the tarp along with his carving knife. With his trunk he cradled the day's work, a perfect rendering of Margda, Barsk's long dead Matriarch. Her face looked back at him with complexity. There was pain and certainty, confidence and confusion, as if she'd just been thrust deep in the throes of one of her prophetic seizures. It was possibly his best work ever.

He had muttered a farewell to the carving and raised his trunk high, preparing to fling the figure into the sea, when the ocean dropped away.

The raft, which had risen and fallen with the sea's mood, froze stiller than calm water. The sudden stability caused Rüsul to tumble over backwards. The tiny rendering of Margda slipped from his nubs as he landed on his backside. He rolled onto his knees, one hand moving back and behind the bottom of his left ear to rub at a sudden stitch in his side. His other hand braced against the raft until his balance returned and allowed him to crawl to the edge.

Peering over the side he saw an expanse of grayness below the raft. It sloped down in all directions too far to measure in the rain. Beyond that lay water. The ocean had not so much dropped from beneath him as something else had surged up from below it, lifting him and the raft.

“There! At the far end. Take him, now. And quickly!”

Rüsul turned. From beyond the other side of his raft, a gate of some sort had opened in the gray below. A tall, bizarre-looking person stood next to the opening and three more poured from it. All four had been wrapped in fire-bright plastic, more plastic than he'd seen in his entire life. The legs of their slacks thickened to form heavy boots. The sleeves of their shirts flowed into gloves and the collars rose up into hoods that hid their heads. Following their instructions, three of them advanced upon Rüsul. Translucent gray masks covered their faces. Two had hold of his arms in an instant and hauled him upright like a wet sack of leaves.

It all happened so fast, so unexpectedly. He was on his way to die. The sameness of the past days had helped him to distance himself from the world and his past life. None of this should be happening. His brain wanted to deny it, disbelieve and make it go away. The hands gripping him made that impossible. As his feet scrabbled beneath him, the greatest piece of strangeness came clear to Rüsul and he struggled to pull free. No trunks. From even a short distance, their plastic hoods and masks rendered his assailants anonymous. But this close he saw the truth. Tiny pointy ears set well back. Long snouty faces with little black, slick noses. And all younger and stronger than him. His pitiful attempts to break away from the two holding him ended as the third wrapped more red plastic around each of Rüsul's wrists and pulled them behind his back. The three pulled him from

his raft and began marching him over the grayness toward their gate, past the fourth figure.

“You’re Dogs. Cans, aren’t you? I’ve seen pictures. But you can’t be here. You’re not supposed to . . .” He passed within the grayness and stopped speaking, his eyes trying and failing to make sense of the featureless surface surrounding him on all sides. He knew he moved because his feet stumbled and scraped as his captors dragged him along. His stomach flipped and for a moment the possibility of his evening meal coming back up distracted him. They seemed to move in a broad arc and the grayness gave way to painfully bright light that defined a corridor. The three Cans stopped. Rūsul steadied himself against them, squinting down the walls that somehow existed where nothing belonged but the open sea.

Another person came toward him, taller and leaner than the others and clad in blue plastic that lacked hood or mask. She advanced on him with a liquid gait. A Cheetah with a significantly flatter face, a smallish nose, and even beadier, black eyes than the Dogs regarded him and drew back her lips to reveal gleaming teeth.

“I am Nonyx-Captain Selishta,” said the Cheetah. “Do you have a name?”

Rūsul blinked. The light hurt his eyes but the questions racing through his mind hurt more. Why were there Dogs on Barsk? Why a Cheetah? Why were they speaking to him when he’d left all conversation behind. Why would anyone ask the name of a dead man? Could any adult be so ignorant and stupid?

“I’m on my way to finish dying,” he said.

The Cheetah sneered at him. “Of course you are. You all are. And of course that’s why you’re naked as well? How foolish of me to think otherwise. Well, old man, your demise is going to have to wait a while. My people have many, many questions to ask you, and I need you alive for that.”

The Fant shook his head. “It doesn’t work like that, I . . .”

A cold plastic hand slapped Rūsul across the face. And then again.

“My name is Selishta. This ship and these men obey my will. I’m the only one who gets to say how things work here.” She pulled her hand back, staring a moment at the glove as if her fingers had touched something

disgusting, then stepped back. She directed her attention to the Cans.

“Maybe this one will know something useful about whatever shrubs and leaves the drug comes from. Hold him here a moment while the rest of the crew secures his flotsam, and then put him below in one of the vacant isolation cells.”

“Shrubs?” said Rüsul, more to himself than the others. “I was a wood carver, but that’s past. I’ve died.”

The Cheetah stepped back, waving one gloved hand in front of her stupid-looking nose. “If you had, I’ve no doubt you’d smell better than you do.”

Rüsul’s eyes widened and he studied his surroundings for the first time. As the Dogs had hauled him in he’d acknowledged only the formless gray of the place, but now the clear outlines of plastic wall panels, metal floor tilings, and piercing artificial light removed all doubt that he was inside an artificial structure. He gazed longingly back at the open gate they’d brought him through, where Nonyx-Captain Selishta stood silhouetted against the darkening sky. Rüsul watched as other Dogs in their red plastic suits hurried past the Cheetah, carrying away his supplies in the tarp that had previously covered them. Other Dogs had dragged the mast and sail in and down another corridor. Moments later, more of Selishta’s crew entered with the disassembled pieces of his raft. And then he saw the Cheetah stoop to pick up something else. As she straightened up and regarded the object in her hand, Rüsul saw that Selishta had found his carving of Margda.

The Nonyx waved the carving in a gesture encompassing everything that moments ago had made up Rüsul’s raft. “You won’t need any of that where we’re going.” She paused and regarded the image in his hand. “This is one of your women? Unbelievable. And I thought the males were the ugly ones.” She tossed it away.

The Cheetah dismissed Rüsul with a wave and the pair of Dogs took him away, deeper into the “ship” as the captain had named it. But it wasn’t like any vessel of good wood that he had heard of, open to rain and sky. The world seemed to close in around him, and at first Rüsul imagined that he had actually died. But he knew it wasn’t time yet. Time, in fact, seemed to have stopped. A claustrophobia that he’d never known before squeezed at his heart.

To the chagrin of the Cans leading him, Rüsul's body went limp. Head and trunk down, he began to wail, as mournful a sound as any living being could manage. The Dogs dropped him.

They clutched at their heads and kicked him until pain silenced him.

"Why do they all do that?" said one of the Cans, over the sound of the Fant's moans. "I think my ears are bleeding."

"Shut up and grab an end," said another. "I just want to get him into a cell before he catches his breath and starts in again."

"Why do I get the smelly end?"

"The whole thing stinks. All the more reason to hurry up and dump his ass where he won't be polluting our air."

One took Rüsul's arms, the other his legs. Neither Dog came anywhere near touching his trunk or ears.

"How can something that's been sitting out in the rain for days smell this bad?"

"Yeah, every time we grab another one, I worry the ship's recycler is going to break down and then we're all screwed."

They hauled him ever further away from his death.

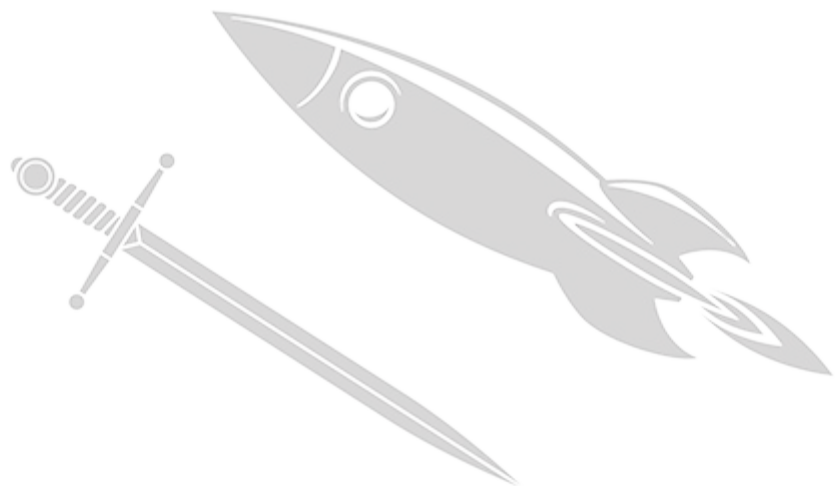
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## **ABOUT THE AUTHOR**

Lawrence M. Schoen holds a Ph.D. in cognitive psychology and psycholinguistics. He's also one of the world's foremost authorities on the Klingon language, and the publisher of a speculative fiction small press, Paper Golem. He's been a finalist for the John W. Campbell Award, the Hugo Award, and the Nebula Award. Lawrence lives near Philadelphia.

# NONFICTION



# Movie Review: *Star Wars: The Force Awakens*

Carrie Vaughn | 3449 words

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**Editor's Note:** We're presenting the following movie review of *Star Wars: The Force Awakens* in two parts. The first, immediately below, is spoiler-free. At the end of the spoiler-free review, you'll find a promotional image from the film, which serves as the divider, and then immediately following the image, you will find the second version, which *does* contain spoilers. So if you've seen the movie, you'll want to just skip to the second version; if you *haven't* seen the movie, you will probably want to stick with this first one (unless you don't care about spoilers).

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## The Burden of the Past (Spoiler-Free Version)

Never has there been more cultural baggage and commentary surrounding a single film release. How does one even begin to review it, given all that history?

Do I start with the personal—my long and geeky relationship with this franchise? (I dressed in costume for the *Episode I* premiere. 'Nuff said.) That seems to be the standard accepted internet mode of talking about Star Wars. Do I talk about the cultural impact of Star Wars in general? That seems to be the more academic, detached formula to follow. Do I even mention the prequels, their disappointment, and the weight of expectation they've placed on this new movie? Or do I simply try to approach it as I would any other movie?

This is a case where the story and the metastory surrounding the film align in interesting ways. Both narratives involve the weight of history, larger-than-life legends, and mistakes made that will either be overcome or will drag everything down into a morass. Nobody can seem to talk about *The Force Awakens* without discussing thirty-five years of previous Star Wars history, just as Kylo Ren, the main villain in *The Force Awakens*, tells

Darth Vader's melted, distorted helmet that he vows to finish what his predecessor started. It's almost like it's a metaphor or something! We're not really dealing with a circle here, but a Möbius, that twists around and still somehow brings us back to where we started.

So, how did I approach this movie? Turns out, I went for the simple: I asked myself, What does a good Star Wars movie look like, in my eyes? I made a list:

- Amazing feats of derring-do. (Check.)
- Engaging characters who are brave and charming. (Our new trio: Rey, Finn, Poe. They'll do.)
- Engaging *alien* characters. (Maz! Portrayed via motion-capture by Oscar-winner Lupita Nyong'o. Also, Chewbacca probably has more to do, and more to emote, in this one film than all the others put together. He was a pleasant revelation.)
- Banter. ("Why do you keep taking my hand?!")
- Sense of wonder. Planetscapes and spaceships. An epic sense of story. (We'll just wrap this all up together, and say there's something to be had here.)
- Innocence and optimism. (This movie has 1000% more hugging than the prequel trilogy. I love every single hug in this.)
- Respect for the original trilogy's story, but with something new. Show me corners of this universe that I've wondered about but haven't seen yet. Build on the world without bashing holes in what came before. (Check.)
- I want a movie that makes me *happy*. (I had to think a little bit about whether or not this movie achieves that, but I believe the answer is yes.)

So that's it, folks: We have ourselves an actual Star Wars movie. There's more to it than that, of course. And there's still the question of the past, and how *The Force Awakens* can't get away from it.

The briefest synopsis: Luke Skywalker, last of the Jedi, holds the key to stopping a conflict threatening to tear the galaxy apart. Trouble is, no one knows where he is. He's gone full hermit. A personable little droid holds a

map to his location—if only it can get to the allies before it is found by the enemy, the cultish remnants of the Old Empire called the First Order, ostensibly led by a young Force-adept named Kylo Ren who worships the memory of Darth Vader. An unlikely pair of characters gets drawn into the quest: a scavenger girl with a murky past named Rey, who is an excellent pilot and an awakening Force-adept; and a former stormtrooper named Finn who isn't sure where his place in the galaxy really is. What follows is a story filled with battles, aliens, great escapes, and dark revelations. Pretty much everything that belongs in a Star Wars movie, and nobody stops the action to talk about trade embargos. (And that is the last I will speak of the prequel trilogy, possibly forever.)

My first impression is that J.J. Abrams took the Star Wars trope box, slapped a dial on it, and screamed, “It goes all the way to eleven!” It's hard to know whether to be annoyed that so many things in this movie are so overly familiar—or ecstatic that all our favorite things are here and looking oh-so-pretty. Ultimately, the film is treading a fine line between nostalgic and derivative, and whether you think it succeeds or fails seems to be a matter of individual preference. For my part, I choose to see the derivative moments as mythic. Patterns repeat in different ways. Mistakes repeat, and maybe it will take a new crew of characters to make things right.

Which brings me to the thing the movie indisputably does well: presents a cast of fresh-faced new characters who are impossible not to love. Fifteen minutes away from the theater afterwards, I realized I desperately want to know what happens to these people next. Even Kylo Ren and smarmy General Hux (this movie's answer to Grand Moff Tarkin). Also, the film passes the Bechdel test. This is Star Wars for the twenty-first century.

The real question is: What's next? The film used so many pieces/parts from the original trilogy, but it ended up in a different place, I think. So what now? I'm going to go with the camp that says this film was *necessarily* overly familiar—so it could lure us in and make us comfortable.

And, now, once again, we can trust in the Force.

My initial criteria for a good Star Wars movie have been met, but the ultimate test is going to be the test of time. What will I think of this movie in five years? In ten? Will I be vowing to never speak of it again? Or will I still be crying when I watch it, the way I still cry at the original *Episode IV*?

I'm anxious to find out. For now, the film did exactly what it needed to do: remind us why we fell in love with this world in the first place, and—like Han Solo says in all those previews—make us feel like we're home.



**Editor's Note:** The following version of the review contains MAJOR PLOT SPOILERS for *Star Wars: The Force Awakens*. Read at your own peril!

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## **The Burden of the Past (Contains Spoilers)**

Never has there been more cultural baggage and commentary surrounding a single film release. How does one even begin to review it, given all that history?

Do I start with the personal—my long and geeky relationship with this franchise? (I dressed in costume for the *Episode I* premiere. 'Nuff said.) That seems to be the standard accepted internet mode of talking about Star Wars. Do I talk about the cultural impact of Star Wars in general? That seems to be the more academic, detached formula to follow. Do I even mention the prequels, their disappointment, and the weight of expectation they've placed on this new movie? Or do I simply try to approach it as I would any other movie?

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So, how did I approach this movie? Turns out, I went for the simple: I asked myself, What does a good Star Wars movie look like, in my eyes? I made a list:

- Amazing feats of derring-do. (Check. Rey's escape may be one of my favorites.)

- Engaging characters who are brave and charming. (Our new trio: Rey, Finn, Poe. They'll do.)
- Engaging *alien* characters. (Maz! Portrayed via motion-capture by Oscar-winner Lupita Nyong'o. Also, Chewbacca probably has more to do, and more to emote, in this one film than all the others put together. He was a pleasant revelation.)
- Banter. ("Why do you keep taking my hand?!")
- Sense of wonder. Planetscapes and spaceships. An epic sense of story. (We'll just wrap this all up together, and say there's something to be had here.)
- Innocence and optimism. (Rey and Finn find each other by chance and cling to each other because neither one has ever had a real friend before. It's a heartfelt relationship. This movie has 1000% more hugging than the prequel trilogy. I love every single hug in this.)
- Respect for the original trilogy's story, but with something new. Show me corners of this universe that I've wondered about but haven't seen yet. Build on the world without bashing holes in what came before. (You know what I've always wanted to see in a Star Wars movie that this movie gave me? Heroes stealing a TIE fighter. "This is very complicated!")
- I want a movie that makes me *happy*. (I had to think a little bit about whether or not this movie achieves that, but I believe the answer is yes.)

So that's it, folks: We have ourselves an actual Star Wars movie. There's more to it than that, of course. And there's still the question of the past, and how *The Force Awakens* can't get away from it.

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quest: a scavenger girl with a murky past named Rey, who is an excellent pilot and an awakening Force-adept; and a former stormtrooper named Finn who isn't sure where his place in the galaxy really is. What follows is a story filled with battles, aliens, great escapes, and dark revelations. Pretty much everything that belongs in a Star Wars movie, and nobody stops the action to talk about trade embargos. (And that is the last I will speak of the prequel trilogy, possibly forever.)

My first impression is that J.J. Abrams took the Star Wars trope box, slapped a dial on it, and screamed, "It goes all the way to eleven!" Here's a desert planet that's even more desert-y and remote than Tatooine! You like the Death Star? We'll give you an entire planet that's been turned into a Death Star, and it doesn't just kill planets, it destroys *entire systems of planets!* You want a father-son confrontation on a catwalk above a gaping chasm? Here it is, turned to eleven!

Yes. Well. About that. No, Mr. Abrams, your father and son on a catwalk over a chasm scene does not quite outdo the previous one, for lots of reasons, but I'll give you a B+ for effort. More about that scene in a bit, because it's the one all those rabid spoiler warnings were there for.

It's hard to know whether to be annoyed that so many things in this movie are so overly familiar—or ecstatic that all our favorite things are here and looking oh-so-pretty. Ultimately, the film is treading a fine line between nostalgic and derivative, and whether you think it succeeds or fails seems to be a matter of individual preference. For my part, I choose to see the derivative moments as mythic. Patterns repeat in different ways. Mistakes repeat, and maybe it will take a new crew of characters to make things right.

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Back to that catwalk-over-a-chasm, I very much want to talk about that moment. You know the one. Han Solo confronts his and Leia's son—(And can I just say how happy I am the movie never tried to hide the fact that Kylo Ren is Han and Leia's son? It's pretty much out there right from the

start so we can move on to other business.)—because Han (or at least Leia) believes there’s still good in him. (See what I mean about this lurking familiarity running through the whole movie?) And Kylo runs him through with his lightsaber. (By killing his own father, he does what Luke couldn’t—another echo.) Yes, that happens, and the scene annoyed me. Not because it happened at all, but that the moment was telegraphed so broadly that my writer-brain was shouting “Just do it already!” It was a bit anticlimactic, which the death of a character of that stature should not have been.

The thing is, I believe it’s a moment that needs to happen. This movie demands a death, and Han Solo is standing in that place in the story. Star Wars kills its mentor figures, because losing a mentor is a hero’s next step into a larger world. No one in any of the Star Wars movies has needed a mentor more than Rey and Finn do, and they’re so excited to have the legendary Han Solo as theirs—and then he’s gone.

I’ll tell you what, though: Two of my very favorite moments in the film are the ones that bookend Han’s death. The moment before, when I’m thinking of how Jedi change their names when they turn to the Dark side, and Han and Leia surely didn’t name him Kylo, so what did they name him? Will they throw a bone to the former Expanded Universe books and take a name from there? Or make up an entirely new name—but that doesn’t feel right, does it? And then Han shouts out *exactly* the name I want him to shout out when he calls to his son. And Kylo—Ben—stops. *That’s* a moment that honors the films that came before, honors the fandom, and yet gives me something new enough to jolt my spine. That’s a scene that successfully balances the weight of history with its own story.

Then there’s the moment some ways after, when Leia is there to greet Rey, and while everyone else is celebrating, they share a moment of vast and wordless pain. I didn’t cry when Han died, but I cried like a freaking baby during this scene because this was the payoff: a passing of the torch. There’s something beautiful and visceral about seeing Leia holding tight to the heroine of the next generation, and Rey acknowledging the path she’s on. God, I’m crying right now writing this.

I wasn’t sure I was at all interested in Kylo Ren at first, but I find him growing on me. His story makes sense to me: After all, has there ever been a kid who grew up with a more daunting set of shadows looming over him?

Han, Leia, Luke, and an entire Republic basically expecting him to be super awesome? Geez, I'd put on a mask and change my name, too. And then maybe try to find out more about that one family member nobody ever talks about. But what next? He took the step he can't back away from. He also has some sort of connection to Rey, now. What will happen with that? I have some ideas, but we'll just have to wait and see.

Most of all, though, I love having a young woman standing in the hero's place in a Star Wars story. She's a pilot. She's clever. She's an orphan. The only thing she has to go on in learning about the Force is the old legends she's heard—just like Luke. Rey as the central character on the hero's journey here feels *right*. The movie ends at exactly the right moment: She confronts Luke, offering him his old lightsaber with an expression of stark desperation on her face. The moment echoes Luke's first meeting with Yoda, but here, they both know all too well the depths of the mistakes they might make. This moment of the film also seems well aware of the weight of history it bears, and manages to incorporate that weight into something new.

The real question is: What's next? The film used so many pieces/parts from the original trilogy, but it ended up in a different place, I think. So what now? I'm going to go with the camp that says this film was *necessarily* overly familiar—so it could lure us in and make us comfortable.

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## ABOUT THE AUTHOR

Carrie Vaughn is the bestselling author of the Kitty Norville series, the most recent of which is the fourteenth installment, *Kitty Saves the World*. Her superhero novel *Dreams of the Golden Age* was released in January 2014. She has also written young adult

novels, *Voices of Dragons and Steel*, and the fantasy novels, *Discord's Apple* and *After the Golden Age*. Her short fiction has appeared in many magazines and anthologies, from *Lightspeed* to *Tor.com* and George R.R. Martin's *Wild Cards* series. She lives in Colorado with a fluffy attack dog. Learn more at [carrievaughn.com](http://carrievaughn.com).

## Book Reviews: January 2016

Andrew Liptak | 2216 words

In 2012, Linda Nagata's self-published novel *The Red: First Light* became the first self-published novel placed on the Nebula ballot for Best Novel. Later, Nagata resold the book to Saga Press, which has since published Nagata's entire trilogy. For this month's review column here at *Lightspeed*, we're going to take a look at each of the installments of the Red Trilogy—*The Red: First Light*, *The Trials*, and *Going Dark*.

As a note of disclosure, I published a related story from Nagata in my anthology, *War Stories: New Military Science Fiction*. In addition, I will note that there are spoilers for the entire trilogy in this review.

### *The Red: First Light*

Linda Nagata

Hardcover/Ebook/Paperback

ISBN 978-1481440936

Saga Press

June 2015

432 pages

*The Red: First Light* is an ambitious, sometimes scattered, but excellent novel. Nagata uses her time to focus on a wide range of relevant topics: corporate warfare, the emergence of an AI from our technology, the impact of wartime trauma, cybernetics and post-humanism, political separatism in the United States, and even the ways in which we communicate through social media. In the hands of another author, any one of these topics would be a daunting task, but Nagata pulls it off triumphantly.

*The Red: First Light* opens with a soldier named James Shelley, deployed to some out-of-the-way outpost in central Africa, where he leads a small squad of soldiers in a never-ending corporate war against a local warlord. While he's in the field, he gets premonitions of danger, which has him wondering if he's being spoken to by God. When Shelley has his legs blown off in an attack that he seemed to know was coming, he's ushered into an experimental program that gives him some advanced prosthetics,

and he's assigned to a specialized unit that is thrust into action soon after his training begins. Nagata's written something truly interesting here: a novel about faith and religion in the trappings of a hard-SF military novel.

Shelley is a different sort of soldier: He's an early adopter of a new technology called an overlay, which uses cybernetic augmented reality implants on his eyes, coupled with a skullcap, to provide him with a range of enhanced options out on the battlefield. It identifies individuals and targets for him, acts as a communications hub, and a bunch of other things. The skullnet is another piece of experimental tech that helps him even out his moods and cope with wartime trauma. On top of all this is a constant connection to a virtual handler, Delphi (who's featured in Nagata's short story here at *Lightspeed*, "Code Name: Delphi" ([lightspeedmagazine.com/fiction/codename-delphi](http://lightspeedmagazine.com/fiction/codename-delphi)), who is an additional set of eyes and ears while he's in combat.

After Shelley's brought back and put into training with his new legs, the unthinkable happens: Coma Day. A series of nuclear weapons are detonated across the United States, targeting communications networks. The purpose isn't mere terrorism: a Dragon—a member of the super-wealthy class—had ordered the strike against The Red, a machine intelligence that seems as though it's been altering and shifting events for an unknown purpose. As Shelley and his team are thrust into the action, they're put on a path that will change each of their lives.

One of the interesting things about this book is how the variety of technological ideas are interpreted by the various characters and in Nagata's prose. Biblical and fantastic imagery is used throughout the novel, and it's interesting to see how a hard-SF novel links together concepts like God and magic within a technological environment. While reading this book, I was reminded in no small way of the television show *Person of Interest*, which plays with a number of the same ideas: One character in the show refers to an AI as a God, and many characters in this novel do as well. Even more chilling, Shelley seems to have been selected by the Red to carry out its larger plans and from its viewpoint in the Cloud, and he's guided through challenging situations and put through trials that test his own resolve and health, only to emerge from the other side a changed person.

Just as exciting is Nagata's ripped-from-the-next-five-minutes future.

She's clearly been reading up on what the military world of the future could look like, and this is a military futurist's dream. Soldiers are outfitted with exoskeletons called Dead Sisters that help them move around, and they use high tech gear like skullcaps, farsights, drones, handlers, and more. Nagata extends this off the battlefield, and looks at how this technology bleeds over to the civilian world. Nagata focuses on the technology, but in a casual way, as fixtures of this future, rather than obsessing over it. The result is a world that looks very much like our present. This is a book that sits comfortably alongside other recent military thrillers, such as *Ghost Fleet* by August Cole and P.W. Singer or Karl Schroeder's *Crisis in Zefra* and *Crisis in Urlia*, each commissioned by the Canadian Army Land Warfare Centre.

Ultimately, *The Red: First Light's* core story is one about one single concept: Duty. Shelley is groomed as a specialized soldier whose job is to protect the country against threats, internal and external. He and his squad come up against corruption and personal challenges that test him every step along the way, and he has to ultimately decide how to best serve his country.

### *The Trials*

Linda Nagata

Hardcover/Ebook/Paperback

ISBN 978-1481440950

Saga Press

August 2015

480 pages

James Shelley's adventures continue in Nagata's follow-up novel *The Trials*. After the actions of the First Light mission, the Apocalypse Squad is put on trial for their actions. They're charged with treason for delivering an American citizen to a foreign trial. They know it, too: Their aim is to break open the story of corruption that's present in the country, and by doing so, they're publicly martyring themselves before the country.

*The Trials* is a weird book—it feels like it should almost be three novels, because it splits into three parts nicely—and over the course of the triptych, it becomes apparent that these are designed like episodes of a television show or serialized novel. In the first, the Apocalypse Squad goes on trial.

We see that they've made a much greater impact on the United States than they thought: There are protests in their favor, and they're ultimately pardoned for their crimes. After that, they're discharged from the military and released. Shelley returns to New York, where he meets Delphi, and Nagata explores some of the aftermath of what Shelley's been through. It's one of the few times I've seen wartime trauma really addressed, and addressed well.

Nagata returns to the larger story at hand after this episode: Shelley and his team reunite and are recruited to work for the private firm that had sponsored the First Light mission. Their task is an extension of their original mission: prevent another Coma Day. They're sent on a whirlwind mission to track down several remaining nuclear warheads, which leads them across the country and over the Atlantic Ocean. In the final act of the novel, Shelley is brought into another mission, one that takes him into Earth's orbit to track down one last nuclear warhead.

While *The Trials* is a scattered novel, it's not a disorganized one, and between it and *First Light*, a larger picture has begun to emerge. Shelley has been chosen to help make the world a better place by helping to eliminate one nuclear weapon at a time. It's an interesting choice: Decades after the Cold War, the threat of nuclear annihilation is largely forgotten, replaced by fundamentalist terrorism and climate change as the next major threats that face the world's society. Shelley has grown somewhat in the course of those two books; he's developed a greater sense of morality, which guides him when faced with complicated problems. He reminds me quite a bit of Jim Holden from James S.A. Corey's *Expanse* series: someone who's optimistic and with a simple vision of good and evil, which cuts right through the clutter in the world.

### ***Going Dark***

Linda Nagata

Hardcover/Ebook/Paperback

ISBN 978-1481440974

Saga Press

November 2015

464 pages

The last installment of the trilogy, *Going Dark*, is as exciting as its predecessors, but ultimately doesn't quite live up to what *First Light* and *The Trials* promised. The novel jumps to eighteen months after the end of *The Trials*: Shelley is now a member of ETM-71 (Existential Threat Management), a squad organized and directed by the Red and designed to prevent humanity from doing something that'll wipe out the species. The novel opens with the team accidentally kicking off a war in the arctic, and we see that there are cracks beginning to show in how the Red accomplishes its mission—it can be fooled, manipulated, and ultimately, controlled. As Shelley and his new teammates are assigned to new, increasingly dangerous missions in the Middle East, they have to come to terms with what the Red really is, and how it determines how to protect humanity.

It's here where we really get to dig into how the Red functions: It's an intelligence, but it's not necessarily an individual. It has motives, but parts of it might function against itself. It might be a marketing program run amok, or it might be something else entirely. We see Shelley and his team work for it because they firmly believe in what it's doing—to the point where they'll abandon their loved ones. At the same time, they begin to learn there are people willing to take control of the Red so that they can rule the world.

It's a decent end to the trilogy, and throughout much of the novel, Nagata raises some really interesting points about the Red and Shelley's mission, all while doing some really interesting work with her main character. Shelley's grown throughout the series, and he ultimately comes to the end someone who's almost ready to die for what he believes in—but not quite.

Ultimately, Nagata is playing with some enormous concepts—concepts and ideas bubble over in these three books, but the focus of the trilogy can be distilled down to a key point: Humanity is a self-destructive species, sacrificing long-term survival for short-term wealth and power. The books make a collective point that this shortfall ultimately leads back to how a select group of individuals can drive the world to destruction pursuing their own goals, and that to save the world, there needs to be a larger revolution that changes the balance of power. Nagata doesn't quite go this far: Shelley's adventures are episodic and deal with crisis after crisis, but the implication seems clear. Shelley's story comes to an abrupt and not entirely

pleasing halt, and much of the momentum, questions, and points that Nagata comes up with just . . . fizzle out. There's potential to this sort of story that is missed, and we're left without answers to a bunch of key questions: what is the Red's end game? Why was Shelley chosen for his role? How does this story end? These questions hold the trilogy back from being truly great, but it's the journey that counts. On the whole, *The Red* trilogy is an excellent work of science fiction, depicting a future that seems all too plausible and providing us with an incredible amount to think about as we go about our technological lives.

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## **ABOUT THE AUTHOR**

Andrew Liptak is a freelance writer and historian from Vermont. He is a 2014 graduate of the Launch Pad Astronomy Workshop, and has written for such places as *Armchair General*, *io9*, *Kirkus Reviews*, *Lightspeed Magazine*, and others. He can be found over at [www.andrewliptak.com](http://www.andrewliptak.com) and at [@AndrewLiptak](https://twitter.com/AndrewLiptak) on Twitter. His first book, *War Stories: New Military Science Fiction* is now out from Apex Publications, and his next, *The Future Machine: The Writers, Editors and Readers who Build Science Fiction* is forthcoming from Jurassic London in 2015.

## **Interview: J. Michael Straczynski**

**The Geek's Guide to the Galaxy | 7531 words**

One of the most popular science fiction writers in Hollywood, Straczynski is best known as the creator of the TV show *Babylon 5*, for which he wrote almost a hundred scripts, and he also has countless other writing credits for various TV shows, comic books, feature films, cartoons, books, and articles. Together with the Wachowskis, he co-created the Netflix original series *Sense8*, which we reviewed in episode 157 and which was just renewed for a second season.

This interview first appeared on Wired.com's *The Geek's Guide to the Galaxy* podcast, which is hosted by David Barr Kirtley and produced by John Joseph Adams. Visit [geeksguideshow.com](http://geeksguideshow.com) to listen to the interview or other episodes.

### **You said that as a child you would steal science fiction books and read them, then bring them back?**

Back when I was a kid, libraries tended not to stock a lot of science fiction. They did give a few necessary things they had to, like *1984*, *Brave New World*, a couple of Bradburys, but to find anything with more meat to it, you really had to go somewhere else. They didn't consider science fiction to be literature. So the options I had for finding science fiction books were limited. But when I was a kid living in Newark, twelve or so, the corner stores had a section where they sold books on the spinner racks; romance, crime, and science fiction by the best writers of the time that came out from very small publishers. I didn't have money to buy them, so I would figure out where the mirrors were positioned so I could create a blind spot, pick out one or two books—usually the ones that said “Hugo Winner”—put them in my notebook or pocket, buy a candy bar at most, read it at home in such a way that I would not break the spine, and put my school books on top of it to flatten it back out again. Then I would bring it back to the store, put it in the spinner-rack, and take the next one; it became my library. My only concern was that I would get caught putting them back, because who would

believe I was trying to put the books back?

**It's interesting that you were so scrupulously honest as a twelve-year-old. Do you think you were naturally an honest person? Or did you absorb some sort of lesson somewhere?**

Certainly comic books gave me a sense of morality; I always looked to Superman as a role model, in how he dealt with the world and people. Plus, my father was a crook and a terrible human being, and I thought I would always go the opposite direction from him. He would've kept the books, so I had to be sure to return them.

**Would he have destroyed them? I heard you say that he actually tore up your comic book collection at some point.**

Yeah, he was a pretty evil guy. We moved every six to eight months, when I was a kid. For the first ten years of my life, I went to a different school every year, and so my grades were never great. He was always looking for an excuse for that, and one particular time I had mouthed off to him when I probably should not have done so. And I was poor and really had to trade to get what I wanted; I had a pretty good collection, and kept my comics in pristine condition. I had a complete run of *X-Men*, the first issue, and *Fantastic Four*—All these books, complete runs; the first appearance of *Spider-man* and *Amazing Fantasy*; books that now would be hundreds of thousands of dollars in value, I kept in a box with a circle on the outside, and written inside the circle was “Joe’s Comics.” And as I sat there, he put the comics in front of me and began tearing them up until all that was left was the box. Which is why later on I made it my company—Joe’s Comics. In later years, he would lament the fact that he had done it, only because he could've gotten the money for it, but at the time no one knew they had value. They had value to me on an emotional basis, and he wanted to hurt me.

**You're obviously a hardcore science fiction fan; you've read all these books, and then you went up to Hollywood, where my impression is that people don't read a lot of science fiction novels. Is that true? What was it like for you showing up there? Did you feel out of place, or did you connect with other people who were interested in reading science fiction?**

I think that science fiction now is more a literature of Hollywood than when I got here. Back then, it was a lot of suits who were afraid of science fiction because they didn't know what it was. It's worth pointing out that when I first came to LA, I came here in the persona of a journalist. I'd been working in San Diego for *San Diego Magazine*, *San Diego Reader*, the *LA Times* San Diego bureau. I got the opportunity to come to Los Angeles when I got my first contract for a book, so for the first three or four years, I was primarily working as a reporter. I knew a number of television writers, most of them in animation, and they were in the science fiction genre. I was a fan of the genre. I went to bookstore signings, hung out with science fiction writers, but I wasn't really living in that world until I sold a couple of short stories here and there and then got into animation.

If there's any one thing that I would point out about that time versus now, it's I had about twenty friends who were television writers primarily working in the science fiction genre, and virtually all of them are no longer writing in television. What happens sometimes, with writers in any genre, is that they define themselves to death. They say, "This is what I do. This is the kind of story that I tell. This is how I write." And that's great, as long as the market keeps buying that. When the market shifts, if you don't shift with it—at least in terms of learning new ideas, new technology, being open and responsive to the changes in society—you get left behind. And I think that points to the importance of staying fresh and current as a writer and not becoming complacent. Complacency kills careers faster than anything.

**You mention that you started out in animation, and you worked on a lot of my favorite cartoons as a kid: *He-Man* and *Jayce and the Wheeled Warriors* and *The Real Ghostbusters* . . .**

I'm sorry.

**Well, I liked them when I was a kid. I still think *The Real Ghostbusters* is a pretty well written show. I went back and watched it recently and I was noticing that, in addition to you, Michael Reeves and David Gerrold also wrote episodes, these writers that I know from science fiction. Did you get a lot of other science fiction writers working in the animation departments?**

Yeah; what was good about the show was that it was a groundbreaker. DiC Entertainment had done a number of shows, but until that one they primarily did gang credits—they put all their writers' credits in the back of an episode in a group so that you never knew who wrote what. I said, "I can bring in good science fiction writers, who know their stuff, but they're going to want to have their names up front where they, quite frankly, belong." I was able to use that pressure to pry loose the single-credit process, and once we did it, other shows were able to do it as well. So, to me, it was important, not just to change the credit situation, but because I wanted us not to be just a kids' show. I wanted it to delve into the history and language and literature of science fiction, fantasy, and horror. Because of that, the show had a maturity to it that, with some glitches here and there, persists and is still appreciable now.

**Also, somewhere in there you met Harlan Ellison? Or you gave him a phone call?**

That happened earlier, when I was still living in San Diego. I had been writing and selling things for a while, and then I hit this stretch where I wasn't selling anything. I didn't realize at the time that every writer goes through a series of plateaus, where you know you aren't writing where you should be writing, but you can't write at the level you were, and everything you write in-between just explodes in front of you and won't sell. Growing up as someone who wanted to be a writer, the introduction that Harlan Ellison did to his stories really sustained me. I was a street rat, had grown

up a street rat, I come from nothing, my family has no connection to literature or writing, and in his introductions I found a kindred spirit. Harlan Ellison was a street rat. He had run with gangs; he was considered trouble. I remembered that in one of his introductions, he had given his phone number. "I wonder if that's real," thought I, so I dialed the number and waited and it began to ring. There was a click and I heard, "Yeah?"

"Is this Har-har-har-lan Ellison?" says I.

"Yeah, what do you want?"

"My-my-my-my name is Joe," I say, stammering through the whole thing, "And I'm a writer and my stuff isn't selling and I thought you might have some advice." Which is the stupidest thing to ask any writer; it's like saying to someone, "What are you doing to my wife?" There is no good answer to that question.

So he says, "All right. Here's what you do: If it's not selling, it's shit. My advice to you? Stop writing shit."

". . . Thank you, Mr. Ellison." Years later, I got to LA and we met in bits and pieces and eventually we became friends, and I finally reminded him of that conversation. And he said, "Were you offended?" And I said, "Had you been wrong, I would've been offended." But he wasn't.

**Another show you worked on that I loved as kid was the new *Twilight Zone* that Harlan wrote for, along with a bunch of other big science fiction authors. Did you bring all those people onto that show?**

No. There were two iterations of that: the CBS version that Harlan worked on, and when they finished up that version, they wanted to do thirty additional half hours direct to syndication in order to fill out the package; back then, you needed to have at least ninety episodes to syndicate. That crowd had, for the most part, moved on and chose not to be involved in our version, even though I thought, in many ways, we were going back to Rod's morality fables.

I did one episode for the network version and was told flat out by Philip DeGuere that, "We're not trying to do morality tales. We're not trying to do Rod Serling. We're not trying to do anything edgy and dark." And I

remember thinking, “Well, then why do you call it *Twilight Zone*?” When we did our version—and people get upset when I say this, but I’m just repeating back what I was told and what he said flat out in interviews—we went back towards that morality-fable point of view, and a lot of them opted not to come and play with us. We had a copy of Alan Brennert’s adaptation of the “The Cold Equations,” which we produced, but otherwise it was other writers who came in, and many of them were quite new.

**I know George R.R. Martin worked on the show, I think on the earlier iteration, but I was just curious if you had worked with him at all.**

When I first sold an episode to the network version, I heard that George was trying to discourage them from buying my script, because I think he enjoyed being the resident science fiction representative after Harlan left; I don’t know that for a fact, that’s just what I was told. Regardless, I had nothing to do with him beyond that, on the first version or my version.

**Then, obviously, you launched *Babylon 5*, and it’s famous for creating this idea of the five-season arc. It seems like it’s really hard just to get a science fiction show made in Hollywood at all. Could you talk about how you came up with the idea of the five-season arc and what made it feasible?**

Bear in mind I’m Russian, and Russians tell long stories. We don’t know how to tell short stories or give a short answer to a question, as you’ve seen so far. It always frustrated me that, having grown up reading sagas like *Lord of the Rings* and *Childhood’s End*, nowhere in television did you find something of a parallel construction. When I came up with the storyline for *Babylon 5*, it came in as a saga, not as a series of episodes. Back then, episodic science fiction was all there was, and that applied to most television as well. No one had ever done a story that said, “Look, we’re going to do it in five years, beginning, middle, and end, and every season based on the section of a book in the sense of introduction, rising action, complication, climax, and denouement.” When I went around to talk about

this, I was told repeatedly that's not going to fly. People haven't got the attention span for it. Back then, all science fiction hit the reset button at the end of the episode, but I knew that this would work.

It wasn't until Chris-Craft Television came on at Warner's to make the deal that we were finally able to get this thing on the air, and even then people kept saying that other than *Star Trek*, no space-based science fiction series—American shows, at least—have gone more than three seasons in twenty-five years. I would tell them, "I'm on a mission from God, motherfucker." We got it, and the funny thing has been seeing that spread over the subsequent years. When Damon Lindelof came on to develop *Lost*, he said straight up to me, "We want to pattern this after the five-year arc you have in *Babylon 5*." And *Battlestar* did a similar thing. Now, it's become "the thing," at least in terms of the attempt. I had a meeting at a network a couple years ago where I was talking about a show I wanted to do with the five-year arc and the main guy in the room said, "Look, we have people coming in all the time saying 'we want to do a five-year arc.' They can never pull it off successfully; what makes you think you can do it?" I invented it, all right?

**One thing that's interesting about *Babylon 5*, that I've seen a lot of people talking about, is that you had the idea of gay marriage as just an ordinary fact of life. How did it come about that you wrote that into the story? Did you get any pushback?**

Surprisingly, no pushback. They are always more open to doing that in a science fiction context rather than a mainstream context, at least back then. My sense was that if we hit a point where we are actually having interaction with alien civilizations, the differences between ourselves become far less important. Gender, sexuality, ethnic background—those pale into the background when you're sitting across from something with fangs and fur and three heads. And I thought, that being the case, then gay marriage shouldn't even be an issue. So we have Franklin and Marcus going off to Mars as a married gay couple as their cover, and no one said boo about the social aspects.

**What sort of reactions did you get when that aired? Did you get positive and/or negative responses from viewers?**

We didn't make a big deal out of it; it was just there, and those who saw it responded, for the most part, very positively. Most people just accepted it as context and let it roll right off of them.

**That's great. When you're looking back on *Babylon 5* now, what would you say are some of the big lessons that you drew from that experience that you would apply to television shows you're making now?**

Because no one had ever done it before, I was making up the structure as I went; now, looking back, if I were to do it again, there are certain elements I would adjust. I would put more visible arc stuff in the first season. Most of it is "when writers talk to each other" kind of stuff, which makes for terrible radio or podcasts, but suffice to say that whenever you write something, you learn the lessons that thing has to teach you. That's why a lot of people who want to be writers, who spend years working on one script or book, I tell them, "You're doing this wrong. Finish that, whatever it is, and move on." As a writer, your job is to acquire tools for your toolbox that will allow you to write more, and more complex things; every time you write a story or a script, you acquire another tool for your toolbox. For me, that show provided a lot of tools; can I say specifically that, "this tool taught me this?" No, but in the aggregate, I learned a lot of lessons from that that are able to feed into my work now.

**I saw you give an interview a couple of years ago where you were asked about collaborating on screenplays, and you said, "I tend to personally avoid it, only because gunfire erupts at some point. I don't play well with others." So I thought, given that, it was interesting you decided to collaborate with the Wachowskis on this new show, *Sense8*. What made you want to collaborate this time? And how long do you think it will be before gunfire erupts?**

Fortunately, our temperaments are much the same, our interests and social perspectives are very much in sync with each other. I was hesitant going in, but to delve more deeply into the root of what you asked, that question was about collaborating on the script with someone, so you're both in the same room writing something versus what we did on *Sense8*, which was they would write two scripts and hand them off to me; I would read them, revise them, make changes. I would write the next two scripts, fire back at them, they would read, revise, check, then write their next scripts. And because we were both writing and rewriting each other, we ended up sharing credit on everything. We did sit together for months to work out the structure of the show, talking about the characters—where they were going, what they wanted, what they believed in, what they were afraid of, and what they hoped to achieve—but when the actual writing started, we went off to our separate corners of the room and did our thing. This season is more of a direct writing, with all of us in a room, so that should be interesting. I think there will probably not be gunfire, but you never know.

**Would you say that you focus on a particular area more than they do? Like character, action, setting, or dialogue?**

If I had to break it down very mechanically, they're terrific on action, really good on plot; structure I think they struggle with a little bit, and character they're also good at. In my case, I'm a structural demon. I lock on to structure like nobody's business. I'm soft on plot. I love action but I can't often make it work in a script as well as I would like to, and I'm also good on character. So like two keys, when you put them side by side, they mesh really well; their strengths make up for my weaknesses and my strengths make up for whatever they're still working on. It's a very good combination.

**From the earliest concept to the final version, were there any major changes you made along the way in how the story turned out?**

Whenever you write something for the first time, you're really telling the story to yourself. We did a couple versions early on that were us feeling our way through the story, the world, and there was more of Whispers involved. One sensate was in Iraq. It was a very different kind of a story, and we thought, "Okay, is that what we actually want to tell the story about? Do we want to, just like every other show, cut to the bad guys, or do we want to stay in subjective camera?" And that became the anchor for all the subsequent iterations.

If you look at the show, after the first opening sequence where the sensates are born, the entire story is told from their perspective. Usually, in any kind of science fiction show, you cut away from your good guys to what your bad guys are doing, and along the way you can get information from the characters that helps move the plot along. But because our characters didn't know what was happening to them, and we couldn't cut away, we realized that we were going to stick the audience in that same position, which is a very risky proposition, particularly because science fiction shows tend to be very much oriented on the plot, the gimmicks, the gadgets, the mission, and that's all spelled out pretty quickly early on in the process. Here you wouldn't find out what that was all about for several episodes. It was a calculated risk, but we figured that the Netflix model lets us do that and the audience is hip enough and strong enough to wait to figure it out. We've shot it, really, as kind of a twelve hour movie, and the first four hours are the first act, and the next are the second act, and the last four hours are the last act. If you were in a movie theater and you were twenty minutes into the first act of a mystery, you wouldn't expect to have all the information. We figured we'd use that same approach, and people will stick around or they won't. Happily, they did.

**So when you're setting your story in places like India, Kenya, and South Korea, how familiar were you with the countries going in? Did you have to do a lot of research or travel?**

We did a buttload of research on each area. When we were in India, Mumbai, we would sit down with people who ran a restaurant, because one

of our characters is the daughter of a guy who runs a restaurant, just to get to know them, and that would feed into the story. Fortunately, Tom Tykwer has shot previously in Nairobi quite a bit and his experience let him direct those sequences with a certain degree of verisimilitude. The Wachowskis had lived in Berlin for a number of years, I had visited there numerous times and worked on projects there, so we had a fairly good foundation of things, but we then took advantage of the location scouting process to immerse ourselves, so we could make the revisions of the script that much more authentic.

The cool thing about this is, as we were starting prep, we had a meeting with a guy in San Francisco who was the production coordinator assigned to us from the company in India that would be working with us. He said, "As a rule, we have two kinds of productions happening in Mumbai; the first is our own stories about us and our culture, our language, history, and religion that we make for ourselves and they never really get much release in the Western world. The other kind we make are Western stories set against an Indian backdrop; we're just the curtain hanging behind them. This is the first Western show about us, and we can't tell you how much that means to us." For Lana, Andy, and myself, that was a really great personal moment, to have that kind of feedback and know we had done it right.

**Speaking of their religion, there's this subplot in India where there's this clash between the more modern-oriented people and the more religious fundamental people. Is that inspired by some specific events that have been happening in India?**

Yeah, there was a case about four years ago where there was a fellow trying to pass laws against religious panhandling, where they could do charms or curses for you, providing fraudulent religious practices for money. And he was assassinated, much as our character in *Sense8*.

**That's interesting. I would guess that a lot of times the reason there aren't stories made in Hollywood about people in India, or set in India,**

**is because they don't think it will sell; did you have any pushback from money-making people in terms of having those characters set in those locations?**

Zero, because we aren't dealing with movies; we're dealing with a television network, and Netflix really got behind the show and the international aspect of it. They are looking, on their own, to expand their international horizons and broaden their opportunities. They saw this as a net positive all around; in point of fact, the show is sitting very high up in every market, while other shows they do may do well domestically, but don't have the same success overseas. That shows it was a pretty worthwhile gambit on their part.

Netflix has never been anything but supportive. They never questioned us or stopped us from doing anything. Their main role, as we went along, was really to keep us on target. On any big project, halfway through, everybody forgets what the hell they signed on to do in the first place, and their task was to nudge us back on track.

**There was an article on io9 and the headline was, “Sense8 is the Philip K. Dick adaptation we always wanted.” When we discussed the show previously on this podcast, I said I thought it was more the Theodore Sturgeon adaptation we always wanted. I was curious to get your opinion on which science fiction books or authors had the most influence on the show.**

That's more a fan point of view, because whenever something comes on, the first impulse is to compare it to what went before, but that doesn't really involve the creative side of it. As we sat down to create the story, Philip Dick, Ted Sturgeon—none of that was ever mentioned. It really came down to, “Who are these characters? What countries are they in? What's their family background? What do they want to achieve with their lives? And what happens if they find themselves suddenly in each other's heads?” That being said, obviously we all stand on the shoulders of giants and there is a subconscious or cultural debt there, but in terms of specifically saying, “Ted

Sturgeon did this, so we should do this, or Philip K. Dick did this . . .” That never happened.

**What do you think about the critical reaction to the show overall? It seems like it was a little negative at first, but as the show went on, the critics got more and more positive. Do you agree that’s what happened? What’s your overall take on that?**

It seems like there’s two kinds of critical reactions: those who didn’t like the show, and those who saw more than three episodes. Persistently and consistently, as critics and people got past the first three, they fell in love. This also speaks something to a . . . maybe prejudice is the wrong word, but certainly an inclination to view science fiction through a different lens than mainstream shows. If you look at series like *The Sopranos* or *Boardwalk Empire*—no one ever said of *House of Cards*, episode three, “When are they going to get to the point?” or “What’s the plot?” But science fiction tends to be lumped in with those that must show their cards early on, because traditionally it has been about the mission, the gadget, the McGuffin, and when we made a show about the journey, a lot of critics rebelled at that. We were being too ambitious or thinking outside of what we should be as a science fiction show. We were trying to change the definition of science fiction, how it’s perceived on television. Our hope is that this will change the standard by which science fiction shows tend to be evaluated.

**Absolutely. Were there any critics that you thought really got it, or said something really astute that made you look at the show in a new way?**

Not that I can think of offhand; that being said, there have been some critics who have come back and requested to do second reviews of the show and say it’s a pretty good show. So I think the problem was just making the first three episodes available and not the rest; had more been seen, the initial reaction would’ve been much better.

## **How about fan reaction? Do any really stick out in your mind?**

More the totality than the singularity of it. When the show went up, I made a point to park myself on Twitter and just start watching the reactions. They started off very slow: “What is this new thing in on Netflix? What’s it all about?” Of course, you can’t jump ahead, they have to watch every episode. You’re watching them watch it in real time: “I don’t get it. I don’t understand it. What’s going on?” And then over the next several days I was seeing the speed of the tweets increasing, the energetic, positive responses increasing. After about two or three days, I was watching 200 tweets a minute about the show, and suddenly it became a Thing. If you weren’t watching it, talking about it, or about to watch it, you weren’t hip. As someone who’s never been hip his entire life, that was pretty cool. So, really it was that the word-of-mouth acceptance of the show that really drove it. The sheer number of reviews and positive comments was breathtaking.

There’s an old saying about critics, when you get a questionable review: “No one liked it but the audience.” And that’s kind of the case here, where it was the audience who drove the show, not the critics.

## **It’s very exciting that *Sense8* has been renewed for a second season. Is there anything you want to say about that, or that you can tell us about what’s going to happen in season two?**

I really can’t; we’re in the process of pulling together all of our bits and pieces to get the thing mounted as fast as we can. We’d much rather have that revealed in the course of showing the second season than talk about it.

## **What do you think were the key factors in the show getting renewed? If it’s an online show like this, do they have the same ratings, or is it social media tension or reviews? What are the factors that go into making that decision?**

I think it’s a stew of all those things. Netflix doesn’t release the figures, but what I’ve heard from them internally is that it’s done ridiculously well

for them. It's certainly been massively successful overseas, which is a big goal of theirs. And they really believe in the message of what we're doing, and they dialed into the social and gender elements early on. They've been our unflagging supporters on some pretty controversial stuff that's in the show. There were some behind-the-scenes business things that had to happen with elements that were outside of our control that held up the renewal for longer than we would've liked, but the good thing was that when everything was finally settled, it happened to coincide with the birth of the sensates, on 8/8.

**Was there anything in the first season that you held back on because you weren't sure how it would be received, and now that the show is a success it's off the hook, anything goes?**

We showed full frontal male nudity and babies crowning. The thing that's cool about the Wachowskis, and myself, is that we are kind of fearless, so at no time—either in the writing or the shooting—did we say, “Are we going too far? Or should we pull back?” The moment you start thinking about the audience, you're doomed. You need to tell the story that works for you in the hope that someone else will buy into it. Mark Twain made the argument that within us we contain all of humanity. We all want the same things. A better life for ourselves and our kids. We want to achieve joy, happiness, love. If you write for yourself, and you are true to those emotions and those motivations, then the writing will be true and people will identify with it. The moment you start second-guessing yourself, the writing becomes false.

**Going forward, if people like the show and they want it to continue into season three, what can they do to help make sure we get a season three?**

Well let's make season two, first. Ultimately, it comes down to the numbers and the reception, so the fans have done their part; they stepped up and offered their support and kind words for season one. Now it's up to us

to make season two as good as we can.

## **What do you think the success of *Sense8* heralds for science fiction on television? Does this mean we'll be getting more science fiction shows in the future?**

When we set out to do this, we were very cognizant of the fact that—as I've said, probably impolitely—a lot of television science fiction is either written by, or aimed at, guys who are afraid of girls. It tends to be a genre about the gimmick, and not as strongly oriented toward character or the journey. Not all of them, but that tends to be the case, particularly when it comes to sexuality and serious subject matter. There's always been this weird dance between science fiction and politics, how much one will get into the other, and the way science fiction television has dealt with this has been just to ignore politics, gender, and sexuality unless they could attach it to some other race. So we have aliens that can change gender and isn't it amazing? That lets them explore general themes without making it about real people. We just figured we'd go for broke and make this about us going through these things. To use the show to examine issues of sexuality, gender, privacy, politics, and religion, not from some weird alien race, but from ourselves. My hope is that, having cracked that door open, we'll begin to see more of that mature level of science fiction being done elsewhere.

Prior to a certain point, cop shows were not considered a franchise; they were niche programming of interest to those who liked police procedurals, they were never a big ratings thing, much as networks tend to do with science fiction. Two shows changed that. The first was *Dragnet*, which was the first—as corny as it is in retrospect—that showed cops on dates. They got married, divorced, and it made them human. But it stayed niched genre until one show concluded that process: *Hill Street Blues*, which not only showed everything right that had been done in the other shows, but also cops had drug and drinking problems and issues dealing with sex. Suddenly, that show transformed the cop genre into a franchise, where there were all kinds of shows opening up with more mature storytelling. Science fiction has had its *Dragnet* moments, but we're hoping this will be the *Hill*

*Street Blues* moment, to say to people who are smarter and brighter and better writers than we are, you can go to places you didn't think you could go. You can tell stories about topics and issues you thought you couldn't handle in the genre, not because you couldn't tell it personally, but because there wouldn't be a reception for it. We encourage people, other shows, to not worry about writing down to kids. This is a genre that can handle adult stuff.

**What do you think about the prospects of good outer space science fiction in particular? I've heard you say that network executives have told you the show has to be set on Earth or no one will care.**

I'm not sure where that rule seems to have come from, but in the last few years it really tends to be a big bugaboo for them. That's kind of a misnomer. When you're watching a dramatic series about a family, you're really into what that family does to and with each other and where they're going to go, not worrying about the rest of the planet blowing up. When you're watching a science fiction show about a family on another planet, you're not worrying about what's happening on Earth, you're watching that particular family. So, like we saw before with the critical reaction, there are all these rules and stipulations and perceptions about science fiction that are different from every other genre, particularly in the mainstream. No one says of mainstream police drama, "You have to set it in New York because if it happens anywhere else, no one's going to care about it." Science fiction television is a genre of rules and limitations, which, for an art form that is all about speculation and possibilities and the broadness of human vision, is counterintuitive. It's really a case of whittling away at those perceptions.

**Why do you think there's such a difference between film and television in this arena? No one would say that nobody cares about *Star Wars*, which takes place in outer space, but somehow if it's television like *Battlestar Galactica*, you even have the actors saying, "No, this isn't science fiction."**

Again, it's perceived as a genre of limitations. So for an actor to say, "We're doing a science fiction TV show," it comes with all the limitations that are attendant upon that. Film tends not to worry as much about it because a movie is a one-shot. They don't worry about you coming back every week, whereas television says that, if you want them to come back and have repeated viewings, it has to be based on Earth. The good thing, right now, is that because film has really become brand-driven, and it's hard to get original stuff out there, we're seeing a huge influx of directors and writers coming from film into television. That's why you're seeing a new golden age of television. Eventually, that type will go back the other direction, and would like to bring back with them the lessons they learn from television, and film will have its own explosion again.

**I had a bunch of people that wanted me to ask you about a *Babylon 5* reboot, or your adaptation of Kim Stanley Robinson's *Red Mars*. Is there anything you can say about either of those?**

My plan is, this year, to finish up the script for a *B5* reboot, and then hopefully get funding for it to shoot it next year. For *Red Mars*, I turned the pilot script in. Spike likes it a great deal. I'm working on the series bible now. I'll get that done before we get too deep into *Sense8*, and we'll have some news about that in the next month or two.

**Do you have any other projects you want to mention?**

We're working on *Night Gallery*; we launch with Universal right now . . . I actually have three other shows in development, one or two which may go ahead, which is cool, but I can't really talk about them at this moment. We're also closing a deal right now for me to do a ten-episode adaptation of a very famous science fiction book. I hope to make an announcement in the next three or four weeks. I've got two movies that I'm writing . . . Lots of things are happening. Last year was the busiest year I've had as a writer, and this year promises to be even busier than last. I find that remarkable.

A lot of writers in Hollywood, the average career span is ten years, because by then the town has figured out who you are; they know all your tricks and lose interest. And I've been writing pretty much non-stop, television, then film, then back in television, since 1984. That I'm busier now than I've ever been is cool, considering that I have no social skills whatsoever. I think you get to a point where they realize they can't kill you, can't put you in prison, they may as well keep hiring you. It's been very rewarding to have projects come my way that are just exciting and fun and I'm having a blast. I'm working sixteen hours a day, but I'm never tired by it. I get to get up every morning and do what I love for a living. What's better than that?

**We certainly wish you the best, and hope you write tons more stuff. And we're really looking forward to the second season of *Sense8*—I love the show—and I just want to thank you for joining us on the show.**

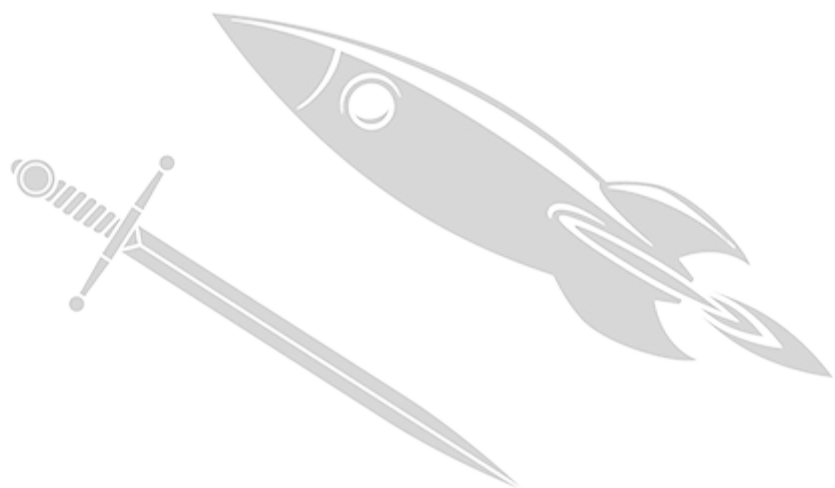
Thank you. My pleasure.

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## **ABOUT THE INTERVIEWER**

*The Geek's Guide to the Galaxy* is a science fiction/fantasy talk show podcast. It is produced by John Joseph Adams and hosted by: David Barr Kirtley, who is the author of thirty short stories, which have appeared in magazines such as *Realms of Fantasy*, *Weird Tales*, and *Lightspeed*, in books such as *Armored*, *The Living Dead*, *Other Worlds Than These*, and *Fantasy: The Best of the Year*, and on podcasts such as *Escape Pod* and *Pseudopod*. He lives in New York.

# AUTHOR SPOTLIGHTS



## **Author Spotlight: Kate Bachus**

**Sandra Odell | 926 words**

**It's said that strong stories need strong openings, and with "Pinono Deep" you prove that to be true. When writing, what elements do you consider a must for a story, ones that stir the blood and hook a reader's interest?**

If there's a "hook," I don't actually feel it's some event, or threat itself.

The action is just the action, but unless we can identify with and care about the characters involved, the hook element—whatever it is—doesn't stick. There's a murder, there's a volcanic eruption, there's a storm of some kind coming, but none of those things matter unless the audience cares about the people involved. It's not the storm at sea, it's that you're invested in the crew and don't want them to die in it.

**What can you tell us about the inspiration behind "Pinono Deep"?**

Ever hear that song about the whale? "'Twas in eighteen hundred and fifty-three on June the thirtieth day?" No? Okay, it's a little obscure. Anyway, the upshot of the song is that whaling is really dangerous and that the industry cares more for the product than the workers. The song's about a whale encounter, where a boat capsizes and they lose five of the crew. "To lose those men, the captain said, / It grieves my heart full sore, / but to lose that whale, that five hundred-barrel whale, / It grieves me ten times more, brave boys . . ." That's harsh. That's a really harsh world, all that and then the whale tries to eat you.

I also spent a lot of time as a kid snorkeling around a hole in the reef around the Samoan island of Upolu. The hole, the hole's called Palolo Deep, and depending on who you ask, was either created by a meteorite, a volcanic sinkhole, or Samoans fishing with dynamite. The coral had all grown down into the hole and you could snorkel for hours around the edge looking at beautiful coral and fish. Sometimes sharks got caught on that side

of the reef, in the hole at low tide. We saw a great white out there once. That's when I found out I could walk on water.

Run on water, actually.

**Your prose with "Pinono Deep" is very sparse and given to a rhythm of an angry sea. Even the dialogue has its own sharp rhythm. How do you choose the voice of a story? For each character?**

I write a lot about the working class, and a lot of my characters aren't formally educated. Many of them have dialects. I grew up around so many languages and dialects, as an expat kid. That's the soundtrack of a place, the rise and fall of how its people speak.

I don't consciously choose, honestly. It's just how I describe a character, probably more than how they look visually.

**Life on a whaling vessel or deep-sea arctic fishing vessel is dangerous, and unrelenting in its hardships and rewards. Have you ever spent an extended time on a seagoing vessel?**

I crewed on the tall ship *Hawaiian Chieftain*, at that time out of Sausalito, CA, for a couple of summers. She's a three-mast schooner and a real honey of a vessel. I'd started out on the *Potomac*, which was formerly a USN cutter that FDR had overhauled to be his presidential yacht—he was concerned about fire and getting caught belowdecks, and it was easier to install an elevator for his wheelchair in the larger cutter anyway—but the first time I saw the *Chieftain*, I jumped ship. So to speak.

She was gorgeous. Red sails, against the blue sky. You can't help but fall in love.

**This story combines elements of both near-future science fiction and fantasy. Publishers and retailers often rely on genre labels to sell books. How do you feel such labels affect a writer's work? Do you find yourself writing to fit the expectations of a specific genre?**

Wait. There are genres? Shit.

**You have a wide range of interests, from hockey to fiber craft, to caring for your family and animals. Amidst all the chaos of the day-to-day, how do you carve out specific time for yourself and your words?**

My business takes up a lot of my time, but the good thing about being an indie dyer is that, although I feel like I'm beholden to the business twenty-four/seven, in fact I do get to make my own schedule. Not being in an office job and getting out of the game design industry means I'm captain of my own vessel (see what I did there?), and I make time to write because it's important.

In general that means leaving the house, going down to the Kilkenny bar in Milford, buying a pint or two, and getting to it. The Kilkenny's a cell service black hole, and I've made the bar staff promise never to give me the password for the Wi-Fi. That leaves drinking and writing, occasionally surfacing to commune with the locals, who tolerate my weirdness, then getting back to work again.

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## **ABOUT THE INTERVIEWER**

Sandra Odell is a 47-year old, happily married mother of two, an avid reader, compulsive writer, and rabid chocoholic. Her work has appeared in such venues as *Jim Baen's UNIVERSE*, *Daily Science Fiction*, *Crosssed Genres*, *Pseudopod*, and *The Drabblecast*. She is hard at work plotting her second novel or world domination. Whichever comes first.

## **Author Spotlight: Will McIntosh**

**Laurel Amberdine | 691 words**

**I love the idea of the Liar’s Tour. Is this a real thing somewhere, or did you make it up?**

Thanks! I made it up. When I lived in Savannah, there were tour trolleys cruising around the historic district all day long, basically all saying the same things about the same historic sites. I once commented to a friend that if I had a tour trolley business, I’d do something totally different. When she asked me what that something totally different would be, I came up with the idea for a Liar’s Tour. Then I wrote it down in my Miscellaneous Story Fodder file, and ten years later it turned up in this story!

**The story is tightly focused on Ben’s dilemma of loving two women, one living and one dead, which is perfect. But the situation that makes this possible is quite amazing in itself, too. You hint at some of the wider ramifications of the dead continuing to interact with the living, but that doesn’t come into play much here. Have you explored this premise in other fiction?**

Funny you should ask. This is the first story I’ve written on this topic, but I have notes for a potential novel set in this world. It’s completely different from this story—a thriller rather than a drama/love story. The trick will be getting my editor to green-light a thriller set in the afterlife.

**Did this story give you any surprises while you were writing it?**

I wrote a first draft, asked some writing friends to critique it, and based on their feedback, I realized it just wasn’t working. It sat on my hard drive for about two years, then one day I realized what was missing. In the original draft (SPOILER ALERT—SPOILER ALERT) the final scene did not involve the visit from his wife. He just eventually realizes what has

happened to him. There was no kick to that.

### **What is a typical writing day like for you?**

It involves a lot of writing. Drop the kids at school, write until lunch. After lunch, continue writing. Around 3:00, exercise for thirty to forty-five minutes, then continue writing until 5:30. I take micro-breaks every hour and do two minutes of exercise, because research indicates sitting all day long is a good way to increase the odds you'll die at a younger age than you'd probably like, and I have a lot more books I want to write. I actually love the writing—if I have a full day ahead with nothing but writing, I'm excited. What I've discovered is that days when I'm in the middle of a project and know what I'm going to write are terrific, whereas days I spend planning out something new, or when I'm stuck and don't know what comes next, are not as much fun.

### **Do you have any new projects that you'd like to share?**

My first young adult novel, *Burning Midnight*, is due out February 2 from Random Penguin House. It's about mysterious colored spheres that are hidden all over the world, and if you have two of the same color they give you something. Easy-to-find colors might give you straighter, whiter teeth; rare colors might give you high intelligence, or physical strength. In the book, two teens find a sphere so rare no one knows what it does. But everyone wants it.

Then I have a new adult novel, *Faller*, coming from Tor Books. After that, I'm hoping to publish a middle grade book I recently finished (can you tell I want to be Paolo Bacigalupi when I grow up?) about robot bodyguards that look like animals, plus I'm working on a second young adult novel that I'm really excited about. When that's finished, maybe I'll start working on a thriller about the afterlife . . .

Laurel Amberdine was raised by cats in the suburbs of Chicago. She's good at naps, begging for food, and turning ordinary objects into toys. She recently moved to San Francisco with her husband, and is enjoying its vastly superior weather. Between naps she's working on polishing up a few science fiction and fantasy novels, and hopes to send them out into the world soon.

## **Author Spotlight: JY Yang**

**Sandra Odell | 1510 words**

**Right from the start, “Secondhand Bodies” hits the reader with issues of fat shaming, hurtful body image, and family tensions, very real issues for many young men and women today. Can you tell us a little about what inspired the story?**

I’ve had the idea for a body-swapping SF story in my head for quite a number of years, I think; it’s just one of those things that occupies my attention every now and then, possibly to a far healthier extent than it should. The human body simultaneously fascinates and repulses me, and I’ve had a lot of thoughts about the body as object in terms of state-slash-medical control. All of that was sort of swirling around the idea of a world where people have the ability to exchange their bodies by surgical means. Over the years there were several attempts to tackle this idea, but none of them made it out of gestation. What finally pulled a story out of the primordial soup and into being was the realization that of *course*, this was going to be a story about body policing and how it intersects with race/class/gender. Once I had that baby spine, that neural tube to coalesce things around, everything else fell into place: the deeply dislikeable protagonist, the obsession of the upper class with appearance, the tension between desire and exotification, fetish.

**This story is also an exploration of privilege: wealth; race; appearance. What spoke to me was how you turned the stereotype of the rich, controlling man on its ear. As a writer, how do you continue to challenge yourself in your exploration of new ideas?**

I’ll admit that writing this story wasn’t easy, I ran into more than my fair share of bumps, but I didn’t specifically set out to challenge myself with this story, or indeed with any new instance of writing I commit! I work on ideas that catch my imagination, and I think the challenges present themselves as I

start to pin idea-bits down to the story map. The hard part in writing this story, in particular, was how I might take the POV of an extremely unpleasant person, someone who's not just racist but also arrogant and manipulative, and go into her head and write from her sort of worldview, but not have the story wind up racist and body-shaming, which would be exactly the opposite of what I wanted. In particular, I didn't want redemption for Agatha. I didn't want her to come to some realization of the error of her ways, I didn't want people to be like "oh, she's all right after all." She had to be horrible throughout. So I had to find some other way of expressing authorial displeasure with her way of thinking. Predictably, for me, that path led me to a place of death and ruin. I'm just surprised I didn't set anything on fire this time.

**The near-future setting resonates throughout the story, familiar enough to make the reader comfortable, different enough to encourage the imagination. When crafting a story, how much thought do you give the setting, building the world the characters inhabit?**

Honestly, I'm terrible at worldbuilding. I'll sit down and work out a world and think I've got it all mapped out, then halfway through writing the story I'll trip over a pothole I didn't realize was there and get stalled because I'll have no idea what to fill it up with. And I'll agonise over it for ages because worldbuilding is something I take fairly seriously. I'm of the opinion that setting shapes character as much as anything else, so I have to make sure all the pieces I put into place make sense from a narrative point of view. This is the disease of the meticulous planner, I think.

**How much of your own life, experiences, and dreams went into "Secondhand Bodies"?**

I think you might have misspelled "life, experiences, and insecurities"! I wouldn't say I particularly identify with Agatha, but a lot of her body-image issues are emotionally drawn from my own struggles with the same. I've definitely done the thing where I stand in front of the mirror and poke my

belly-fat with a mixture of disgust and resignation, so that's the part of me that's gone into the story. Definitely I wanted to show a different side to her ugliness, that despite all her privileges and abuse thereof, she in turn is also a victim of this social pressure on women to be unattainably perfect.

Everything else, though, is largely drawn from my experiences with interacting with the upper class in Singapore, the bankers and dentists and business owners. When I was young, I got into a program that transferred me into one of the nation's elite primary schools for girls. Singapore's enrollment system gives preference to children who already have a sibling in the school, so my younger sister eventually managed to enroll there as well. Neither of us had a good time at this school—we both agree on this. My mother, though, joined the Parent Volunteer Group, and that's how she, a working-class housewife, ended up in a social circle full of wealthy socialites. In local parlance we call them tai-tais, and the fact that the phrase is a Chinese one is no coincidence. There would be all these social events, Christmases and drive-up trips to Malaysia, and we hived off into tribes—the kids oblivious and frolicking, the dads off to one side, and the mums gossiping. I enjoyed these trips—social inequality hardly matters when you're twelve and having a great time playing Marco Polo in a swimming pool. But my mother came back with stories from the ladies' table, and those were horrifying: shame at having to buy themselves a medium-sized pair of pants, frank judgement of their daughters' bodies, and discussion of plastic surgery to fix the areas they thought were “not so nice.” We were all twelve and below! It's a problem, I think, when children become seen as extensions of their parents' social status.

**You have a strong digital presence, whether posting on Twitter, maintaining your website, or promoting the accomplishments of others. How do you see the ever-changing face of the Internet influencing the works and ideas of future writers?**

That's a hefty question! I honestly don't think I'm in a position to predict how the Internet of the future will affect the craft of these unnamed and unformed putative future writers. What I *can* talk about is how the Internet

has influenced the development of my work. There are people that I've met, and schools of thought that I've encountered, that have shaped the kinds of stories I want to tell. A major thread that runs through "Secondhand Bodies," for example, is the (often unexamined) racial privilege that Chinese people have in Chinese-controlled Singapore. That's something I definitely credit friends and activists I met online for having hammered into my thickly privileged skull in the last few years. I'm still learning, I'm always learning, and the Internet is a great place for learning.

### **What's next for JY Yang? Are there any upcoming projects eager readers can look forward to?**

I'm contributing to a few anthology projects that are in the works, and I can't talk about most of them yet, although I will when I can! One that I can mention, and that I'm incredibly excited about, is the *Elements* anthology ([www.elementsanthology.com](http://www.elementsanthology.com)). It's a comics anthology written and illustrated by creators of colour, and I'll be contributing a story to it. I've been paired with a wonderfully talented artist, Yasmin Liang, and I've probably already said how excited I am about this, but I'll say it again: I am immensely excited by this.

Otherwise, I'm working on a novel as part of my Creative Writing MA/MFA at the University of East Anglia, which is a ton of fun because I've never worked on something of that length before. It's set in near-future alternate Singapore, in a world boiled from the bones of a short story I had ("Mothers' Day," in *LONTAR* #3—[bit.ly/lontar3](http://bit.ly/lontar3)), it's got four POV protagonists, and I'm going to completely mess it up. I know. I've started to blog about the process, which I hope might be illuminating to other short story writers who might be thinking of tackling a novel project for the first time.

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### **ABOUT THE INTERVIEWER**

Sandra Odell is a 47-year old, happily married mother of two, an avid reader, compulsive writer, and rabid chocoholic. Her work has appeared in such venues as *Jim*

*Baen's UNIVERSE, Daily Science Fiction, Crosssed Genres, Pseudopod, and The Drabblecast.* She is hard at work plotting her second novel or world domination. Whichever comes first.

## **Author Spotlight: Leena Krohn**

**Robyn Lupo | 426 words**

**What compelled you to write a story about mathematical monsters?**

I am not sure if it is any story. I tried to ponder about the essential differences between artificial and so-called natural. It was a pleasure to describe such digital beings, which are so odd and so beautiful. But I also tried—and am still trying—to understand the relation between the inner secret world and the external self, biological or non-biological.

**“Gorgonoids” is far from your only look into the subject; do you think you’ll ever tire of exploring the connections between ideas and the material world?**

But writing *is* exploring the very connections between ideas and the material world. And yes, when I tire of living, I’ll tire of writing and vice versa. Perhaps pretty soon, actually.

**You’ve written before that you like to write your novels from short chapters; when you’re composing a shorter piece, what does that process look like?**

I try to be short and clear and rich in my writing. These were the three virtues of a writer, which H. C. Andersen talked about. (I love Andersen, because he knew that everything in the world is living.) Our life is consisting of short fragments, which our consciousness tries to unite. Our selves are the integral part of all happenings. There are no incidents without an observer, and where there is an observer, there are incidents. Writing is uniting.

**You’ve written everything from children’s novels to essays; do you have**

## **a favourite medium?**

An essay novel, perhaps . . . I am seeking my path on border zones of different genres. And I am staggering on my way.

**“Inconceivable that something that has existed in some place can no longer exist in any place. How can we help asking, when someone dies, ‘Where has he gone?’” Loneliness threads itself through this work; what was it about the gorgonoids that allowed you see the opportunity to look at loneliness this way?**

Through a language you can break the circle of loneliness. And gorgonoids do not have any language. Actually, when you write, you are not alone. On the contrary, you are together with all the mankind.

## **What’s next for you, Leena Krohn?**

I am writing to children about a patient and conscientious postman. He is a character of Hieronymus Bosch.

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## **ABOUT THE INTERVIEWER**

Robyn Lupo lives in Southwestern Ontario with her not-that-kind-of-doctor partner and three cats. She enjoys tiny things, and has wrangled flash for Women Destroy Science Fiction! as well as selected poetry for Queers Destroy Horror! She aspires to one day write many things.

## **Author Spotlight: Jason Gurley**

**Sandra Odell | 1635 words**

**“The Dark Age” begins with an intense moment of character drama, even more so to many parents. Can you tell us a little about what inspired the story?**

When my wife and I decided that we would move to Portland, OR, our daughter wasn't quite a year old. By the time she was two, I'd been laid off at work, and found myself working triply hard to keep our family above the water line. For me, at that time, that meant I was doing quite a bit of consulting work, burying myself in book cover design projects, and of course interviewing like mad for a new job. All of this kept me extraordinarily busy while at home, my daughter was growing up by leaps and bounds. Each day when I came home, my dear wife had stories of new developments I'd missed. “The Dark Age” comes entirely from that place of feeling that I was doing exactly what my family needed me to do in order to care and provide for them, and by doing so, I was constantly orbiting them, missing out on all of the moments I so badly longed to witness. To this day, “The Dark Age” takes me back to that place. It just breaks me up.

**Every word, every scene, heightens the tension of the story. You capture the character's hopes, fears, and bittersweet dreams. There is no monster or evil outside force, simply the grim reality of extended space travel and saying goodbye. As a writer, how important is it to you to make those strong emotional connections with your readers?**

Well, let me answer that as a reader first: I'll go absolutely anywhere with an author who can pluck those emotional notes within me. I'm a raw nerve. My favorite books and films and songs are the ones that get in there, really deep, and just start mucking around with my wiring. And the impetus to be a writer comes directly from being a reader, so I suppose it's only natural that similar emotional themes emerge in my work. When one of my own

stories cuts me as deeply as this one did, it usually means I'm doing something right.

**This story also addresses the issue of extra-marital sex, in particular sex for the sake of positive relationships and mental well-being. Many people and organizations are uncomfortable with the thought of relationships of that nature, particularly because of the possible discomfort that may come of it later on (which you also address). Do you foresee any other social challenges humanity might face before we reach the stars?**

Yes, that's true; the team of people aboard the ship in "The Dark Age" are all faced with a future that doesn't include their partners and loved ones. They're isolated in ways that most of us never will be, with an ever-widening gulf—physical, emotional, verbal—between them and their spouses and lovers. Under such circumstances I'm not surprised to see relationships aboard the ship become sexual. I do wonder about their inner lives as they consummate those relationships. How does it make them feel, searching for physical companionship and connections while their own relationships back home are hurtling towards an unavoidable ending?

It seems to me that any journey to the stars would rewrite social norms, and probably in ways we wouldn't anticipate. When you live in space, thousands of miles from the traditions and heritage of your upbringing, what rules will you find yourself rewriting? What artificial boundaries will break down?

I've always wondered about the crew's mission in "The Dark Age." Given the commitment they've each made, it seems it must be a very serious endeavor. They're sacrificing their own families for a cause, I think, and if that's true, the cause must be very great. But the cost is immense, and when they achieve their goal, they'll be doing so for entirely new generations of people back home. Let's say they return home someday. Not a single soul on Earth will know them, not personally. Will they resent the strangers they've saved, while missing the families they've lost?

## **It is said that writers write what they know. How much of Jason Gurley made it onto the page in “The Dark Age”?**

Quite a bit, I think. All of the anxieties and fears of being a father went into this story, in particular the fear of my child’s future, of what she’ll encounter in her lifetime as our planet changes, as we change as a civilization. The story is about my own sense of missing out, as I mentioned before, but there’s another wrinkle there: it’s also about my fear of missing out on everything she’ll do, all she’ll become.

Years ago I read one of Stephen Baxter’s Manifold novels—*Manifold: Time*, perhaps?—in which a character floated alone to the edge of our solar system, then dove into a wormhole. For years afterward, he bounced around through time and space, now and then popping back into our solar system to witness how mankind had evolved, what it had achieved. There’s a sense of that built into “The Dark Age,” too. It’s not only my daughter’s life that I don’t want to miss out on; it’s the grand march we’re all on. I’d live forever if I could. I just want to know where we’re going, where we end up. I hate the idea that I’ll die without those answers.

**With the re-release of *Eleanor*, and stories in anthologies such as *Loosed Upon the World*, *Synchronic*, and *Help Fund My Robot Army!!!*, your readership continues to expand. If you could part the mists of time and look into the future, how would you like to see your writing remembered?**

I want to twist the question just a bit in my answer. I’d rather be remembered for the husband and father and all-around decent person that I hope I am, and I’d prefer if my writing didn’t have to be remembered, because it will go on being *read*. Plenty of writers and their books are forgotten by time. It’s madness to spend time worrying about whether I’ll be one of them.

I am, however, particularly excited about *Eleanor*’s re-release into the world. An excerpt of it appeared right here in *Lightspeed* back in 2014, when I’d self-published the novel. And here we are, two years later, with a

major publisher bringing *Eleanor* to a wider audience. It's been a very surreal couple of years, and quite a dream come true.

### **If offered the opportunity to “see what’s out there,” would you accept?**

In the film *Contact*, Jodie Foster's character takes a journey to the stars only after the first choice—an experienced astronaut with a family—resigns his commission. In a press conference, his young son says—and I may be paraphrasing here—“I told him I didn't want him to go.” The astronaut shrugs and asks how anyone could argue with that. I relate to that astronaut for precisely this reason; I wouldn't be capable of leaving behind the family I love so much. But I also want to smack the astronaut for even putting his name into the hat to begin with. Secretly, you know that guy's going to burn with resentment for the rest of his life. Those poor kids. That poor family.

My wife and I talked about this question. If NASA asked me tomorrow to join the Mars mission, would I go? I wouldn't. There are many, many more qualified people for that kind of job. I wouldn't trade a full life with my family for that. I couldn't do it.

But, hypothetically speaking, if someone had to go to the stars in order to save all of mankind, and I was the only person on Earth qualified for the job—what then? Putting my family first would be a crime against our species. Wouldn't it? By saying no, what would I doom humanity to? I gotta say, I'm grateful that I don't have any world-saving abilities, so I'll never be faced with this kind of decision. I mean, what kind of save-humanity space mission would require my special set of skills, anyway? “Aliens have demanded that we send a human representative to the Galactic Council to defend our planet's right to survival. Strict requirements: Our representative has to be bearded, kinda tall, a mediocre third baseman, a moderately competent drummer, a decent illustrator with zero knowledge of human anatomy, a fan of the films of Paul Thomas Anderson but not Wes Anderson, more partial to *Superman Returns* than *Man of Steel*, a student who attended the infamous Texas Cheerleader-Murdering-Mom junior high school, and utterly inexperienced at all things aeronautical, biological,

mathematical—well, anything ending in -al. Jason! You're clearly the only man for this job.”

No, I'll just strive for immortality down here on Earth so I am around when *whoever* goes to the stars decides to come back. Then they'll have someone to tell their stories to.

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## **Author Spotlight: Kat Howard**

**Robyn Lupo and Liz Argall | 565 words**

**It's been a little over a year since we last interviewed you. What's new in your life? Has anything about your writing style or approach to writing changed?**

Let's see. I moved halfway across the country, escaping winter in the Twin Cities just in time to move to New Hampshire for a winter where we had four feet of snow fall *in one day*. I may not be good at strategic planning. I adopted another cat. Her name is Viola, and if you follow me on Twitter (@KatWithSword), you can see many pictures of her and my other cat Maeve helping me write. Er, for the cat version of helping.

Oh, wait. You asked about writing. Has my style changed? That's hard to say. There are certain things that I am interested in, like myths and like stories that center on women's voices, that have stayed pretty consistent. I am in love with language as I ever was. But I am trying to challenge myself in the way that I tell those stories—by experimenting with structure, with point of view, with more complicated plots. I want to continue to push myself as a writer, so my approach involves looking for new ways to do that.

**In the line about myth calling to myth, what was calling the myth of the unicorn to the myth of the city?**

I love the ideas of cities as mythic places. And not just cities of myth, but the cities that exist in our world that we build up myths and stories around. I think a good case can be made that New York is the premier mythic city in America. We tell stories about it, we sing songs about what it means to make it there, it has a certain symbolic weight. I wanted to pull the unicorn hunt out of tapestries (although those live in New York as well, at The Cloisters) and into a modern myth.

## **Unicorns pass in and out of our culture a fair bit; what do you think it is about unicorns that we re-discover every so often?**

This is sort of a hard question for me to answer, because I have always loved unicorns—I had so many unicorn posters and stickers and stuffed animals. As I was working on this story, my sister texted me a picture of the membership card of the Unicorn Club I founded when we were little. I still have unicorns on my bookcases. They are one of my favorite myths, and I started loving them for the simplest of reasons—I thought they were beautiful. I still do.

But like any useful myth, they are adaptable. We can shift their symbolism—or subvert it—in ways that continue to fit into our imaginations.

## **What's next for you?**

My debut novel, *Roses and Rot*, comes out in June. If you like stories about fairy tales or sisters or ambition or really troublesome family relationships or making art or secrets or love or sacrifice, you might like it. I am currently working on my next novel, which is completely unrelated to *Roses and Rot*, and various other projects.

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## **ABOUT THE INTERVIEWERS**

Robyn Lupo lives in Southwestern Ontario with her not-that-kind-of-doctor partner and three cats. She enjoys tiny things, and has wrangled flash for Women Destroy Science Fiction! as well as selected poetry for Queers Destroy Horror! She aspires to one day write many things.

Liz Argall's short stories can be found in places like *Apex Magazine*, *Strange Horizons*, *Daily Science Fiction*, and *This is How You Die: Stories of the Inscrutable, Infallible, Inescapable Machine of Death*. She creates the webcomic *Things Without Arms and Without Legs* and writes love songs to inanimate objects. Her previous incarnations include circus manager, refuge worker, artists' model, research officer for the Order of Australia Awards, farm girl, and extensive work in the not-for-profit sector.

## **Author Spotlight: Keith Brooke and Eric Brown**

**Jude Griffin | 1008 words**

### **How did “Beyond the Heliopause” come about?**

The two of us have collaborated for a long time. Back in the early 1990s we started critiquing each other’s work, so, to an extent, a lot of our stories have been a form of collaboration, always far better for that last-minute reality check, ranging from picking up typos to “That’s nonsense—you can write that scene much better than this.” We started collaborating more formally a few years after that, and a collection of our joint stories, *Parallax View*, came out in 2001. For a time, that drew a line under the collaborations—it gave the sense of a project completed—but in the last year or so, we’ve started writing together again, speculating about big ideas and writing a few stories, and “Beyond the Heliopause” was one of these new stories.

### **What is the theme of this story? I thought it might be about the nature of faith, but this seems to be more the question we are left with than the material explored in the story itself. Or maybe it all sets the foundation for that final question?**

We prefer to leave readers to work out that kind of thing. It’s rare for us to set out to write a story with a particular theme or message. These things emerge from the concerns of the characters and their interaction with the big science-fictional idea. SF tends to deal with such big ideas that the writer doesn’t need to strive for theme, it just emerges. Maybe we should work harder at this aspect, but we tend to be more concerned with the story and the characters!

### **What is your process for dealing with tropes in your stories? For instance, the whole “I had to hurt you now in order to hurt you less later” logic that Charles uses with Suzanne?**

Again, it's not a conscious thing: We bounce ideas around, characters and twists emerge in that process, and a story takes shape. In the case of this story, the big idea was Fermi's Paradox: If aliens are out there, then all the laws of statistics say that at least some of them would be sufficiently advanced to have left a mark, so why have we seen no evidence?

It's a question we've both explored before and will do so again (Keith's Philip K. Dick Award-shortlisted novel *Harmony* is a Fermi story, as is another recent collaboration, "The End of the World", which appeared in Ian Whates' Fermi anthology *Paradox*). But these ideas are really only the starting point, and as we develop our approach to such tropes, we're also identifying the protagonists and their stories; "Beyond the Heliopause" required a character like Charles to take some tough, and apparently cold-hearted, decisions, but the way these choices manifest in his personality and how he communicates them all comes from the character that emerges as we develop the story.

### **What was the most challenging aspect of writing "Heliopause"?**

It might sound a bit disingenuous, but the story was actually a delight to write. One of the real joys of collaborating is that when one author finds something tricky, it might be something that plays to the strengths of the other writer—or if that's not the case, any challenges are usually solved by the fresh perspective a collaborator brings. With our collaborations, we each always argue that we've done less than half of the work—there's that magic extra bit that neither of us takes credit for. The most challenging part? Probably something as simple as the logistics: We're both very busy, and it can be hard to make the time to indulge ourselves in developing ideas together and then actually doing the writing. We really should do more of that!

**Tell us more about the process of collaborating. Why do you do write together, how does it work, and what does it bring to a story that you couldn't manage alone?**

As we've already mentioned, we've worked together in various ways for around twenty-five years, ranging from critiquing solo work to full-blown collaboration. Some of our early joint stories started off as solo efforts that never took off—in such cases, it's no holds barred: The collaborator wades in and rips apart the original and then rebuilds it. From there, we moved on to developing ideas from scratch, and most of our collaborations are of this variety. Occasionally this happens in person, often over a drink or two or a good curry; usually, though, that's not possible, as we live 400 miles apart, and it all takes place by email—lots of “what if?” and “yes, but what about . . .?” until we have enough in the way of notes that we feel ready to start on the opening scenes and take it from there. The first draft bounces back and forth between us by email as we take it in turns to add anything from a few hundred to a few thousand words. There's no set rule for who gets to do the first edit, but it's a similar iterative process, until by the end we would really struggle to identify who wrote which bit originally and who then fixed it so it worked. As collaborators, we're lucky that we have similar interests in what we want to get from a story, but there are enough differences that a joint story is always something that neither of us could have written alone. It can be very strange to end up writing something neither of us could have otherwise written, but it's fascinating to see such stories emerging and we're both very happy to be collaborating again after taking a break.

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## **ABOUT THE INTERVIEWER**

Jude Griffin is an envirogeek, writer, and photographer. She has trained llamas at the Bronx Zoo; was a volunteer EMT, firefighter, and HAZMAT responder; worked as a guide and translator for journalists covering combat in Central America; lived in a haunted village in Thailand; ran an international frog monitoring network; and loves happy endings. Bonus points for frolicking dogs and kisses backlit by a shimmering full moon.

## **Author Spotlight: Michael Swanwick**

**Moshe Siegel | 960 words**

**Your novella, “Griffin’s Egg,” was first published in 1991; do you think 2015’s Michael Swanwick would have written the story any differently, in terms of, say, humanity’s self-awareness and respect for the technologies that we’re developing?**

So far as I can tell, humanity’s attitude is still “Adopt first—ask questions later.” Every new technology has unintended consequences, many of them easily foreseeable, and yet we’re always amazed when they hit us. I doubt we’re any more self-aware than we ever were.

If I were writing “Griffin’s Egg” today, I’d make the radio communications system more like a local area network, with video and multiple windows. Other than that, I think the technology holds together pretty well.

**On a craft note, your intuitive future-tech lingo—“trance chips,” “hoppers,” “peecees,” etc.—enriches the world of the story without jarring the reader with obscure terminology. Do you find it challenging to create a believable future-lexicon while also maintaining clarity for your readers?**

Yes, it’s a lot of work. But that’s just part of the job.

**“An intercorporate development zone” seems a logical prediction of the Moon’s fate, but what led you to portray our lunar presence as private-sector venture?**

There’s an international treaty expressly forbidding its signatories from claiming the Moon or other celestial bodies for their own so, as you say, it seemed logical. And once the infrastructure is in place, there are a lot of reasons why private industry would desire a presence on the Moon. But

mostly I wanted to get away from the global politics of the time. All my life, the world had been locked in a nightmarish struggle between East and West, with the possibility of nuclear war a constant, and I was bored sick with it. So I refused to make it a part of the novella.

Which was a lucky thing, because between the time I submitted the manuscript and the book's publication, the Berlin Wall fell and the Soviet Union was clearly headed for the dustbin of history. If I hadn't felt an echo of that same weariness with the status quo that motivated the East Germans, the story would have been an instant fossil.

Putting Gunther into a corporate research campus also had the added benefit of immersing him in a culture where profit and efficiency were unquestioned values, which made the moral issues easier to dramatize.

**As a science fiction fan with no scientific background whatsoever, the physics of Gunther's Moon adventures—from the gravity to the radiation to the scrambled service bots—is totally convincing. Have I been charmed by an author, or did you ground this story in hard science?**

Absolutely hard science. It began with brochures that my father, who was an engineer for General Electric's aerospace division, brought home from work. From childhood, I'd been thinking about lunar colonies as very real places that I might well live to see. So I'd been gathering information about them for some time. Also, I knew I was going to start work on *The Iron Dragon's Daughter* as soon as I finished "Griffin's Egg," and would be away from science fiction for a couple of years. So I wanted to use up as much of the hard science ideation I'd been putting together over the previous decade as I could. I didn't want to return and find myself writing 1980s SF midway through the 1990s.

I spent a lot more time researching the science behind this story than shows. At least I hope it doesn't show. Most of it never made it in. But you don't know what you'll need until the story's finished.

**Gunther eventually settles on a rather fatalistic perspective in**

**accepting that he is a servant to his chemical impulses and hardwired responses. What do you think about his outlook?**

It's not all that different from the way a lot of people I knew adapted to corporate America after they got their degrees. Gunther's problem, at the beginning, is that he refuses to grow up. He thinks of that as defeat. So when he's forced to grow up, he accepts it as a defeat.

Personally, I found his outlook lamentable. But what choice did he have? It's the accommodation most of humanity is going to make with the technology, so he's the right character to stand in for all the rest of us. I didn't want anybody to think the story was meant to have a happy ending.

**Are there any recent or upcoming projects you would like to share with us?**

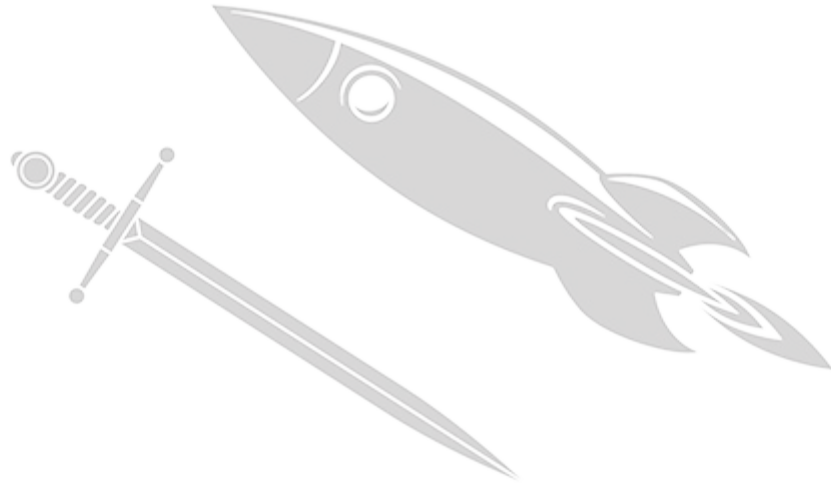
My new novel, *Chasing the Phoenix*, in which post-Utopian confidence artists Darger and Surplus accidentally conquer China, is out on the stands right now, and I'd appreciate it if everybody ran out and bought lots and lots of copies. And I'm currently at work on *The Iron Dragon's Mother*, the third and final stand-alone novel in my Industrialized Faerie sequence. As a teenager, entranced by Tolkien, I desperately wanted to write a fantasy trilogy. But by the time I published my first story, I'd switched my allegiance to science fiction and understood why I would never write such a beast. So it's ironic that when this book is done, I'll have fulfilled my youthful ambition.

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## **ABOUT THE INTERVIEWER**

Moshe Siegel interviews at *Lightspeed*, works in the New York State library system, and hatches indie publishing plots from his Hudson Valley home office. Follow tweets of varying relevance @moshesiegel.

# MISCELLANY



# Coming Attractions

The Editors | 152 words

Coming up in February, in *Lightspeed* . . .

We have original science fiction by Rachael K. Jones (“Charlotte Incorporated”) and Sarah Pinsker (“Sooner or Later Everything Falls Into the Sea”), along with SF reprints by Samuel Peralta (“Hereafter”) and Paul McAuley (“Transitional Forms”).

Plus, we have original fantasy by Jeremiah Tolbert (“Not by Wardrobe, Tornado, or Looking Glass”) and Karin Tidbeck (“Starfish”), and fantasy reprints by Rachel Swirsky (“Monstrous Embrace”) and Christopher Barzak (“Map of Seventeen”).

All that, and of course we also have our usual assortment of author and artist spotlights, along with our book and film review columns.

For our ebook readers, we also have a novella reprint of “May Be Some Time” by Brenda W. Clough and a novel excerpt.

It’s another great issue, so be sure to check it out.

Thanks for reading!



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## Also Edited by John Joseph Adams

### The Editors

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- THE APOCALYPSE TRIPTYCH, Vol. 1: *The End is Nigh* (with Hugh Howey)
- THE APOCALYPSE TRIPTYCH, Vol. 2: *The End is Now* (with Hugh Howey)
- THE APOCALYPSE TRIPTYCH, Vol. 3: *The End Has Come* (with Hugh Howey)
- *Armored*
- *Best American Science Fiction & Fantasy 2015* (with Joe Hill)
- *Best American Science Fiction & Fantasy 2016* [forthcoming Oct. 2016]
- *Brave New Worlds*
- *By Blood We Live*
- *Dead Man's Hand*
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