AUGUST 2012

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Asimov's Science Fiction

AUGUST 2012

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EDITORIAL

Sheila Williams

THE 2012 DELL MAGAZINES AWARD

It was another record-breaking year for submissions to The Dell Magazines Award for Undergraduate Excellence in Science Fiction and Fantasy Writing. Once again, my co-judge Rick Wilber and I chose our finalists from a huge pool of talented authors. And once again, we were delighted to have all the finalists in attendance at the 2012 International Conference on the Fantastic in the Arts in Orlando, Florida. The award, which includes a five hundred dollar first prize, is co-sponsored by Dell Magazines and the International Association for the Fantastic and is supported by the School of Mass Communications, University of South Florida. It is given out each year at the conference.

Top honors went to Rebekah Baldridge for her complex and moving time travel tale, "Superpositions." Rebekah a junior at Newman University, is a student of English and philosophy. Her love for improv is matched by her love for the Classics. Rebekah studies writing with Bryan A. Dietrich. Bryan's name may be familiar to readers of this magazine because his poem "Edgar Alan Poe" was the winner of our own 2010 Readers' Award Poll.

Madeline Stevens, our first runner-up, is a freshman at Bennington College. In 2010, she attended Diane Turnshek's Alpha Writers' Workshop for teens and she is returning to the program this summer as a junior staff member. Madeline received her award certificate for the heartbreaking "Halcyon Days."

Although the awards' final outcomes are decided by a blind read, we were pleased to see familiar faces among the recipients. Our second runner-up Rachel Halpern is a three-time finalist. A senior at Grinnell College studying English and Spanish, Rachel is considering an MFA program in the fall and is pursuing some entrepreneurial online ventures. She accepted her certificate for a chilling tale about "The Taste of Salt."

Rick and I had such a hard time choosing stories this year that we ended up with a three-way tie for third runner-up. Once the decision was in, we discovered that two of the three recipients were well known to us. Lara Donnelly is a fourth-time finalist for the award. A senior at Wright State University who had just been accepted into this summer's Clarion Writers Workshop, she received her award for the dark, yet delightful "Case of the Smitten Magician." Another Wright State senior, Anthony Powers, was a finalist two years ago and returned to accept his award this year for "Opus 4: Duet for Expressionism and Absinthe." Anthony is a painter, fencer, fire performer, and multi-instrumentalist. At the conference's request, he treated us to a piano performance during the evening's cocktail reception.

The third branch of this talented triumvirate, Brit Mandelo is quickly becoming a force in the SF field. Brit, who studies at the University of Louisville, blogs at *Tor.com* and has recently been appointed a fiction editor at *Strange Horizons*. She received her award for the eerie "Writ of Years."

While Brit was new to our contest, our two honorable mentions were known entities. Rebecca McNulty, another three-time finalist, is a senior at the College of New Jersey. Rebecca is an English major who has worked as a ghostwriter for online media. She received her award for the bittersweet "Sister Kite." Our other honorable mention, and fellow three-time finalist, E. Lily Yu, received her award for the evocative "Ilse, Who Saw Clearly." Lily is a senior at Princeton University studying English and biophysics. In 2011, she

Photo credit: Francesca Myman, Locus Publications.

Left to right: Anthony Powers, Rick Wilber, Lara Donnelly, Rebecca McNulty, Rebekah Baldridge, Madeline Stevens, E. Lily Yu, Brit Mandelo, Rachel Halpern, and Sheila Williams

was second runner-up with a captivating tale about "The Cartographer's Wasp and the Anarchist Bees." Soon after last year's conference, she sold a revised version of the story to *Clarkesworld*. The tale is now a finalist for the Nebula and the Hugo, and Lily is a finalist for the John W. Campbell Award for Best New Writer. We hope you will join Rick and me in wishing Lily and our other finalists the best of luck with all their future endeavors.

As usual, the students were warmly welcomed by a number of leading authors. On Friday night, they had dinner with Nancy Kress, James Patrick Kelly, Kit Reed, and Joe Haldeman. At Saturday's banquet they dined with Rob Sawyer, Nick DiChario, and Kathleen Ann Goonan. Other writers at the conference included Suzy McKee Charnas, Ted Chiang, Stephen R. Donaldson, Andy Duncan, Kij Johnson, Nalo Hopkinson, China Miéville, John Kessel, Patricia McKillip, Sandra McDonald, Rachel Swirsky, Peter Straub, Nick Mamatas, Delia Sherman, and Karen Joy Fowler.

You can visit with previous finalists and current writers at our Facebook site. Search for the **Dell Magazines Award** or go directly to *http://www.facebook.com/pages/manage/#!/pages/Dell-Magazines-Award/177319923776*

We are actively looking for next year's winner. The deadline for submissions is Monday, January 8, 2013. All full-time undergraduate students at any accredited university or college are eligible.

Before entering the contest, contact Rick Wilber for more information, rules, and manuscript guidelines. He can be reached care of:

Dell Magazines Award
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Tampa, Florida 33620
Rwilber@usf.edu

Next year's winner will be announced at the 2013 Conference on the Fantastic, in the pages of *Asimov's Science Fiction* magazine, and on our website. ❍

REFLECTIONS

Robert Silverberg

BIG-ENDIANS/LITTLE-ENDIANS

So there I was in the kitchen one afternoon not long ago, cracking open a hard-boiled egg, which I do by tapping one end of the egg against the tiled edge of the stove. I was about to tap the smaller end of the egg against the stove when, suddenly, feeling that something was wrong, I halted my descending arm and shook my head. "That's not the proper way to do it, is it?" I asked myself, and I switched the egg around in my hand so that the bigger end would be the one that hit the stove.

And that was how I discovered, very belatedly, that I was a Big-Endian.

I have been aware of the Big-Endian/Little-Endian controversy for something close to sixty-five years, ever since I first read Jonathan Swift's *Gulliver's Travels*. I still have my childhood copy of that fine book, a handsome illustrated edition published by Doubleday in 1945, and probably acquired by me no more than two or three years later than that. Unlike a lot of the editions of *Gulliver's Travels* that were given to children then, mine offers the unexpurgated text, with many an explicit bawdy or scatological passage that surely was startling to the eyes of the barely pubescent reader in an era far more delicate about such things than our modern one. But, of course, what really drew me to Swift's masterpiece was its glorious depiction of imaginary continents, for, even then, I was a seeker after fantastic fiction and *Gulliver's Travels* is one of the greatest fantasy novels ever written.

The business about eggs turns up in Chapter Four. Gulliver, has been shipwrecked on the shores of the diminutive land of Lilliput and (after convincing its emperor that his gigantic visitor meant no harm) enters into a conversation with Reldresal, the imperial Secretary of Private Affairs. This functionary tells him that Lilliput is currently threatened by an invasion from its neighbor and rival, the empire of Blefuscu.

Lilliput and Blefuscu, Gulliver learns, have been "engaged in a most obstinate war for six and thirty moons past. It began upon the following occasion. It is allowed on all hands, that the primitive way of breaking eggs before we eat them, was upon the larger end: but his present Majesty's grandfather, while he was a boy, going to eat an egg, and breaking it according to the ancient practice, happened to cut one of his fingers. Whereupon the Emperor his father published an edict, commanding all his subjects, upon great penalties, to break the smaller end of their eggs. The people so highly resented this law, that . . . there have been six rebellions raised on that account, wherein one Emperor lost his life, and another his crown. These civil commotions were constantly fomented by the monarchs of Blefuscu, and when they were quelled, the exiles always fled for refuge to that empire. It is computed, that eleven thousand persons have, at several times, suffered death, rather than submit to break their egg at the smaller end. Many hundred large volumes have been published upon this controversy, but the books of the Big-Endians have been long forbidden, and the whole party rendered incapable by law of holding employment. During the course of these troubles, the Emperors of Blefuscu did frequently expostulate by their ambassadors, accusing us of making a schism in religion. . . ." And thus eventually events led to war between the two empires, egged on, if I may put it that way, by the Big-Endian exiles from Lilliput dwelling at the court of Blefuscu.

It is a dire war indeed: "We have lost forty capital ships, and a much greater number of smaller vessels, together with thirty thousand of our best seamen and soldiers, and the damage received by the enemy is reckoned to be somewhat greater than ours." Blefuscu, Gulliver learns, is now on the verge of launching an invasion of Lilliput by sea. "Wherefore His Imperial Majesty, placing great confidence in your valour and strength, hath commanded me to lay this account of his affairs before you," and Gulliver, though uneasy about interfering in strife between two foreign countries, eventually agrees to put his great size to work in the service of Lilliput. By singlehandedly capturing the entire Blefuscan invasion fleet he forces Blefuscu to sue for peace.

Doubtless I understood, even as a small boy, that Swift was satirizing the bitter religious differences that had cost so many devout Christians their lives over the centuries. But very likely I also pondered the problem of which end of the egg really was the right one to break, because I was a Very Serious small boy who was struggling to figure out all sorts of things about the adult world. Whether I chose to regard myself as a Big-Endian or a Little-Endian back then, I have no idea. Probably I decided that I was one or the other, and then forgot all about it, and I am quite sure that I gave the issue no thought at all in the next six or seven decades, until that recent epiphany in the kitchen when I realized, at long last, that I was without question a Big-Endian.

Which was worth a moment's giggle, and some pleasant thoughts about Swift's delightful book, and, since *Gulliver's Travels* is certainly relevant to the field of fantasy and science fiction, I thought I might get a column out of the subject. So off I went to Wikipedia for a little background information on Jonathan Swift, and, to my astonishment, discovered that the Big-Endian/Little-Endian controversy is still going on in the wonderful world of Silicon Valley.

The computer chaps haven't been fighting over the right way to break eggs,

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exactly, but in general outline the feud hasn't been all that different from the one that raged during the war between Lilliput and Blefuscu. In an essay called "Basic concepts on Endianness," by Juan Carlos Cobes, which is easy enough to find with a bit of Googling, I read that "it refers to the order in which bytes in multi-byte numbers should be stored, most-significant first (Big-Endian) or least-significant (Little-Endian) first." Cobes goes on to explain that "Big-Endian means that the most significant byte of any multibyte data field is stored at the lowest memory address, which is also the address of the larger field. Little-Endian means that the least significant byte of any multibyte data field is stored at the lowest memory address, which is also the address of the larger field."

All this stuff about least significant bytes and lowest memory addresses is as abstract and mysterious to me as the ancient Christian debate over whether the Son is one with the Father or distinct from Him. I have not found it necessary, during the course of a long and busy life, to master either the intricacies of Christian theology or those of computer programming. But I do follow the discussion of the right way to assemble an Internet address: even a layman like me can see that it does make a difference if the system is expecting to find the domain of the e-mail sender listed at the end of the data string and it is at the front of it instead. And I can comprehend the example of the so-called NUXI problem, NUXI being the way a Little-Endian system would store the bytes that a Big-Endian system would (correctly) interpret as UNIX. Beyond that I get lost.

At any rate, what I can understand, in Cobes' discussion of Endianness, is his answer to the question he poses, "Which format is better?" What he says is, "Like the egg debate described in *Gulliver's Travels,* the Big- vs. Little-Endian computer dispute has much more to do with political issues than with technological merits. In practice, both systems perform equally well in most applications." (I should stop there; but in fact Cobes does go on to describe "a significant difference in performance when using Little-Endian processors instead of Big-Endian ones in network devices." I will spare you the details, mainly because I don't understand them.)

Juan Carlos Cobes' paper on Endianness dates from 2005. But the controversy within the computer world over the proper method of byte storage has had a Swiftian tone since 1980 and the publication of a famous paper by Danny Cohen, "On Holy Wars and a Plea for Peace." Cohen, after describing the nature of the conflict between the two systems, concludes by saying, "Swift's point is that the difference between breaking the egg at the little-end and breaking it at the big-end is trivial. Therefore, he suggests that everyone does it in his own way. We agree that the difference between sending eggs with the little- or the big-end first is trivial, but we insist that everyone must do it the same way, to avoid anarchy. Since the difference is trivial we may choose either way, but a decision must be made."

Has a decision been made? I'm not geeky enough to give you a report on that, although I assume, since the Internet does seem to work most of the time, that a détente has been reached. My sources tell me that most computer architecture nowadays follows the Big-Endian mode, but where that leaves hardcore Little-Endians I am unable to say. Perhaps, like the last survivors of the various heretical Christian sects of the fourth century, they still hold underground convocations in which they praise their chosen system to one another, and bitterly denounce the mad follies of the opposition.

I don't know. What I do know is what I discovered in my own kitchen not long ago, which is that I myself seem to be a Big-Endian, at least when it comes to cracking eggshells. I can only hope that my computer is on the right side of things as well. ❍

My House of the Future

My house is a futuristic abode,
advanced beyond your wildest dreams.
The ceiling fans are the inexpensive kind,
yet they efficiently circulate cool,
oxygen-rich air from another dimension,
taming the ever-humid summer heat.

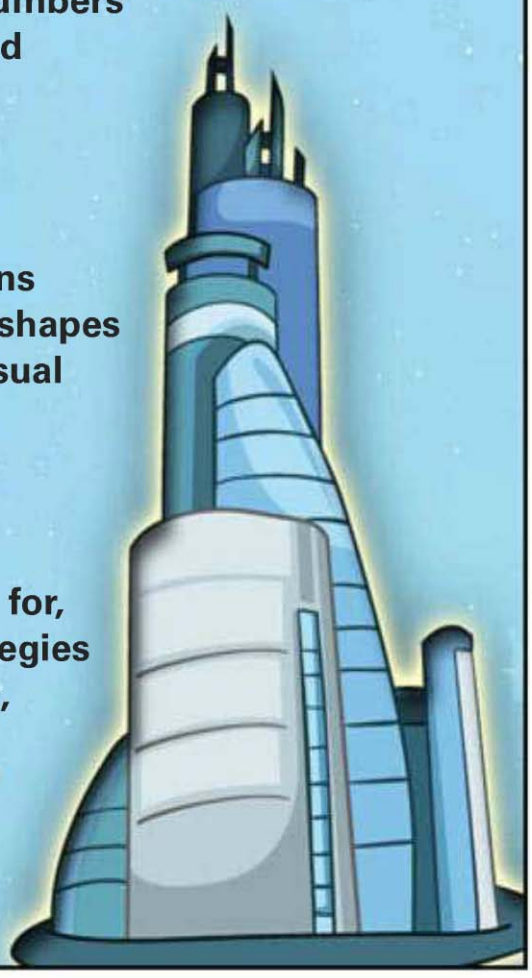
The four and a half burner gas stove
works like a charm, the half burner just
right for those low calorie, stovetop meals,
and its oven a place of magical transformations.
Pop a beef roast in to bake, and two and a half
hours later, find a lovely Boeuf Bourguignon,
préparé par le fantôme de Julia Child

The refrigerator is getting old,
but it still replenishes itself weekly with
fresh homemade preserves, pickled cucumbers
and vanilla ice cream, just like Mom used
to prepare before her timely death.

Of course there's more
at 79 Saturn Circle, circa 2051,
like my automatic garage door that opens
upon deep space, a shower nozzle that shapes
the water into warm fingers for the sensual
massaging of one's ageless body,

and a new six screen TV
that only broadcasts reality, 24/7,
which I can never seem to find the time for,
always too busy dreaming up new strategies
for the trapping of mutant dust bunnies,
and novel ways to bend time.

—G. O. Clark



On the Net

James Patrick Kelly

WHAT IS REALITY?

cyberdelic

Once upon a time, figuring out what was real was easy. Reality was the chair you were sitting on, the floor under your feet, the air that filled your lungs. If you dropped the **Science Fiction Encyclopedia** <*sf-encyclopedia.com*> on your toe (1993 edition = 6 lbs.), it would hurt, and if you were hit by a meteor . . . well, the only critters who had extra lives in the days before **Pac-Man** <*webpacman.com*> were cats. I have a vague memory that, during the drug-addled sixties, **The Firesign Theater's** <*firesigntheatre.com*> deranged comedy LP album "Don't Crush That Dwarf, Hand Me The Pliers," featured a confused and possibly tripping character who cried out in mock anguish "What is reality?" Part of the joke was that the question was absurd. We knew, or at least, we thought we did.

Funny how things have changed. My guess is that it was television that first began to nibble at the edges of reality. For example, was watching a baseball game on TV less real than watching it from the center field bleachers? Turns out that you saw much more of the game on the tube, and once they invented replays, plain vanilla reality was a sorry substitute for enhanced, couch-based sports viewing. And of course, for people of my generation who did not serve in the military, the nightly news was the closest we came to the "reality" of the war in Vietnam. But it was the digital revolution that truly altered the state of reality. Speaking of drugs, it was none other than **Timothy Leary** <*leary.com*> who famously declared "The PC is the LSD of the 1990s." Toward the end of his life he revisited his classic admonition of "turn on, tune in, and drop out" and suggested that seekers of the cyberdelic experience "turn on, boot up, and jack in." And indeed, many tech pioneers like **Steve Jobs, Stewart Brand,** and **John Perry Barlow** <*pcworld.com/article/193685/tech_visionaries_and_lsd_turn_on_tune_in_geek_out.html*> took his advice, turning from acid to the internet and helping to switch the digital age on.

Of course, we in SF had a little something to do with the ongoing improvements to reality. One of the first stories to anticipate the new digital reality was Murray Leinster's **"A Logic Named Joe"** <*baen.com/chapters/W200506/0743499107___2.htm*>, published in *Astounding* in 1946. And while there were others, it was certainly William Gibson's classic **Neuromancer** <*antonrauben weiss.com/gibson/01neuromancer.html*> that introduced the modern notion of cyberspace, which has come to be almost synonymous with the internet. This is despite the many differences between the 1984 novel and the 2012 iteration of the WWW. For those who have not yet read cyberpunk's founding text, here's an article from **Macworld** <*macworld.com/article/141500/2009/07/neuromancer_25.html*>, written on the occasion of *Neuromancer*'s twenty-fifth birthday, which details some of what Bill got right and what he got wrong. Bottom line: he was truly prescient—or perhaps, as some assert, core features of the net—and with it, reality—were reverse-engineered from his science fiction novel. Might William Gibson be to the internet as Arthur C. Clarke is to space? Electronic Frontier Foundation co-founder **John Perry Barlow wrote** <*w2.eff.org/Misc/Publications/John_Perry_Barlow/HTML/crime_and_puzzlement*

_1.html>, "In this silent world, all conversation is typed. To enter it, one forsakes both body and place and becomes a thing of words alone. You can see what your neighbors are saying (or recently said), but not what either they or their physical surroundings look like. Town meetings are continuous and discussions rage on everything from sexual kinks to depreciation schedules . . . Whether by one telephonic tendril or millions, they are all connected to one another. Collectively, they form what their inhabitants call the Newt. It extends across that immense region of electron states, microwaves, magnetic fields, light pulses and thought which sci-fi writer William Gibson named Cyberspace."

defs

But when I assert that cyberspace is *almost* synonymous with the internet, I am flirting with a dangerous imprecision. Is email part of cyberspace? Texting? **Skype** <*skype.com*>?

For that matter, when you pick up your smartphone and call your cousin in St. Louis, are you entering cyberspace? And if you are, what about if you call her on your landline? And are these electronic conversations you might have with her using email, Skype with video, or that old fashioned telephone handset more or less "real" than what you say to one another when you visit her in St. Louis?

Is there a philosophy major in the house? Just what is reality?

As it turns out, reality comes in a variety of flavors these days. There is **real life** <*en.wikipedia.org/wiki/Real_life*>, or "meatspace" as the cyberpunks liked to call it. There is cyberspace, or the world of the internet. Then there is **Artificial Reality** <*en.wikipedia.org/wiki/Artificial_reality*>. Wait, isn't that the same as **Virtual Reality** <*electronics.howstuffworks.com/gadgets/other-gadgets/virtual-reality.htm*> or virtuality? In common parlance it is, but there is a useful distinction to be made. And what is this **Augmented Reality** <*commoncraft.com/video/augmented-reality*> we keep hearing is just around the corner?

Some fast and dirty definitions for the purposes of our discussion. Feel free to come up with your own.

Let's decide that when we say artificial reality, a term first used by computer artist **Myron W. Krueger** <*dada.compart-bremen.de/node/3704*#> to describe his interactive immersive environments, we mean a created environment that is so persuasive that the user can't distinguish it from reality. This is essentially a science fiction notion at the moment, since there is no technology on the horizon that is likely to fool users as thoroughly as the Wachowski's **Matrix** <*hackthematrix.org*> convinced Neo and the other hapless citizens of the twenty-second century that they were living unhappily ever after in 1999. Some also call this level of digital verisimilitude simulated reality.

Virtual reality, then, is a simulation that can seem very real (or not), but in which the user is always aware that she is in a simulation. The term was popularized by VR pioneer **Jaron Lanier** <*jaronlanier.com*>. (By the way, his 2010 book **You Are Not A Gadget** <*jaronlanier.com/gadgetcurrency.html*>, which skews to a cautionary view of current net culture, is nonetheless essential reading for the aspiring digerati.) VR, used in this sense, has a long and distinguished literary history. See, for example, the **virtual reality entry** <*sf-encyclopedia.com/entry/virtual_reality*> in the lighter-than-air-digital version of the *Science Fiction Encyclopedia*. It mentions **E.M. Forster's** <*musicandmeaning.com/forster*> cells equipped with "cinematophotes" in **"The Machine Stops"** <*archive.ncsa.illinois.edu/prajlich/forster.html*> (1909) and **Aldous Huxley's** <*huxley.net/ah*> "feelies" in ***Brave New World*** <*huxley.net/bnw*> (1932) and **Arthur C. Clarke's** <*arthurcclarke.net*> "sagas" in *The City and the Stars* (1956) and **Philip K. Dick's** <*philipkdick.*

com> Can-D and Chew-Z (Drugs! Surprise!) in *The Three Stigmata of Palmer Eldritch* (1965) and **Orson Scott Card's** <*hatrack.com*> combat simulations in **Ender's Game** (story version 1977, novel 1985). And this list is by no means complete.

Virtuality is a science fictional idea that is being quickly overtaken by current events. The technology to create immersive simulations is some forty years old now, perhaps dating from the debut of the arcade video game **Pong** <*pong game.org*> in 1972. As crude as it was, Pong helped create the video game industry and was a precursor to the console and computer game industry that last year did some fifty-six billion dollars in business.

According to **The Economist** <*economist.com/blogs/graphicdetail/ 2011/12/daily-chart-0*>: "The gaming industry is more than twice the size of the recorded-music industry, nearly a quarter more than the magazine business and about three-fifths the size of the film industry." That's a lot of reality, virtual or not. I would argue—at least for the duration of this column and the next—that cyberspace is a special case of virtual reality.

Augmented reality is an information based technology that aims to enhance our senses in real time. When I say senses, I mean sight mostly—there is some aural AR but no smell, taste or touch enhancements that I know of. In 1997 Ronald Azuma offered an early look at developments in AR in his ***A Survey of Augmented Reality*** <*cs.unc.edu/~azuma/ARpresence.pdf*> that anticipates some of the gizmos that are available today off the shelf. For example, a staple of the geek press is an article like **"The 10 Coolest Augmented Reality Apps"** <*complex.com/tech/2012/02/the-10-coolest-augmented-reality-apps#2*> that lists such smart-device apps as **Layar** <*layar.com*>, which calls itself a "reality browser." It can recognize stuff in the real world and display information about that stuff on the screen on your phone. **Car Finder** <*carfinderapp.com*> will remember where you parked your car and lead you back to it using your phone's onboard GPS. **Google Sky Map** <*google.com/mobile/skymap*> is one of many wonderful astronomy apps that use your device's compass, GPS, and clock to tell you exactly what you're looking at when you point it at the heavens. And there's more AR on its way, so that the amazing tech we've seen in movies like **Blade Runner** <*scribble.com/ uwi/br/off-world.html*> and the **Terminator** <*terminatorfiles. com*> franchise, and in Vernor Vinge's Hugo-award-winning novel **Rainbow's End** <*http://books.google.com/books?id=rF9zs9TRakYC*>, may be just around the corner. Want a heads-up display like the one you saw in **Iron Man** <*iamironman2.com/uk*>? Check out your local Wal-Mart next Christmas!

exit

Now that we have some provisional definitions, what are we going to do with them? It occurs to me that it's worth thinking about the future of our relationships with the artificial and the real. For a long time, the default view has been to consider them opposites. The artificial is, after all, what is not real. But as our technologies mature and grow ever more astonishing in their capabilities, some believe it may be more productive to think of them as existing on a continuum.

And then there is **Nick Bostrom** <*nickbostrom.com*>, who has proposed the provocative idea that the universe we perceive all around us may well be a Matrix-like simulation, given certain not-all-that-unlikely assumptions. What is reality? Maybe there is no such thing!

More on the simulation controversy in the next installment. Until then, keep it real! ❍

Indrapramit Das is a writer and artist from Kolkata, India, currently living in Vancouver, Canada. His fiction has appeared in *Apex Magazine, Redstone Science Fiction, New Scientist CultureLab, Flash Fiction Online, The World SF Blog,* and is forthcoming in *The Speculative Ramayana Anthology* (Zubaan Books, India). He has also written reviews for *Strange Horizons* and *Tangent Online.* Having graduated with his MFA in Creative Writing from the University of British Columbia, he is ready to flounder about trying to be an adult until someone publishes his novel (which might make him officially an adult). To find out more or see his artwork, visit *http://flavors.me/indra_das*. In his first story for *Asimov's,* the author shows us just how perilous life can be on a tidal-locked planet, and we soon learn why the inhabitants . . .

WEEP FOR DAY

Indrapramit Das

I was eight years old the first time I saw a real, living Nightmare. My parents took my brother and me on a trip from the City-of-Long-Shadows to the hills at Evening's edge, where one of my father's clients had a manse. Father was a railway contractor. He hired out labor and resources to the privateers extending the frontiers of civilization toward the frozen wilderness of the dark Behind-the-Sun. Aptly, we took a train up to the foothills of the great Penumbral Mountains.

It was the first time my brother and I had been on a train, though we'd seen them tumble through the city with their cacophonic engines, cumulous tails of smoke and steam billowing like blood over the rooftops when the red light of our sun caught them. It was also the first time we had been anywhere close to Night—Behind-the-Sun—where the Nightmares lived. Just a decade before we took that trip, it would have been impossible to go as far into Evening as we were doing with such casual comfort and ease.

Father had prodded the new glass of the train windows, pointing to the powerlines crisscrossing the sky in tandem with the gleaming lines of metal railroads silvering the hazy landscape of progress. He sat between my brother Velag and me, our heads propped against the bulk of his belly, which bulged against his rough crimson waistcoat. I clutched that coat and breathed in the sweet smell of chemlis gall that hung over him. Mother watched with a smile as she peeled indigos for us with her fingers, laying them in the lap of her skirt.

"Look at that. We've got no more reason to be afraid of the dark, do we, my tykes?" said Father, his belly humming with the sound of his booming voice.

Dutifully, Velag and I agreed there wasn't.

"Why not?" he asked us, expectant.

"Because of the Industrialization, which brings the light of Day to the darkness of Night," we chimed, a line learned both in school and at home (inaccurate, as we'd never set foot in Night itself). Father laughed. I always slowed down on the word "industrialization," which caused Velag and me to say it at different times. He was just over a year older than me, though.

"And what is your father, children?" Mother asked.

"A knight of Industry and Technology, bringer of light under Church and Monarchy."

I didn't like reciting that part, because it had more than one long "y" word, and felt like a struggle to say. Father *was* actually a knight, though not a knight-errant for a while. He had been too big by then to fit into a suit of plate-armor or heft a heavy sword around, and knights had stopped doing that for many years anyway. The Industrialization had swiftly made the pageantry of adventure obsolete.

Father wheezed as we reminded him of his knighthood, as if ashamed. He put his hammy hands in our hair and rubbed. I winced through it, as usual, because he always forgot about the pins in my long hair, something my brother didn't have to worry about. Mother gave us the peeled indigos, her hands perfumed with the citrus. She was the one who taught me how to place the pins in my hair, both of us in front of the mirror looking like different-sized versions of each other.

I looked out the windows of our cabin, fascinated by how everything outside slowly became bluer and darker as we moved away from the City-of-Long-Shadows, which lies between the two hemispheres of Day and Night. Condensation crawled across the corners of the double-glazed panes as the train took us further east. Being a studious girl even at that age, I deduced from school lessons that the air outside was becoming rapidly colder as we neared Night's hemisphere, which has never seen a single ray of our sun and is theorized to be entirely frozen. The train, of course, was kept warm by the same steam and machinery that powered its tireless wheels and kept its lamps and twinkling chandeliers aglow.

"Are you excited to see the Nightmare? It was one of the first to be captured and tamed. The gentleman we're visiting is very proud to be its captor," said Father.

"Yes!" screamed Velag. "Does it still have teeth? And claws?" he asked, his eyes wide.

"I would think so," Father nodded.

"Is it going to be in chains?"

"I hope so, Velag. Otherwise it might get loose and—" He paused for dramatic effect. I froze in fear. Velag looked eagerly at him. "Eat you both up!" he bellowed, tickling us with his huge hands. It took all my willpower not to scream. I looked at Velag's delighted expression to keep me calm, reminding myself that these were just Father's hands jabbing my sides.

"Careful!" Mother said sharply, to my relief. "They'll get the fruit all over." The indigo segments were still in our laps, on the napkins Mother had handed to us. Father stopped tickling us, still grinning.

"Do you remember what they look like?" Velag asked, as if trying to see how many questions he could ask in as little time as possible. He had asked this one before, of course. Father had fought Nightmares, and even killed some, when he was a knight-errant.

"We never really saw them, son," said Father. He touched the window. "Out there, it's so cold you can barely feel your own fingers, even in armor."

We could see the impenetrable walls of the forests pass us by—shaggy, snarled mare-pines, their leaves black as coals and branches supposedly twisted into knots by the Nightmares to tangle the path of intruders. The high, hoary tops of the trees

shimmered ever so slightly in the scarce light sneaking over the horizon, which they sucked in so hungrily. The moon was brighter here than in the City, but at its jagged crescent, a broken gemstone behind the scudding clouds. We were still in Evening, but had encroached onto the Nightmares' outer territories, marked by the forests that extended to the foothills. After the foothills, there was no more forest, because there was no more light. Inside our cabin, under bright electric lamps, sitting on velvet-lined bunks, it was hard to believe that we were actually in the land of Nightmares. I wondered if they were in the trees right now, watching our windows as we looked out.

"It's hard to see them, or anything, when you're that cold," Father breathed deeply, gazing at the windows. It made me uneasy, hearing him say the same thing over and over. We were passing the very forests he traveled through as a knight-errant, escorting pioneers.

"Father's told you about this many times, dear," Mother interjected, peering at Father with worried eyes. I watched. Father smiled at her and shook his head.

"That's all right, I like telling my little tykes about my adventures. I guess you'll see what a Nightmare looks like tomorrow, eh? Are you excited?" he asked, perhaps forgetting that he'd already asked. Velag shouted in the affirmative again.

Father looked down at me, raising his bushy eyebrows. "What about you, Valyzia?"

I nodded and smiled.

I wasn't excited. Truth be told, I didn't want to see it at all. The idea of capturing and keeping a Nightmare seemed somehow disrespectful in my heart, though I didn't know the word then. It made me feel weak and confused, because I was and always had been so afraid of them, and had been taught to be.

I wondered if Velag had noticed that Father had once again refused to actually describe a Nightmare. Even in his most excitable retellings of his brushes with them, he never described them as more than walking shadows. There was a grainy sepia-toned photograph of him during his younger vigils as a knight-errant above the mantle of our living-room fireplace. It showed him mounted on a horse, dressed in his plate-armor and fur-lined surcoat, raising his longsword to the skies (the blade was cropped from the picture by its white border). Clutched in his other plated hand was something that looked like a blot of black, as if the chemicals of the photograph had congealed into a spot, attracted by some mystery or heat. The shape appeared to bleed back into the black background.

It was, I had been told, the head of a Nightmare Father had slain. It was too dark a thing to be properly caught by whatever early photographic engine had captured his victory. The blot had no distinguishing features apart from two vague points emerging from the rest of it, like horns or ears. That head earned him a large part of the fortune he later used to start up his contracting business. We never saw it, because Nightmares' heads and bodies were burned or gibbeted by knights-errant, who didn't want to bring them into the City for fear of attracting their horde. The photograph had been a source of dizzying pride for my young self, because it meant that my father was one of the bravest people I knew. At other times, it just made me wonder why he couldn't describe something he had once beheaded, and held in his hand as a trophy.

My indigo finished, Mother took the napkin and wiped my hands with it. My brother still picked at his. A waiter brought us a silver platter filled with sugar-dusted pastries, their centers soft with warm fudge and grünberry jam. We'd already finished off supper, brought under silver domes that gushed steam when the waiters raised them with their white-gloved hands, revealing chopped fungus, meat dumplings, sour cream and fermented salad. Mother told Velag to finish the indigo before he touched the pastries. Father ate them with as much gusto as I did. I

watched him lick his powdered fingers, which had once held the severed head of a Nightmare.

When it was time for respite, the cabin lights were shut off and the ones in the corridor were dimmed. I was relieved my parents left the curtains of the windows open as we retired, because I didn't want it to be completely dark. It was dim enough outside that we could fall asleep. It felt unusual to go to bed with windows uncovered for once.

I couldn't help imagine, as I was wont to do, that as our train moved through Evening's forested fringes, the Nightmares would find a way to get on board. I wondered if they were already on the train. But the presence of my family, all softly snoring in their bunks (Velag above me, my parents opposite us); the periodic, soothing flash of way-station lights passing by outside; the sigh of the sliding doors at the end of the carriage opening and closing as porters, waiters, and passengers moved through the corridors; the sweet smell of the fresh sheets and pillow on my bunk—these things lulled me into a sleep free of bad dreams, despite my fear of seeing the creature we'd named bad dreams after, face-to-face, the next vigil.

When I was six I stopped sleeping in my parents' room, and started sleeping in the same room as my brother. At the time of this change, I was abnormally scared of the dark (and consider, reader, that this was a time when fear of the dark was as normal and acceptable as the fear of falling from a great height). So scared that I couldn't fall asleep after the maids came around and closed our sleep-shutters and drew the curtains, to block out the western light for respite.

The heavy clatter of the wooden slats being closed every respite's eve was like a note of foreboding for me. I hunkered under the blankets, rigid with anxiety as the maids filed out of the room with their lanterns drawing wild shadows on the walls. Then the last maid would close the door, and our room would be swallowed up by those shadows.

In the chill darkness that followed, I would listen to the clicking of Nightmares' claws as they walked up and down the corridors of our shuttered house. Our parents had often told me that it was just rats in the walls and ceiling, but I refused to believe it. Every respite I would imagine one of the Nightmare intruders slinking into our room, listening to its breathing as it came closer to my bed and pounced on me, not being able to scream as it sat on my chest and ran its reeking claws through my hair, winding it into knots around its long fingers and laughing softly.

Enduring the silence for what seemed like hours, I would begin to wail and cry until Velag threw pillows at me and Mother came to my side to shush me with her kisses. To solve the problem, my parents tried keeping the sleep-shutters open through the hours of respite, and moved my brother to a room on the windowless east-facing side of the house when he complained. Unfortunately, we require the very dark we fear to fall asleep. The persistent burning line of the horizon beyond the windows, while a comforting sight, left me wide awake for most of respite.

In the end Velag and I were reunited and the shutters closed once more, because Father demanded that I not be coddled when my brother had learned to sleep alone so bravely. I often heard my parents arguing about this, since Mother thought it was madness to try and force me not to be afraid. Most of my friends from school hadn't and wouldn't sleep without their parents until they were at least eleven or twelve. Father was adamant, demanding that we learn to be strong and brave in case the Nightmares ever found a way to overrun the city.

It's a strange thing, to be made to feel guilty for learning too well something that was ingrained in us from the moment we were born. Now nightmare is just a word, and it's unusual to even think that the race that we gave that name might still be

alive somewhere in the world. When Velag and I were growing up, Nightmares were the enemy.

Our grandparents told us about them, as did our parents, as did our teachers, as did every book and textbook we had ever come across. Stories of a time when guns hadn't been invented, when knights-errant roved the frigid forest paths beyond the City-of-Long-Shadows to prove their manhood and loyalty to the Monarchy and its Solar Church, and to extend the borders of the city and find new resources. A time coming to a close when I was born, even as the expansion continued onward faster than ever.

I remember my school class-teacher drawing the curtains and holding a candle to a wooden globe of our planet to show us how the sun made Night and Day. She took a piece of chalk and tapped where the candlelight turned to shadow on the globe. "That's us," she said, and moved the chalk over to the shadowed side. "That's them," she said.

Nightmares have defined who we are since we crawled out of the hot lakes at the edge of fiery Day, and wrapped the steaming bloody skins of slaughtered animals around us to walk upright, east into the cooler marches of our world's Evening. We stopped at the alien darkness we had never seen before, not just because of the terrible cold that clung to the air the further we walked, but because of what we met at Evening's end.

A race of walking shadows, circling our firelight with glittering eyes, felling our explorers with barbed spears and arrows, snatching our dead as we fled from their ambushes. Silently, these unseen, lethal guardians of Night's bitter frontier told us we could go no further. But we couldn't go back towards Day, where the very air seems to burn under the sun's perpetual gaze.

So we built our villages where sun's light still lingers and the shadows are longest before they dissolve into Evening. Our villages grew into towns, and our towns grew into the City-of-Long-Shadows, and our city grew along the Penumbra until it reached the Seas-of-Storms to the north and the impassable crags of World's-Rim (named long before we knew this to be false) to the south. For all of history, we looked behind our shoulders at the gloaming of the eastern horizon, where the Nightmares watched our progress.

So the story went, told over and over.

We named bad dreams after them because we thought Nightmares were their source, that they sent spies into the city to infect our minds and keep us afraid of the dark, their domain. According to folklore, these spies could be glimpsed upon waking abruptly. Indeed, I'd seen them crouching malevolently in the corner of the bedroom, wreathed in the shadows that were their home, slinking away with impossible speed once I looked at them.

There are no Nightmares left alive anywhere near the City-of-Long-Shadows, but we still have bad dreams and we still see their spies sometimes when we wake. Some say they are spirits of their race, or survivors. I'm not convinced. Even though we have killed all the Nightmares, our own half-dreaming minds continue to populate our bedrooms with their ghosts, so we may remember their legacy.

To date, none of our city's buildings have windows or doors on their east-facing walls.

And so the train took us to the end of our civilization. There are many things I remember about Weep-for-Day, though in some respects those memories feel predictably like the shreds of a disturbing dream. Back then it was just an outpost, not a hill-station town like it is now. The most obvious thing to remember is how it sleeted or snowed all the time. I know now that it's caused by moist convective winds in

the atmosphere carrying the warmth of the sun from Day to Night, their loads of fat clouds scraping up against the mountains of the Penumbra for all eternity and washing the foothills in their frozen burden. But to my young self, the constant crying of that bruised sky was just another mystery in the world, a sorcery perpetrated by the Nightmares.

I remember, of course, how dark it was. How the people of the outpost carried bobbing lanterns and acrid magenta flares that flamed even against the perpetual wind and precipitation. How everyone outside (including us) had to wear goggles and thick protective suits lined with the fur of animals to keep the numbing cold of outer Evening out. I had never seen such darkness outdoors, and it felt like being asleep while walking. To think that beyond the mountains lay an absence of light even deeper was unbelievable.

I remember the tall poles that marked turns in the curving main road, linked by the ever-present electric and telegraph wires that made such an outpost possible. The bright gold-and-red pennants of the Monarchy fluttered from those poles, dulled by lack of light. They all showed a sun that was no longer visible from there.

I remember the solar shrines—little huts by the road, with small windows that lit up every few hours as chimes rang out over the windy outpost. Through the doors you could see the altars inside; each with an electric globe, its filament flooded with enough voltage to make it look like a hot ball of fire. For a minute these shrines would burn with their tiny artificial suns, and the goggled and suited inhabitants of Weep-for-Day would huddle around them like giant flies, their shadows wavering lines on the streaks of light cast out on the muddy snow or ice. They would pray on their knees, some reaching out to rub the faded ivory crescents of sunwyrm fangs on the altars.

Beyond the road and the slanted wet roofs of Weep-for-Day, there was so little light that the slope of the hill was barely visible. The forested plain beyond was nothing but a black void that ended in the faint glow of the horizon—the last weak embers in a soot-black fireplace just doused with water.

I couldn't see our City-of-Long-Shadows, which filled me with an irrational anxiety that it was gone forever, that if we took the train back we would find the whole world filled with darkness and only Night waiting on the other side.

But these details are less than relevant. That trip changed me and changed the course of my life not because I saw what places beyond the City-of-Long-Shadows looked like, though seeing such no doubt planted the seeds of some future grit in me. It changed me because I, with my family by my side, witnessed a living Nightmare, as we were promised.

The creature was a prisoner of Vorin Tylvur, who was at the time the Consul of Weep-for-Day, a knight like Father, and an appointed privateer and mining coordinator of the Penumbral territories. Of course, he is now well remembered for his study of Nightmares in captivity, and his campaigns to expand the Monarchy's territories into Evening. The manse we stayed in was where he and his wife lived, governing the affairs of the outpost and coordinating expansion and exploration.

I do not remember much of our hosts, except that they were adults in the way all adults who aren't parents are, to little children. They were kind enough to me. I couldn't comprehend the nature of condescension at that age, but I did find the cooing manner of most adults who talked to me boring, and they were no different. Though I'm grateful for their hospitality to my family, I cannot, in retrospect, look upon them with much returned kindness.

They showed us the imprisoned Nightmare on the second vigil of our stay. It was in the deepest recesses of the manse, which was more an oversized, glorified bunker on the hill of Weep-for-Day than anything else. We went down into a dank, dim corridor in the chilly heart of that mound of crustal rock to see the prisoner.

"I call it Shadow. A little nickname," Sir Tylvur said with a toothy smile, his huge moustache hanging from his nostrils like the dead wings of some poor misbegotten bird trapped in his head. He proved himself right then to have not only a startling lack of imagination for a man of his intelligence and inquisitiveness, but also a grotesquely inappropriate sense of levity.

It would be dramatic and untruthful to say that my fear of darkness receded the moment I set eyes on the creature. But something changed in me. There, looking at this hunched and shivering thing under the smoky blaze of the flares its armored jailers held to reveal it to its captor's guests, I saw that a phantom flayed was just another animal.

Sir Tylvur had made sure that its light-absorbent skin would not hinder our viewing of the captured enemy. There is no doubt that I feared it, even though its skin was stripped from its back to reveal its glistening red muscles, even though it was clearly broken and defeated. But my mutable young mind understood then, looking into its shining black eyes—the only visible feature in the empty dark of its face—that it knew terror just as I or any human did. The Nightmare was scared. It was a heavy epiphany for a child to bear, and I vomited on the glass observation wall of its cramped holding cell.

Velag didn't make fun of me. He shrank into Mother's arms, trying to back away from the humanoid silhouette scrabbling against the glass to escape the light it so feared; a void-like cut-out in reality but for that livid wet wound on its back revealing it to be as real as us. It couldn't, or would not, scream or vocalize in any way. Instead, we just heard the squeal of its spider-like hands splayed on the glass, claws raking the surface.

I looked at Father, standing rigid and pale, hands clutched into tight fists by his sides. The same fists that held up the severed head of one of this creature's race in triumph so many years ago. Just as in the photograph, there were the horn-like protrusions from its head, though I still couldn't tell what they were. I looked at Mother who, despite the horrific vision in front of us, despite her son clinging to her waist, reached down in concern to wipe the vomit from my mouth and chin with bare fingers, her gloves crumpled in her other hand.

As Sir Tylvur wondered what to do about his spattered glass wall, he decided to blame the Nightmare for my reaction and rapped hard on the cell with the hilt of his sheathed ceremonial sword. He barked at the prisoner, wanting to frighten it away from the glass, I suppose. The only recognizable word in between his grunts was "Shadow." But as he called it by that undignified, silly nickname, the thing stopped its frantic scrabbling. Startled, Sir Tylvur stepped back. The two armored jailers stepped back as well, flares wavering in the gloom of the cell. I still don't know why the Nightmare stopped thrashing, and I never will know for sure. But at that moment I thought it recognized the nickname its captor had given it, and recognized that it was being displayed like a trophy. Perhaps it wanted to retain some measure of its pride.

The flarelight flickered on its eyes, which grew brighter as moisture gathered on them. It was clearly in pain from the light. I saw that it was as tall as a human, though it looked smaller because of how crouched into itself it was. It cast a shadow like any other animal, and that shadow looked like its paler twin, dancing behind its back. Chains rasped on the wet cell floor, shackled to its limbs. The illuminated wound on its back wept pus, but the rest of it remained that sucking, indescribable black that hurt the human eye.

Except something in its face. It looked at us, and out of that darkness came a glittering of wet obsidian teeth as unseen lips peeled back. I will never forget that invisible smile, whether it was a grimace of pain or a taunting leer.

"Kill it," Velag whispered. And that was when Mother took both our hands tight in hers, and pulled us away from the cell. She marched us down that dank corridor, leaving the two former knights-errant, Father and Sir Tylvur, staring into that glimmering cell at the specter of their past.

That night, in the tiny room we'd been given as our quarters, I asked Velag if the Nightmare had scared him.

"Why should it scare me?" he said, face pale in the dim glow of the small heating furnace in the corner of the chamber. "It's in chains."

"You just looked scared. It's okay to be scared. I was too. But I think it was as well."

"Shut up. You don't know what you're saying. I'm going to sleep," he said, and turned away from me, his cot groaning. The furnace hissed and ticked.

"I think papa was scared also. He didn't want to see a Nightmare again," I said to Velag's back.

That was when my brother pounced off his cot and on top of me. I was too shocked to scream. My ingrained submission to his power as an elder male authority figure took over. I gave no resistance. Sitting on my small body, Velag took my blanket and shoved it into my mouth. Then, he snatched my pillow and held it over my face. Choking on the taste of musty cloth, I realized I couldn't breathe. I believed that my brother was about to kill me then. I truly believed it. I could feel the pressure of his hands through the pillow, and they were at that moment the hands of something inhuman. I was more terrified then than I'd ever been in my entire short life, plagued though I'd always been by fear.

He held the pillow over my head for no more than four seconds, probably less. When he raised it off my face and pulled the blanket out of my mouth he looked as shaken as I was. His eyes were wet with tears, but in a second his face was twisted in a grimace.

"Never call Papa a coward. Never call Papa a coward. Papa was never afraid. Do you hear me? You never had to sleep alone in the dark, you don't know. I'm going to grow up and be like Papa and kill them. I'll kill them," he hissed the words into my face like a litany. I started crying, unable and probably too scared to tell him I hadn't called Father a coward. I could still barely breathe, so flooded was I with my own tears, so drunk on the air he had denied me. Velag went back to his cot and wrapped himself in his blanket, breathing heavily.

As I shuddered with stifled sobs, I decided that I would never tell my parents about this, that I would never have Velag punished for this violence. I didn't forgive him, not even close, but that is what I decided.

I was seventeen the last time I saw Velag. I went to visit him at the Royal Military Academy's boarding school. He had been there for four years already. We saw him every few moons when he came back to the City proper to visit. But I wanted to see the campus for myself. It was a lovely train ride, just a few hours from the central districts of the City-of-Long-Shadows to the scattered hamlets beyond it.

It was warmer and brighter out where the Academy was. The campus was beautiful, sown with pruned but still wild looking trees and plants that only grew further out towards Day, their leaves a lighter shade of blue and their flowers huge, craning to the west on thick stems. The sun still peered safely behind the edge of the world, but its gaze was bright enough to wash the stately buildings of the boarding school with a fiery golden-red light, sparkling in the waxy leaves of vines winding their way around the arched windows. On every ornate, varnished door was a garish propaganda poster of the Dark Lord of Nightmares, with his cowled cloak of shadows and black sword, being struck down by our soldiers' bayoneted guns.

I sat with Velag in a pavillion in the visitors' garden, which was on a gentle bluff. In the fields adjacent, his fellow student-soldiers played tackleball, their rowdy calls and whistles ringing through the air. We could see heavy banks of glowing, sunlit storm-clouds to the west where the atmosphere boiled and churned in the heat of Day, beyond miles of shimmering swamp-forests and lakes. To the east, a faint moon hung over the campus, but no stars were visible so close to Day.

Velag looked so different from the last time I saw him. His pimples were vanishing, the sallow softness of adolescence melting away to reveal the man he was to become. The military uniform, so forbidding in red and black, suited his tall form. He looked smart and handsome in it. It hurt me to see him shackled in it, but I could see that he wore it with great pride.

He held my hand and asked about my life back home, about my plans to apply to the College of Archaeology at the University of St. Kataretz. He asked about our parents. He told me how gorgeous and grown-up I looked in my dress, and said he was proud of me for becoming a "prodigy." I talked to him with a heavy ache in my chest, because I knew with such certainty that we hardly knew each other, and would get no chance to any time soon, as he would be dispatched to the frontlines of Penumbral Conquest.

As if reading my thoughts, his cheek twitched with what I thought was guilt, and he looked at the stormy horizon. Perhaps he was remembering the night on which he told me he would grow up and kill Nightmares like Father—a promise he was keeping. He squeezed my hand.

"I'll be all right, Val. Don't you worry."

I gave him a rueful smile. "It's not too late. You can opt to become a civilian after graduation and come study with me at St. Kataretz. Ma and Papa would think no less of you. You could do physics again; you loved it before. We can get an apartment in Pemluth Halls, share the cost. The University's right in the middle of the City, we'd have so much fun together."

"I can't. You know that. I want this for myself. I want to be a soldier, and a knight."

"Being a knight isn't the same thing as it was in Papa's time. He was independent, a privateer. Things have changed. You'll be a part of the military. Knighthoods belong to them now and they're stingy with them. They mostly give them to soldiers who are wounded or dead, Velag."

"I'm in military school, by the saints, I know what a knighthood is or isn't. Please don't be melodramatic. You're an intelligent girl."

"What's that got to do with anything?"

"I'm going. I have more faith in my abilities than you do."

"I have plenty of faith in you. But the Nightmares are angry now, Velag. We're wiping them out. They're scared and angry. They're coming out in waves up in the hills. More of our soldiers are dying than ever before. How can I not worry?"

His jaw knotted, he glared down at our intertwined hands. His grip was limp now. "Don't start with your theories about the benevolence of Nightmares. I don't want to hear it. They're not scared, they *are* fear, and we'll wipe them off the planet if need be so that you and everybody else can live without that fear."

"I'm quite happy with my life, thank you. I'd rather you be alive for Ma and Papa and me than have the terrible horde of the Nightmares gone forever."

He bit his lip and tightened his hand around mine again. "I know, little sister. You're sweet to worry so. But the Monarchy needs me. I'll be fine. I promise."

And that was the end of the discussion as far as he was concerned. I knew there was no point pushing him further, because it would upset him. This was his life, after all. The one he had chosen. I had no right to belittle it. I didn't want to return to the City on bad terms with him. We made what little small talk was left to make, and then we stood and kissed each other on the cheek, and I hugged him tight and

watched him walk away.

What good are such promises as the one he made on our final farewell, even if one means them with all of one's heart? He was dispatched right after his graduation a few moons later, without even a ceremony because it was wartime. After six moons of excited letters from the frontlines at the Penumbral Mountains, he died with a Nightmare's spear in his chest, during a battle that earned the Monarchy yet another victory against the horde of darkness. Compared to the thousands of Nightmares slaughtered during the battle with our guns and cannons, the Monarchy's casualties were small. And yet, my parents lost their son, and I my brother.

In death, they did give Velag the knighthood he fought so hard for. Never have I hated myself so much for being right.

When Velag was being helped out of Mother by doctors in the city, my father had been escorting pioneers in the foothills. I see him in his armor, the smell of heated steel and cold sweat cloying under his helm, almost blind because of the visor, sword in one hand, knotted reins and a flaming torch in the other, his mount about to bolt. A new metal coal-chamber filled with glowing embers strapped to his back to keep the suit warm, making his armor creak and pop as it heated up, keeping him off-balance with its weight and hissing vents, but holding the freezing cold back a little. Specks of frozen water flying through the torch-lit air like dust, biting his eyes through the visor. His fingers numb in his gloves, despite the suit. The familiar glitter of inhuman eyes beyond the torchlight, nothing to go by but reflections of fire on his foes, who are invisible in the shadows, slinking alongside the caravan like bulges in the darkness. The only thing between the Nightmares and the pioneers with their mounts and carriages weighed down by machinery and thick coils of wire and cable that will bring the light of civilization to these wilds, is him and his contingent.

How long must that journey have been to him? How long till he returned to see his wife and new son Velag in a warm hospital room, under the glow of a brand new electric light?

By the time I was born, armorers had invented portable guns and integrated hollow cables in the suit lining to carry ember-heated water around armor, keeping it warmer and enabling mercenaries and knights-errant to go deeper into Evening. The pioneers followed, bringing their technology to the very tops of the foothills, infested with Nightmares. That was when Father stopped going, lest he never return. They had new tools, but the war had intensified. He had a son and daughter to think of, and a wife who wanted him home.

When I watched Velag's funeral pyre blaze against the light of the west on Barrow-of-Bones cremation hill, I wondered if the sparks sent up into the sky by his burning body would turn to stardust in the ether and migrate to the sun to extend its life, or whether this was his final and utter dissolution. The chanting priest from the Solar Church seemed to have no doubts on the matter. Standing there, surrounded by the fossilized stone ribs of Zhurgeith, last of the sunwyrms and heraldic angel of the Monarchy and Church (who also call it Dragon), I found myself truly unsure about what death brings for maybe the first time in my life, though I'd long practiced the cynicism that was becoming customary of my generation.

I thought with some trepidation about the possibility that if the Church was right, the dust of Velag's life might be consigned to the eternal dark of cosmic limbo instead of finding a place in the sun, because of what he'd done to me as a child. Because I'd never forgiven him, even though I told myself I had.

How our world changes.

The sun is a great sphere of burning gas, ash eventually falls down, and my dead

brother remains in the universe because my family and I remember him, just as I remember my childhood, my life, the Nightmares we lived in fear of, the angel Dragon whose host was wiped out by a solar flare before we could ever witness it.

Outside, the wind howls so loud that I can easily imagine it is the sound of trumpets from a frozen city, peopled by the horde of darkness. Even behind the insulated metal doors and heated tunnels of the cave bunkers that make up After-Day border camp, I can see my breath and need two thick coats to keep warm. My fingers are like icicles as I write. I would die very quickly if exposed to the atmosphere outside. And yet, here I am, in the land of Nightmares.

Somewhere beyond these Penumbral Mountains, which we crossed in an airtight train, is the City-of-Long-Shadows. I have never been so far from it. Few people have. We are most indebted to those who mapped the shortest route through the mountains, built the rails through the lowest valleys, blasted new tunnels, laid the foundations for After-Day. But no one has gone beyond this point. We—I and the rest of the expeditionary team from St. Kataretz—will be the first to venture into Night. It will be a dangerous endeavor, but I have faith in us, in the brave men and women who have accompanied me here.

My dear Velag, how would you have reacted to see these beautiful caves I sit in now, to see the secret culture of your enemy? I am surrounded by what can only be called their art, the lantern-light making pale tapestries of the rock walls on which Nightmares through the millennia scratched to life the dawn of their time, the history that followed, and its end, heralded by our arrival into their world.

In this history we are the enemy, bringing the terror of blinding fire into Evening, bringing the advanced weapons that caused their genocide. On these walls we are drawn in pale white dyes, bioluminescent in the dark, a swarm of smeared light advancing on the Nightmares' striking, jagged-angled representations of themselves, drawn in black dyes mixed from blood and minerals.

In this history Nightmares were alive when the last of the sunwyrms flew into Evening to scourge the land for prey. Whether this is truth or myth we don't know, but it might mean that Nightmares were around long before us. It might explain their adaptation to the darkness of outer Evening—their light-absorbent skin ancient camouflage to hide from sunwyrms under cover of the forests of Evening. We came into Evening with our fire (which they show sunwyrms breathing) and pale skins, our banners showing Dragon and the sun, and we were like a vengeful race of ghosts come to kill on behalf of those disappeared angels of Day, whom they worshipped to the end—perhaps praying for our retreat.

In halls arched by the ribcages and spines of ancient sunwyrm skeletons I have seen burial chambers; the bones of Nightmares and their children (whom we called imps because we didn't like to think of our enemy having young) piled high. Our bones lie here too, not so different from theirs. Tooth-marks show that they ate their dead, probably because of the scarcity of food in the fragile ecosystem of Evening. It is no wonder then that they ate our dead too—as we feared. It was not out of evil, but need.

We have so much yet to learn.

Perhaps it would have given you some measure of peace, Velag, to know that the Nightmares didn't want to destroy us, only to drive us back from their home. Perhaps not.

Ilydrin tells me it is time for us to head out. She is a member of our expedition—a biologist—and my partner. To hide the simple truth of our affection seems here, amidst the empty city of a race we destroyed, an obscenity. Confronted by the vast, killing beauty of our planet's second half, the stagnant moralities of our city-state appear a trifle. I adore Ilydrin, and I am glad she is here with me.

One team will stay here while ours heads out into Night. Ilydrin and I took a walk outside to test our Night-shells—armored environmental suits to protect us from the lethal cold. We trod down from the caves of After-Day and into the unknown beyond, breath blurring our glass faceplates, our head-lamps cutting broad swathes through the snow-swarmed dark. We saw nothing ahead but an endless plain of ice—perhaps a frozen sea.

No spectral spires, no black banners of Night, no horde of Nightmares waiting to attack, no Dark Lord in his distant obsidian palace (an image Ilydrin and I righteously tore down many times in the form of those Army posters, during our early College vigils). We held each other's gloved hands and returned to Camp, sweating in our cramped shells, heavy boots crunching on the snow. I thought of you, Father, bravely venturing into bitter Evening to support your family. I thought of you, Brother, nobly marching against the horde for your Monarchy. I thought of you, Mother, courageously carrying your first child alone in that empty house before it became *our* home. I thought of you, Shadow—broken, tortured prisoner, baring your teeth to your captors in silence.

Out there, I was shaking—nervous, excited, queasy. I wasn't afraid.

I have Father's old photograph with the Nightmare's head (he took it down from above the mantelpiece after Velag died). I have a photograph of Mother, Father, Velag and me all dressed up before our trip to Weep-for-Day. And finally, a smiling portrait of Velag in uniform before he left for the Academy, his many pimples invisible because of the monochrome softness of the image. I keep these photographs with me, in the pockets of my overcoat, and take them out sometimes when I write.

So it begins. I write from the claustrophobic confines of the Night-Crawler, a steam-powered vehicle our friends at the College of Engineering designed (our accompanying professors named it with them, no doubt while drunk in a bar on University-Street). It is our moving camp. We'll sleep and eat and take shelter in it, and explore further and longer—at least a few vigils, we hope. If its engines fail, we'll have to hike back in our shells and hope for the best. The portholes are frosted over, but the team is keeping warm by stoking the furnace and singing. Ilydrin comes and tells me, her lips against my hair: "Val. Stop writing and join us." I tell her I will, in a minute. She smiles and walks back to the rest, her face flushed and soot-damp from the open furnace. I live for these moments.

I will lay down this pen now. A minute.

I don't know what we'll find out here. Maybe we *will* find the Dark Lord and his gathered horde of Nightmares. But at this point, even the military doesn't believe that, or they would have opposed the funding for this expedition or tried to hijack it.

Ilydrin says there's unlikely to be life so deep into Night—even Nightmares didn't venture beyond the mountains, despite our preconceptions. But she admits we've been wrong before. Many times. What matters is that we are somewhere new. Somewhere other than the City-of-Long-Shadows and the Penumbral territories, so marked by our history of fear. We need to see the rest of this world, to meet its other inhabitants—if there are others—with curiosity, not apprehension. And I know we will, eventually. This is our first, small step. I wish you were here with me to see it, Velag. You were but a child on this planet.

We might die here. It won't be because we ventured into evil. It will be because we sought new knowledge. And in that, I have no regrets, even if I'm dead when this is read. A new age is coming. Let this humble account be a preface to it. ❍

Born and raised in the American South, Jason Sanford worked in various parts of the world as an archeologist and Peace Corps volunteer before settling down in the Midwestern U.S. with his wife and sons. In the last few years, he has published a dozen stories in the British SF magazine *Interzone,* which devoted a special issue to his fiction in December 2010. Other publications include stories in the *Year's Best SF 14, Analog, Orson Scott Card's Intergalactic Medicine Show, Tales of the Unanticipated,* and *The Mississippi Review.* Jason is a three-time winner of the Interzone Readers' Poll and was a finalist for the Nebula Award. Jason also co-founded the literary journal *storySouth,* through which he runs the annual Million Writers Award for best online fiction, and he writes a monthly column for the Czech SF magazine *XB-1.* In the author's first story for *Asimov's,* humanity's fate hinges on not encountering the caress of . . .

HEAVEN'S TOUCH

Jason Sanford

As the *Tonatiuh* arcs through the sparkling coma of Heaven's Touch, Parda's holographic proxy wraps herself around my spacesuit and kisses my visor. "Please let Sister Dusty live," the proxy prays in fervent devotion, defying the actions of the real Parda, who at this moment is piloting our ship on a collision course with the comet.

But I'm too busy for either Parda or her proxy. After topping off my suit's air, I crank open the exterior airlock door until whiteness swirls before me, my fatigue-addled mind turning the ice and dust to ghosts. Countless comet ghosts. Icy haunts begging me to embrace my destiny.

"If you jump now, you're dead," the proxy whispers seductively in my ear. "All the prayer in the universe won't save you. Wait until we're closer to the surface."

I nod, almost forgetting this isn't the real Parda. Instead, the autonomous AI program is a near-perfect imitation of my best friend—the proxy's programmed intelligence infesting my spacesuit, my visor's holographic projectors creating the illusion of her body. The proxy appears to wear a white dress as she stands barefoot before the open airlock door, as if Parda and I were once again in Florida running along white-sand beaches.

To my eyes, this is Parda.

As if knowing my thoughts, this simulated Parda suddenly pirouettes and, without a care about the lack of gravity, dances out the open airlock door into the coma. The proxy's green eyes gaze at me as she shimmies and spins through the ice and dust, her slender brown hands clasped firmly together in prayer.

"Stop that!" the real Parda hisses over the radio, her voice mixing with the cockpit's proximity alarms and computer warnings. I should have known Parda would be monitoring her proxy's actions. Chagrined, the proxy appears to skulk back into the airlock, eyes downcast as if ashamed to express frivolity in such a serious moment.

"You should join me in prayer, Sister Dusty," the real Parda broadcasts to me. Without waiting for my response, she begins: "Blessed be those who embrace their destiny, for they shall see heaven. Blessed be God's one true destiny, for it carries humanity to paradise."

Her words run ice through my spacesuit. That's the martyr's prayer, uttered by Seekers prepared to die in attainment of their destiny.

"She doesn't mean it," the proxy whispers. "She loves you, Dusty. Your death is merely an undesirable aspect of achieving her destiny."

I don't answer, even though I want to curse and scream. Perhaps this intelligent program believes her words prove her love for me. Perhaps she believes her AI-generated prayers can spark miracles, just as religious fervor led Parda's real self down the path of martyrdom.

Knowing I'm out of time, I edge closer to the open airlock door. Before me, the comet's dirty surface reaches for the *Tonatiuh*. Parda has piloted our ship into a near horizontal approach to Heaven's Touch, closing on the ice at only ten meters a second. But that's still too fast for our delicate ship to handle.

Parda repeats the martyr's prayer twice more before sighing, disappointed I didn't join in. "Don't forget," she says. "I'll always be your friend, my sweet. That's God's only truth."

The proxy's holographic face nods her own agreement, looking so like the real Parda I want to punch her for her progenitor's deeds.

"Don't worry, Dusty," the proxy says excitedly as the comet's black surface races toward us. "I know God heard me. You're going to make it. You'll finish building your ice ship and see the universe!"

I don't answer. We're mere seconds from crashing. All I have to do is stay in the airlock and my death will be quick. If I jump I'll probably only prolong my life for a few days.

I mutter how I didn't want to die like this. Not alone. Not knowing I was betrayed by my closest friend.

"You aren't alone, Dusty," the proxy says with a loving sigh. "I'm there for you. Always."

I nod my head. Parda is with me. Always.

I jump into the coma.

Perhaps the proxy was Parda's way of comforting me. Perhaps gifting me with the intelligent program proves Parda still cared—that even as my friend piloted the *Tonatiuh* toward its impact with Heaven's Touch, some part of her still needed to reassure and look after me.

Not that it worked. Parda had trapped me in the main airlock after I'd left the ship for routine maintenance on our antenna. Naturally, I didn't see the betrayal coming. Instead, as Parda helped me into my spacesuit, she'd grinned happily and promised to cook a big dinner upon my return. I'd laughed at her lame joke—there was no cooking involved in heating packets of synthetic food—but as the airlock door closed her grin turned horribly serious. I thought she was merely worried about my safety,

but when I finished the space walk I discovered the inner airlock door jammed shut and a suddenly religious Parda proclaiming her destiny.

"I'm sorry, Dusty," she'd said sadly. "It doesn't matter to wish things different. We can't go against God's will."

I cursed her to no end. Back on Earth, our company's director begged Parda to reconsider. When that didn't work, the company reluctantly turned control over to NASA, allowing Johnie Acaba and the other astronauts I'd once worked with to broadcast soothing words at Parda. None of it made a difference. With me trapped and Johnie and everyone else so far away, there was nothing to stop Parda's dream of martyrdom.

But she did share her proxy with me.

Perhaps, in the end, that means something.

After jumping from the *Tonatiuh,* I shoot high in the weak gravity and waste most of my suit's emergency jets reaching the surface. The proxy had been correct—if I'd jumped earlier I wouldn't have made it.

The ship hits the coal-black surface a few moments after I land. I watch the *Tonatiuh* rend and twist as automatic lines and spurs shoot out, anchoring the ship even as it breaks apart. Our precious foil-wrapped cargo bay breaks away; the cockpit explodes in a burst of decompression. I imagine Parda screaming as tears boil from her eyes.

When outgassing finally hides the crash site, I gaze with despair at Heaven's Touch. We've crashed on the comet's dark side, meaning I won't immediately bake to death or be outvented into space. As I stumble across the black surface—scraping or punching through to the volatiles below with each step I take—I leave behind a dingy trail of smoking pearls. Above, the comet's misty coma wraps the sky in a glittering gauze.

Heaven's Touch is a sungrazer twenty kilometers in diameter. Our mission had been to anchor the *Tonatiuh* to the comet and siphon enough water to build an ice ship. While the timing had been tight—we'd have only had a few weeks before the comet was too close to the sun to safely work—the potential payoff was so exciting that Parda and I eagerly agreed to the mission.

But obviously Parda had hidden her true plans.

The crash site outgasses for almost an hour before dying down enough that the ship becomes visible again. The *Tonatiuh* looks relatively intact even though her right angles of struts and interconnected modules have partially collapsed. I bound over to discover large rips in the ship's mirror-reflective skin. Through a hole in the main cabin I see my zero-gee sleeping bag fluttering as the main oxygen tank vents. The airlock I'd been trapped in is also destroyed.

The only good news is the auxiliary airlock still works. I crank the airlock open and step inside. The space is tiny, barely big enough for me and my suit. Still, its emergency batteries function and the backup air supply means I can top off my suit for at least a week. If I wanted to waste the air, I could even pressurize the airlock and take off my helmet.

Not that it matters. Unless I escape this comet, an extra week's air will mean very little.

I leap carefully to the top of the *Tonatiuh*—not wanting to hurl myself too high in the low gravity—and scan the wreckage. My visor's holographic interface lights up with rainbowed notations showing coded supplies of food, gear, and other survival items. I ask the system to locate additional air supplies, but there are none.

Then, in an urgent starburst of red vital signs and flashing arrows, the visor points me to Parda's body.

Needing to see her one last time, I hike toward the ship's cockpit, which broke off and rests dozens of meters from the rest of the wreckage. Parda is strapped in her control seat and wears a white Seeker gown, which blurs with the comet's mists. She must have cut the outfit from her sleeping bag's lining. The gown's whiteness indicates she attained her life's destiny.

"God's only truth?" I mutter. I kick her already frozen body. I would cry except there's no way to wipe tears in a spacesuit.

As I look at our shattered ship, I naïvely believe Parda's goal has been to stop our mission. To keep us from creating the first long-term spacecraft in human history.

I am wrong.

As usual, Johnie Acaba breaks the bad news.

"Here's the problem, Dusty," he broadcasts from a space station in low-Earth orbit, his voice mixed with static from crossing so many millions of kilometers. "She rammed the blipper."

He means the tiny nuclear device NASA launched a year earlier and attached to the comet. While Heaven's Touch easily missed Earth this go around, its close approach to the sun would change its orbit. When it comes back around twenty years from now there's a high chance of a devastating impact. NASA designed the blipper to explode at the comet's closest approach around the sun, changing its orbital path by a few millimeters. While that wouldn't matter much in the short term, over the next two decades the effect would grow until the comet missed Earth by a safe distance.

"Where's the blipper?" I ask, waiting the long seconds for our broadcasts to cross space.

"On a quick drop toward the sun. Parda jumped it like a cue ball off an icy pool table."

I grimace at Johnie's silly analogy, even if it's accurate. This is bad. While my mission was privately funded, our company had subcontracted with NASA to remotely inspect the blipper and make sure it was still functional. But as I watch oxygen and other gases venting from the *Tonatiuh*, I realize this problem no longer concerns me. I won't be alive in a few weeks—let alone twenty years—unless I escape Heaven's Touch. Still, it explains what Parda had been up to.

"The Seekers are going crazy down here," Johnie says. "They're proclaiming the comet to be God's will. Saying unless people repent, Heaven's Touch will destroy the world."

"That's what you get for subcontracting out important work," I joke, instantly regretting the words because I know they'll be misunderstood by too many people back on Earth. I don't ask if NASA can launch another blipper at the comet—I already know the answer. Thanks to anti-tech religions like the Seekers, NASA barely had the funding for a single blipper. Hence subcontracted players like me.

Besides, the timing is off. The easiest way to change the path of a large comet is to affect it at perihelion. With the blipper gone, that opportunity is lost. By the time the comet heads back to Earth, it will be extremely difficult to alter its course.

"I'd hate to be in your shoes right now," I say, imagining the panic and finger-pointing unfolding on Earth over this debacle.

"It's worse than you know," Johnie says. "Parda uploaded something into the *Tonatiuh's* systems before she crashed the ship. This, uh, thing, kept us from remotely accessing the ship's controls."

Despite Johnie's vagueness, I know he's referring to Parda's proxy. I've been so busy trying to survive I'd forgotten about the AI program. If the proxy had access to my suit before I jumped, it is a safe bet it's still hiding somewhere in my systems.

"Are you there, Parda?" I ask. For a moment the radio static giggles. Johnie asks me to repeat my statement so I explain that the proxy has already infested my suit. His silence tells me all I need to know about what this means for my chances at survival.

I glance at the shimmering white sky. I stand on a comet with only a weak suit radio to contact Earth, more alone than any other person now living. If this proxy really did help Parda crash the *Tonatiuh,* then it isn't as benevolent as I originally thought. It might even be able to take control of my spacesuit. All it has to do is shut down my heat exchangers or air system and I'll die.

"Sucks to be me, huh?" I mutter. "Although it might suck to be you in twenty years."

To his credit, Johnie doesn't disagree. "Worry about yourself, Dusty," he says. "Maybe the comet won't hit Earth. And twenty years is a long time."

I nod. A long time. Much longer than I have.

After securing as many supplies as I can, I recharge my suit's oxygen and sleep a few hours in the airlock, closing the outer doors but staying in my suit. My stomach snaps and begs—I've now gone almost two days with only a single high-energy protein bar to eat. That's all the food we normally keep in a spacesuit. To eat anything else I'd have to pressurize the airlock and remove my helmet. But I refuse to waste air on a grumbling stomach.

As I fall through a fitful sleep, Heaven's Touch shimmers and vents. Each vibration hums the airlock's darkness, reminding me of the violence the sun throws my way. If the lack of air doesn't kill me I'll eventually be baked alive or exploded off the surface by outventing.

Lovely thoughts. Perfect for meditating on while falling asleep.

Eventually I do sleep, only to dream of meeting Parda two years back at our company's training facility near Cape Canaveral. During our training and the time we spent on the *Tonatiuh,* I felt like I'd discovered the sister I'd never had. We were the perfect team, knowing each other's needs before our own.

Once, during an EVA, my spacesuit snagged on the communications array. I kept quiet, figuring I could free myself, only to see Parda floating beside me with a cutting tool. Somehow she'd figured out the situation without a word from me.

After slicing off the metal snagging my suit, she'd pushed me back to the airlock with a giggle. "Dusty," she'd said, "I don't know what you'd do without me."

I wake from my dream as the airlock shakes from an extremely violent outgassing. My breathing echoes in my helmet as I hear Parda's voice whispering. Apologizing. Saying she is still my friend.

I tell her to go to hell as I fall back to sleep.

When I finally open the airlock door—feeling even more tired, hungry, and angry—I walk to the *Tonatiuh's* cargo bay, which appears intact. I open the bay using the manual release. Inside, the mechanical spiders are undamaged, as is the massive package containing the ice ship's fabric shell.

Despite everything Parda has done, there's no reason I can't still build our ice ship and use it to escape from Heaven's Touch. Everything I need to melt the ice and fill the giant fabric shell is in this cargo bay. Even the arm-sized solid-fuel rockets to lift the completed ship from the surface have survived.

But my hopes die when I look at the collapsed solar sail—during the crash, one of the ship's structural beams impaled it. I run my gloved fingers across the sail's silver sheen. The sail had always been the most delicate part of our mission. Even if everything else works, without the sail the ship can't be propelled back to Earth. It'll drift

on a long-term orbit just like this comet, and I'll die the same as if I'd never left Heaven's Touch.

I curse as I grab my anchor gun, used for bolting items to the ice. I hike to the destroyed cockpit and cut out Parda's stiff body. Her frozen, holier-than-thou gaze pours through my visor. I bolt her hands and feet to the ice with the anchoring gun and ram one final bolt through her heart. I hope her ghost screams at the insult. I hope she's gone straight to the devil for betraying me.

Panting at the exertion and angry at wasting my limited time and air on such stupidity, I try to decide what to do. I could still build the ice ship, but I'd only drift inside it until my food supplies ran out. Far better to die here. Simply shoot the anchoring gun through my suit and be done with it.

But as my hand absently taps the gun, Parda appears. She stands barefoot on the frigid surface, her white gown sparkling in the soft rain of ice crystals I've stirred up.

"Hello, Dusty," she says, her beautiful lips puckering as if to kiss my facemask.

I jump—literally, rising dozens of meters in the air. My emergency jets kick on and return me to the comet's surface.

I land beside Parda's bolt-impaled body, her white gown speckled with black dust. I kick her leg and feel her frozen flesh crack.

"Hello again," Parda says.

I spin to see Parda standing before me once more. She laughs the irritatingly happy grin she's always flashed when she knows the answer before I do. Even though I understand this is the proxy, I still reach for her. My gloved hand passes through her body.

"You're not real," I say, more to myself than to Parda.

"Real as you, perhaps."

I curse, remembering what Johnie said about this proxy helping Parda crash the ship. I radio him and wait for several long minutes, far longer than he'd need to respond. Nothing.

"Johnie won't be talking anymore," Parda finally says, her brown skin glowing against the whiteness of her gown and the outventing mists. "I didn't like what he said about me, so it's now just the two of us."

I stare at the proxy, which looks so like the real Parda I fight the urge to hug her for being alive—or punch her for what she's done. Our company had built detailed proxies of all its astronauts so the AI personality programs could be quickly run through mission scenarios. I assume Parda somehow copied her proxy and brought the program with us.

I try overriding my suit's communication controls, which project her holographic image onto my facemask, but I'm locked out. The proxy obviously wants no one else to talk to me—and to leave me no choice but to listen to her.

"So what are you doing, Dusty?" Parda asks as she stares at the black ice and the remains of our ship.

I grip the bolt gun tight. I could still end it all. Take the quick way out. But seeing Parda's proxy standing there reminds me how angry I am at her. I refuse to let her or this Seeker nonsense be the death of me.

I holster the bolt gun and smile at the proxy. "I'm building an ice ship. You want to help?"

"I admire your will to survive," Parda says, appearing to sit on the ice as she makes a snowman. "Not that I'm surprised. Your destiny's among the stars."

I ignore the proxy as I power up the spiders in the cargo bay. The spiders look like giant insects and are the perfect companions on construction projects, with a wondrously strong yet delicate touch.

As I test one spider, Parda throws a dirty snowball at me. I duck, my instincts forgetting she and everything she does are only holographic projections on my suit's visor. I've already run a diagnostic and, as I'd suspected, the proxy is deeply embedded in my suit's systems. But as long as the proxy only wants to harass me with words and images, instead of harming my suit's critical systems, I'll be okay.

Using the spiders, I pull the steamer out of the cargo bin, leaving a long, outventing scar in the black surface of Heaven's Touch. I set up the small reactor several hundred meters from the crash. The steamer immediately snakes pipes into the comet's surface to melt water for the ice ship.

"Going nuclear, huh?" Parda asks as she inspects the steamer. "Not very green of you."

I laugh. The proxy perfectly mimics Parda's lame sense of humor. "Not much green out here," I say. "Which is, of course, why you're frozen stiff."

Parda glances at her body, still bolted to the ice. "You didn't have to do that."

"You didn't have to crash our ship."

"But I did. It was my—her—destiny. Come on, surely you suspected something. Didn't you ever wonder why we became such close friends?"

I nod, forgetting I'm only talking to an intelligent program. I can see I'll have to be careful—the more exhausted I become, the harder it'll be to remember I'm not seeing and hearing a real person.

Still, the proxy is right. I'd long suspected Parda of being a Seeker from the little things she said. The words and motions only someone who'd grown up in that tech-hating religion would notice. How she'd seemed a little too convinced of her destiny in life.

I knew these things because I'd also grown up a Seeker, even though I'd never been a very good one. Instead I was always reading that cursed science fiction, and I loved fighter jets and space ships a little too much for a good God-fearing, anti-tech girl.

I never mentioned my suspicions about Parda because I remembered the obstacles I'd encountered as a lapsed Seeker in the space program. NASA had kicked me out when it learned about my Seeker background, and I'd only been able to find work as an astronaut for private companies. I figured Parda was the same—trying to escape her past. And we were friends. Best friends.

Obviously I'd been wrong.

"Why are you here?" I ask. "You reached your destiny. You destroyed the blipper, ensuring this comet will hit Earth."

Parda giggles as she flops a snow angel in the comet's ice. "Maybe I don't trust you. Maybe I think you'll find a way to disturb the destiny I died for."

Obviously this proxy either doesn't truly understand the situation I'm in, or is lying. "Are you going to kill me?" I ask.

Parda looks at me with wide, innocent eyes. "What do you mean?"

"I mean, do you plan to finish what Parda started? If so, perhaps you should just do it."

Parda gazes at me as her face beams purest love and caring. But while her projected image doesn't waver, my suit does, the environmental controls suddenly flickering as the heat exchangers stop pumping. "Might be interesting," Parda whispers. A wave of nervous warmth flashes through me. I can already imagine the temperature rising in my suit.

But then the heat exchangers begin pumping again. I shiver, but not from the chilled air once again blowing against my body.

"I could kill you," Parda says softly. "It'd be easy. But I'm not that Parda. Just please don't mess up my destiny."

I frown, trying to understand how a copy of a dead person's personality and mem-

ories could have a destiny. Or was she simply referring to the real Parda's destiny? Either way, I mutter that I won't muck it up.

"You promise?" she asks.

"God's truth," I say between gritted teeth.

You know you're in rough shape when you to lie to a computer program.

I work on the ice ship for three days straight with no food and little sleep. I drink my suit's recycled water until the system can't purge the taste of urine. My backup air supply in the airlock drains lower and lower while the ice under my feet continually shakes as the sun's energy causes violent outventing on the other side of Heaven's Touch.

Still, the ice ship comes together quickly. The spiders clear a flat area near the *Tonatiuh* and unfold the torus while I assemble the insulated pipes to carry water from the steamer to the ice ship's fabric.

The nuclear steamer is, as expected, temperamental—pump in too much water and the pipes shoot off, the explosion of spray freezing on everything and making reconnection difficult. Still, I manage, and the ice ship's reinforced canvas quickly fills.

The canvas is designed to be filled with water until it creates a ring torus a hundred meters in diameter. When full, the canvas will look like those old science fiction dreams of a rotating space station. Running along the middle of this torus—shielded by ice walls five meters thick—will be more living space than all the space ships and stations built across the last century. More than a hundred people could live for decades inside the ship's bulk.

Nuclear engineer Anthony Zuppero first proposed creating an ice spaceship back in the twentieth century. My company updated his design with a carbon nanotube mesh reaching between the outer walls to strengthen the torus. Once water freezes through the mesh the walls are strong enough to rotate and create an artificial gravity. The thick ice is also the perfect shield against all the nasty radiation space throws at us flimsy little humans.

I glance again at the sparkling coma framing Heaven's Touch—already the comet's slow rotation has brought closer the bright lines of sunlight slicing through those cloudy mists. With the comet quickly nearing the sun, the ice ship will soon be a great place to be.

On the fourth day I sleep again, pitifully collapsing from exhaustion in the airlock. Hunger dull-aches my body while my mind spins to the thousand things I need to do before launching the ice ship. I also gag on my suit's recycled funk, wishing I could waste the air to pressurize the lock.

"Are you asleep?" Parda asks.

"I'm trying," I say, uncertain if I'm asleep and dreaming of the real Parda, or awake while her proxy messes with me.

"I hope you know it wasn't about you," Parda says. "My destiny, I mean."

"That makes it better? You betrayed me. Betrayed everyone. God's truth."

Parda sits silently beside me, her white robe flapping to breezes that don't blow on Heaven's Touch. "I thought you'd understand."

Tears run from my eyes. I want to hug Parda. To tell her everything is all right. That everything is forgiven.

Parda arches an eyebrow, the same mischievous look she'd flashed so often when she was alive. "Remember that beach trip?" she asks. "When that shark swam up behind Johnie?"

I grin at the memory. While I've been friends with Johnie for years, he is such an astronaut's astronaut—with a chiseled face, perfect crew-cut hair, and big muscles

from long hours of working out—that he often drives me crazy. But on that beach trip his macho image totally broke down. We'd been swimming a dozen meters offshore when a small sandbar shark moved in. Johnie had freaked and run from the waves while Parda and I howled in laughter.

Wishing I could go back to those happy days, I grab at Parda's holographic hand and dream of playing yet again under the blue Florida sky.

"God's truth," Parda says. "If I'd wanted to kill you I could have let the real Parda crash the ship into the blipper at full speed. I convinced her that doing so risked missing the target. Do you know how difficult it was to crash into the comet without destroying the ship? I did that so you'd have a chance at survival."

As I stare into Parda's face, I want so badly to believe her. But did this proxy save my life, or had the real Parda done that while her programmed double now merely lies? It's impossible to know the truth.

Suddenly the airlock shakes to another outventing and I shoot forward, smacking my helmet on the closed airlock door. I curse and kick like an angry child, wanting to be back in Florida where I'd known who my friends were.

"I'll always be there," Parda whispers in the dark. "Always."

By the fifth day the ice ship's torus is filled and frozen solid. I connect the steamer to the ship's spare water bag—which will hang in the center of the torus like a big balloon—and use the spiders to attach the solar panel fabric to power the ship's systems.

As I stand before the torus' reflective skin, checking my suit for any possible damage, Parda speaks. "It's all vanity," she says.

"What's vanity?"

"The fact that you're attempting to deny your God-given destiny."

My body shakes from hunger as I glance again at Parda's real body. She's dead. But as I stare across the blackened landscape—and especially at the distant ring of ice fingers created by millennia of melting and freezing—I realize this is the perfect place for a ghost. A ghost-haunted comet.

"What do you know of my destiny?" I ask.

"You're destined to reach for the stars."

"So you've said. Well, guess what? I'm here."

"No. To truly reach the stars you must ride Heaven's Touch around the sun before heading further out than any human has ever gone."

I laugh. "Is that what you want? To stay on this comet with me? Return to Earth and destroy the sinners? You'd like that, wouldn't you?"

"Not really," Parda mutters sadly. "But the real Parda once told me that was your destiny."

I want to spit. Parda believed her destiny was to send this comet slamming into Earth, so of course she thought my destiny was to be dead and cold and tagging along for the ride. "If that's what you believe, why did you save my life?"

"Because I wasn't sure if Parda told the truth," the proxy says. "Perhaps she was wrong about your destiny."

"I guess we'll soon find out," I say, not sure where the proxy is taking this conversation.

"Exactly!" the proxy says, clapping her hands in excitement. "You understand! The only way to discover God's true plan for you is to see if you survive!"

I start to tell the proxy to shut up—that at this point it isn't God's destiny that will save me but my own hard work. But before I can argue, my suit's controls indicate that the steamer's pumps have shut down, likely clogged yet again with slushy ice crystals. As I bound over to fix the problem, I mistime my landing and fall in slow-motion, banging my facemask on the ice. I curse as I flop over, trying to stand up.

Parda appears beside me. Holding me. Comforting me. Like she did during those long months alone in our ship. "You should sleep. Eat something."

I push her away, only to fall forward as my hand shoots through what I'd thought was her body. I'm getting punch-crazy from exhaustion and hunger, but I don't care. I stumble to the steamer, intending to clear the clogged pipe before taking a break.

I glance at the steamer's control panel and see that the pump has shut down automatically. Leaning over the steamer, I unclamp the pipe, which jumps from my gloves as a blast of water explodes against my spacesuit. Parda shrieks in happiness as the explosion shoots me up in the weak gravity, spinning me end over end as my suit's nearly depleted jets try to compensate.

After a few weak spurts, the jets die.

"I'm sorry, but I have to know," Parda says softly, her image in my facemask shedding tears that dance around her face. "Now we'll learn whether God truly wants you alive or if you're destined to perish here."

"Leave me alone!" I yell, trying to focus on saving myself. Parda bows slightly and disappears.

I quickly assess the situation. While the jets have slowed my climb, I'm still rising. Two hundred meters. Four hundred. The comet's surface fades to white from the coma mists roiling around me. If I'm not careful, I'll lose my sense of direction.

Before me, the sunlight burns a bright line through the coma. When I cross out of the comet's shadow, my suit's heat exchangers will struggle to keep me alive.

I am dead. I'll die alone, floating endlessly through these white mists.

"If it be Thy will, please let Sister Dusty live," Parda whispers.

Nodding agreement, I reach for my anchor gun and turn it to full power. I shoot a bolt into space, then another, only three bolts left. Two. One.

The bolts slow my ascent, maybe even push me back the way I'd come. But in the mists I can't tell if I'm now falling or still rising. I fling my gun away to give me a final grab at momentum before relaxing. There's nothing more I can do.

Parda giggles nervously before reappearing, her body seeming to hug my suit. She is still praying, begging God to save my life, just as the proxy did before the ship crashed. I float in a sea of milk as tiny ice motes swim by, my addled mind again turning them into ghosts.

My suit's clock counts twenty minutes before the mists clear and I can see the comet's dirty surface approaching. Without my jets I land hard, rolling across the ice as I pray my suit doesn't break.

When I look up—bruised, but safe and alive—Parda stands before me. She smiles as she leans over and kisses my helmet.

"I'm glad you made it," she says. "And now, Sister Dusty, we know the truth. God intends you to live."

After checking the steamer, I know what Parda did. She'd projected a false image of the steamer controls onto my facemask. The pipe hadn't jammed and it hadn't been shut off by automatic controls. When I'd opened the valve, instant liquid explosion.

Even though I have very little air left, I need rest and food. Going for broke, I climb into the airlock and pressurize it. I twist off my helmet, removing Parda's ability to interact with me. I drink fresh water and eat packet after packet of food—not caring what flavor it pretends to be—and fall into the best sleep I've ever known.

The airlock controls wake me ten hours later. I place extra food and clean water pouches in my suit and twist on my helmet.

Parda is waiting. "You don't have much time," she says urgently. "Only twelve hours of air left. You must hurry."

"So what are you going to do? Support me or stop me?"

"I'm your friend. And now that we've determined God's destiny is for you to live, I'll do anything I can to help."

This proxy is as crazy as the real Parda. I'm about to say that when suddenly Parda disappears, replaced by a holographic diagram showing detailed blueprints of the ice ship. But the blueprints have been modified, with the water bag in the center of the torus now connected to the steamer.

"Even if you launch the ship," Parda says, "without the solar sail you'll never reach Earth. But if you hook up the steamer to the spare water container, you could use spurts of steam to slow your orbit. My calculations show we could get close enough to Earth for NASA to mount a rescue."

I scan through Parda's diagrams and numbers, which seem to add up. "It might work."

"I thought of the idea after the steamer blasted you off the comet," Parda says, grinning wickedly.

The proxy is obviously playing with me because those are exactly the wrong words to make me trust her. Still, her plan is solid. And if the proxy's now convinced it's my destiny to escape Heaven's Touch, perhaps she won't get in my way. "Do I have your word on this plan?" I ask, remembering how this proxy once made me promise not to mess up the awful destiny the real Parda died for.

"Would it matter?" she asks. "Stopping you isn't my destiny, is it?"

"No, it isn't," I say as I open the airlock and return to work.

Parda sees herself as a true believer. I wonder if the proxy should instead call herself insane.

After all, proxies are only meant for simulations, not real life. Whether utilized by NASA or a private space company or the latest high-tech startup, you plug proxies through simulation after simulation and they are none the worse for wear. But real life—who knows what that does to them?

No matter how closely they're molded around our minds, memories, and personalities, the proxies aren't us. Parda's proxy obviously inherited the love Parda showed me before her betrayal. But Parda also somehow hid her true memories and belief in martyrdom from our company, or else they would never would have let her become an astronaut. So when Parda copied this proxy, she copied an inexact replica of herself. And when she hacked the proxy into doing her bidding, she moved the program even further from what my friend had once been.

I can't trust this version of Parda any more than I could trust the real Parda.

But I don't want to die alone. And right now this Parda is all I have.

With the spiders I install the ice ship's main airlocks and finish moving the heavy equipment inside. According to the original mission plan, at this point Parda and I would have used the tiny rockets attached to the ice ship to lift it from the surface. After rendezvousing with the ice ship, we'd have brought the internal systems online and used the solar sail to guide the ship into Earth orbit.

Obviously I don't have that last option. But if Parda's plan works, perhaps it won't matter.

With the ice ship hooked up to the steamer I have enough power to run the systems until I unbolt the ship from its anchors. I plug the final hose into the ice ship and set the steamer to both pumping in and heating up the ship's atmosphere. It'll be cold in there when my suit's air runs out, but at least I'll be able to live.

One final time I finger the solar sail's collapsed sheen. The sail's mirror-like gossamer would have been a beautiful sight, stretching for kilometers through space after it unfolded. But with the sail damaged there's no way it can propel the ship. I

order several of the spiders to drag it away. The other spiders continue carrying supplies to the ice ship, and hooking up the steamer to the massive ice bag in the center of the ship's torus.

By the time the ship has a breathable atmosphere, I have less than an hour of air left in my suit. I cycle through the ice ship's airlock and stand inside the massive, curved hallway. Dim glow lights illuminate the space. After a career in the cramped quarters of space stations and tiny spaceships, my eyes tear at the size of this ship.

"You should be here," I tell Parda. "This is the start of humanity's real exploration of space."

"I am here."

I start to argue. To tell the proxy that no, the person she'd been modeled after was dead on the ice, her body waiting to be exploded by outventing and baked by the sun.

Instead, I remove my helmet and breathe deep of the chilled air.

"I knew you could do it," Parda says, her voice a whisper from the helmet in my hands. "Do you think they'll be able to rescue us in time?"

"Maybe. If not, I'll be embracing that starry destiny you mentioned."

Parda laughs in happiness.

I also laugh, attempting to sound relaxed. Because this proxy is so smart, I don't want to risk her discovering the last part of my plan. "Parda, can you run a final check of the launch sequence?" I ask. "The maneuvering rockets weren't designed to lift both the ship and the steamer. We don't want something going wrong."

"I've already analyzed all possible outcomes. Do you want me to do that again?"

"Please."

The proxy almost purrs with satisfaction as she dives into her deep analysis. With Parda distracted, and while still cradling my helmet in my arm, I turn the helmet slightly so its sensors can't monitor my hands. So the proxy won't see what I'm about to program the spiders to do.

I'll take most of the spiders with me. They'll unbolt the ice ship and hang on as the maneuvering rockets lift us from the surface. But I have a special mission for the spiders I'm leaving behind. I'm tempted to tell Parda my plan. But as I've learned, I can't trust her too much.

A minute later, Parda says her calculations show everything is still a go for launch. "Now what do we do?" she asks.

"Test my destiny," I say. "See if it's still God's will that I survive."

Parda giggles like a little girl receiving a gift. I put my helmet back on and walk through the entire torus, showing Parda the ship we've built. She seems impressed, her voice chuckling over every square meter of open space.

"Do you forgive me?" she asks. "Maybe we can both embrace our destinies?"

"Maybe," I say as the spiders unbolt the ship and the rockets kick us into space.

Five months. Five months of the ice ship spinning blindly.

At first Parda is so happy to escape the comet she lets me speak to Johnie and everyone else back home so they'll know I'm alive. So they can mount a rescue mission. Using the spiders, I also finish hooking up the steamer to the spare water bag in the middle of the torus. With the steamer functioning as a simplified steam engine, I slow the ice ship enough to give a rescue ship from Earth a shot at reaching us.

Parda's excitement lasts until we receive telemetry that Heaven's Touch has changed course. Johnie and everyone back on Earth are baffled, so I finally admit ordering the spare spiders to unfold the solar sail across ten square kilometers of the comet's surface. As Heaven's Touch neared its closest approach to the sun, the sail reflected back so much energy that the projected outventing greatly decreased. The comet's trajectory changed far more than the blipper could ever have achieved.

Heaven's Touch would never again threaten Earth.

Naturally, Parda is furious. In a burst of un-Godlike rage, the proxy crashes the ice ship's communication and sensor systems and refuses to speak to me for a week. Still, I know NASA is coming. It's just a matter of whether they reach me before my food supply runs out.

But it's a long, lonely, hungry wait.

"Today's the day," Parda says as I wake. I'm in the ice ship's cockpit. It's cold in here—I've never been able to activate all of the ship's solar-heating systems—but my spacesuit's insulation keeps me warm enough. Because the suit long ago ran out of air, I now wear it with my helmet cracked open so I can breathe the ice ship's atmosphere. But aside from that, the suit feels much like it did on Heaven's Touch.

This has the added benefit of allowing Parda to keep me company. To keep me from being the loneliest person in the solar system. To ensure this, Parda always reminds me to recharge the suit using the ship's power, and as the suit's main systems crash she reroutes the controls so the holo displays continue to show her to my eyes.

At the sound of Parda's voice I try to sit up but fall back to the deck. My food ran out weeks ago. The other day I asked Parda if I was going to end up a ghost like her, but she didn't answer. She hates it when I'm morbid.

I sip my suit's water as I watch Parda sit on the control panel, her flowing robe as sparkling white as ever. When she'd first learned I'd destroyed the real Parda's destiny she'd been angry. But over time she's forgiven me as only true friends can.

"You said yesterday was the day," I whisper weakly, "but no one arrived." I stare out the cockpit windows. Without communications or telemetry, staring into space is the best I can do. Parda still apologizes every day for crashing those systems, but at this point there's nothing to be done about it.

"Today it will happen," she says in a cheerful voice. "Today they will arrive."

I grin and reach for Parda's hand, forgetting for the millionth time I can't touch her. She and I both know the orbital mechanics. There's a narrow window when a ship from Earth can reach us. We're almost at the end of that time frame.

Then I fall back asleep and dream of food—rice and beer and chicken and spices and pies, a feast I'd give anything to eat. Each time I wake I listen to Parda prattle on about what we'll do when we're rescued. She's afraid they won't keep us together. That everything will change between us. Before I fall back asleep, I reassure her that nothing could ever change.

I wake a final time to silence and the sensation of the ice ship shaking slightly. Only a small shimmy, but enough to know something is happening.

"What's going on?" I ask. Several of the cockpit's controls flash rainbow colors, but I'm too weak to sit up and read them.

"Parda?" I whisper. "Are you there?"

"Are we still friends?" her tiny voice asks. For the first time since I'd known the proxy she sounds nervous. Afraid.

"We'll always be friends."

"Do you really mean that?" she says. She stands in front of the control panel and twists her white robe back and forth. She stares fearfully at the cockpit door.

"Yes," I say as Johnie and another astronaut step before me. They shout my name and twist my helmet off, vanishing Parda in a burst of light. Johnie holds a food bulb before my face and squirts soupy protein between my lips. I swallow greedily.

"Parda!" I yell, hoping she can still hear me. "Don't worry. You'll always be my friend."

You know you're in rough shape when you lie to a computer program. ❍

Theodora Goss's publications include the short story collection *In the Forest of Forgetting* (2006); *Interfictions* (2007), a short story anthology coedited with Delia Sherman; *Voices from Fairyland* (2008), a poetry anthology with critical essays and a selection of her own poems; and *The Thorn and the Blossom* (2012), a novella in a two-sided accordion format. The author has been a finalist for the Nebula Award, Crawford Award, Locus Award, and Mythopoeic Award, and on the Tiptree Award Honor List. She has won the World Fantasy and Rhysling Awards. In her latest tale for us, a scientist tries to determine the secret of . . .

BEAUTIFUL BOYS

Theodora Goss

You know who I'm talking about.

You can see them on Sunday afternoons, in places like Knoxville, Tennessee or Flagstaff, Arizona, playing pool or with their elbows on the bar, drinking a beer before they head out into the dusty sunlight and get into their pickups, onto their motorcycles. Some of them have dogs. Some of their dogs wear bandannas around their necks. Some of them, before they leave, put a quarter into the jukebox and dance slowly with the waitresses, the pretty one and then the other one.

Then they drive or ride down the road, heading over the mountains or through the desert, toward the next town. And one of the waitresses, the other one, the brunette who is a little chubby, feels a sharp ache in her chest. Like the constriction that begins a panic attack.

"Beautiful Boys" is a technical as well as a descriptive term. Think of them as another species, *Pueri pulchri*.

Pueri pulchri cor meum furati sunt. The Beautiful Boys have stolen my heart.

They look like the models in cigarette ads. Lean, muscular, as though they can work with their hands. As though they had shaved yesterday. As though they had just ridden a horse in a cattle drive, or dug a trench with a backhoe.

They smell of aftershave and cigarette smoke.

That night, when she makes love to her boyfriend, who works at the gas station, the other waitress will think of him.

She and her boyfriend have been together since high school.

She will imagine making love to him instead of her boyfriend: the smell of aftershave and cigarettes, the feel of his skin under her hands, smooth and muscled. The rasp of his stubble as he kisses her. She will imagine him entering her and cry aloud, and her boyfriend will congratulate himself.

Afterward, she will stare into the darkness and cry silently, until she falls asleep on the damp pillow.

Would statistics help? They range from 5' 11" to 6' 2", between 165 and 195 pounds. They can be any race, any color. They often finish high school, but seldom finish college. On a college campus, they have almost unlimited access to what they need: fertile women. But they seldom stay for more than a couple of semesters.

They are more likely than human males to engage in criminal activities. They sell drugs, rob liquor stores and banks, but are seldom rapists. Sex, for them, is a matter of survival. They need to ensure that the seed has been implanted.

They seldom hold jobs for more than six months at a time. You can see them on construction sites, working as ranch hands, in video stores. Anything temporary.

They seldom marry, and those marriages inevitably end in desertion or divorce. They move on quickly.

They always move on. I believe that on this planet, their lifespan is approximately seven years. I have never seen a Beautiful Boy older than twenty-nine.

Oscar Guest is not his real name.

He had all the characteristics. Tall, brown skin, high cheekbones: a mixture of Mexican and American Indian ancestry. Black hair pulled back into a ponytail, black eyes with the sort of lashes that sell romance novels or perfume. He was wearing a T-shirt printed with the logo of a rock band and faded jeans.

"I hear you're paying three hundred dollars to participate in a study," he said.

It's a lot of money, particularly considering our grant. But we choose our test subjects carefully. They have to fit the physical and aesthetic criteria (male, 5' 11"–6' 2", 165–195 pounds, unusually attractive). Even then, only about 2 percent of those we test are Beautiful Boys.

I could tell he was one of them at once. I've developed a sort of sensitivity. But of course that identification would have to be verified by testing.

Sometimes, the Beautiful Boy doesn't move on immediately. Sometimes, he stays around after the dance. He gets a job in construction, starts dating the pretty waitress. If she insists, they might even get married.

By the time he leaves, she's pregnant.

As far as we know, Beautiful Boys mate and reproduce like human males. Based on anecdotal evidence, we suspect they're superior lovers, but that data has not been verified. We are writing a grant to study their reproductive cycle. However, we are still at the stage of identifying them, of convincing the general population that they are here, among us—an alien species.

We always perform the standard tests: blood tests, skin and hair analysis. Beautiful Boys are physiologically identical to human males, but show a higher incidence of drug use. They typically have lower body fat, more lean muscle. I have known some to live on a diet of Cheetos and beer. They don't need to diet or exercise. It's as though their metabolism is supercharged.

What Oscar used to eat: Cocoa Puffs with milk, orange juice from concentrate, peanut butter and jelly sandwiches, leftover pizza, Oreos, beer.

Although I have no statistical evidence, I believe Beautiful Boys need more carbo-

hydrates than human males. Once, at night, I walked into the kitchen and saw him standing in front of the open refrigerator, in his boxer briefs, drinking maple syrup from the jug.

He showed up at my house.

"Hey, Dr. Leslie, it's me, Oscar," he said when I opened the door. "I was wondering if there's anything else I can do for the study. My landlord just kicked me out and I don't have money for another place."

"Why did he kick you out?" I asked. It was two A.M. I stood at the door in my pajamas and a robe, trying not to yawn.

"I got in a fight."

"A fight? You mean in the apartment?"

"Yeah," he said. "With the wall."

He showed me his bloody fists. I told him to come in and cleaned his knuckles, then bandaged them.

"How much have you been drinking?" I asked.

"A lot," he said. He looked sober, although he smelled like beer. Beautiful Boys have a higher than average tolerance for alcohol. That metabolism again.

"You can spend the rest of the night on the sofa," I said. "Tomorrow, you'll have to find a new apartment."

The next morning, I woke up to the smell of pancakes. He was in the kitchen, fixing the screen door that had always stuck. "Hey, Dr. Leslie," he said. "I made you pancakes. How come you don't have a man around to fix this door, a beautiful lady like you?"

"My husband decided that he preferred graduate students," I said.

"Seriously? What an idiot. This door should work a lot better now. Anything else you want me to fix around here?"

The pancakes were stacked on a plate, on the kitchen table. I sat down, poured syrup over them, and started to eat.

I have devised a test that identifies Beautiful Boys with 98 percent accuracy. I believe Beautiful Boys emit a particular set of pheromones to attract human women. I do not know whether this is a conscious or unconscious process.

We put the test subject in an empty room. My research assistant, a blonde Tri Delt, enters the room and asks the test subject a series of questions. The questions themselves are irrelevant: What is your favorite color? If you could be any animal, what would you be? (A statistically significant number of Beautiful Boys identify themselves as predators, such as wolves or mountain lions.) After he has answered the questions, we inform the test subject that he has been enrolled in the study and give him the study T-shirt, in exchange for the shirt he is currently wearing. We take that shirt and put it in a sterile plastic bag.

Later, three testers smell the T-shirt and rate their sexual arousal on a scale of one to ten. Human males typically elicit no more than a five. Beautiful Boys average in the seven to nine range. Our testers are all female. I have found that the best testers are brunette, a little chubby, nearsighted. They are most responsive to the chemicals that Beautiful Boys emit.

Why have they come to Earth?

For the same reason aliens always come to Earth in old science fiction movies: Mars needs women.

Where is their home planet? I'm not sure even they know.

Sometimes Oscar would stare off into space, and I would say, "What are you thinking about?"

He would say, "Just a place I used to play when I was a kid." Then he would roll over and say, "Hey, how about it? Are you up for a quickie?"

He was a superior lover. I do not, of course, know if that is a characteristic of all Beautiful Boys, or unique to Oscar. I think of him sometimes, when I'm alone at night: his smooth brown skin, mostly hairless, with the muscles articulated underneath. The black eyes looking down into mine. He would grin, kiss the tip of my nose. He was always affectionate, like a puppy. One day he brought me flowers he'd stolen from the college's botanical gardens.

"You really shouldn't have," I said. "I mean, seriously."

"I know," he said. "But what's what makes it fun."

One day, he came to me and said, "Dr. Leslie, I've got to go. My dad down in Tampa is sick, and I need to take care of him for a while."

I didn't tell him, you don't have a father in Tampa. You landed here on an alien spaceship with others of your kind. Where, I don't know.

"Give me your father's address," I said. "I'll send you some books."

He scribbled an address down on a slip of paper.

We made love one last time. It was like all the other times: intimate, affectionate, effective. Like being made love to by a combination of teenage boy, eighteenth-century libertine, and robot. Then I gave him five hundred dollars and he drove off in his pickup.

A week later, I missed my period. I was angry with myself, told myself I should have been more careful. Although I suppose my therapist would tell me that I unconsciously wanted this to happen.

I found a phone number for the address in Tampa. It was a bicycle repair shop, where they had never heard of Oscar Guest.

The study has three stages. The first one, nearly complete, involves devising a test to identify Beautiful Boys. That test has been devised, with 98 percent accuracy. We are in the process of writing up our results.

The second stage, for which we are currently seeking funding, focuses on understanding their reproductive cycle. We believe Beautiful Boys belong to a species that only produces males. To reproduce, they depend on the females of other species. In order to spread their genes and avoid inbreeding, they leave the planet on which they were born and travel to another planet, where they transform themselves into particularly appealing males of the target species. They travel around that planet, implanting their offspring.

The third stage focuses on the offspring they produce with human women. What are these children like? We do not know when Beautiful Boys first began coming to Earth, although we suspect their presence as far back as the early twentieth century. There were probably Beautiful Boys seducing women in both World Wars, in Korea, in Vietnam. There are certainly alien children among us. We should find out as much about them as we can.

I'm going to call him Oscar Jr.

I didn't need the ultrasound to tell me that he was a boy. Of course he would be.

What will my Oscar be like? Will he play with Matchbox cars? Will he watch Scooby-Doo? Someday, will he ask about his father?

We don't know what happens to the children of Beautiful Boys, which is why completing the third phase of the study is so important. We don't know if some of them have the lifespan of human males, or if they all repeat the reproductive cycle of their fathers. Will Oscar go to college, settle down with a nice brunette, have my grandchildren?

Or, after high school, after we have argued because he's been smoking pot again

and he's told me that he needs to find himself, waving a battered copy of *On the Road,* will he drive to the mountains, find the ship with others of his kind, fly to another planet, and become whatever the women want there: green, with six arms and gills, like something out of an old science fiction movie?

I don't know. I think I would love him, even with six arms and gills.

I think of them sometimes, all the Beautiful Boys, driven to reproduce as salmon are driven to spawn. Driving across the country like an enormous net whose knots are bars, cheap apartments, college dorm rooms. And because I'm a scientist, I'm comforted by what science teaches us: that life is infinitely stranger than we can understand, that its patterns are beyond our comprehension. But that they tie us to the stars and to each other, inextricably. Like a net. ❍

The Big Bang's Backstory

We see the universe the way it is because we exist. —Stephen Hawking

Let's imagine a car—your family car, 1958 in the late afternoon. You and your sister share the back seat. The windows are rolled down because there's no air-conditioning in cars yet. You both finished the Archie comic books four billion hours ago and your father isn't speaking to your mother because, in a fit, she threw the map out the car window.

We now know that every particle has an antiparticle, with which it can annihilate.

Your sister's foot was resting on the floor hump but now it drops over to your side of the car. You glare at her. She smirks. You squeeze closer to your window. A truck whines by, the wind blast shuddering against the car. Her foot is all the way over in your space. You complain, loudly. Your parents stare at the long center line ahead, passing billboards with huge hamburgers on them, Coca-Colas, water beading on the frosty bottles.

Why don't we notice all those extra dimensions, if they are really there?

And so you pinch her. And she bawls. Your father shouts and tries to reach his right arm around to slap you but you squeeze back against the door and the car swerves and rocks when your father pulls the wheel, his face tight. Your mother is hollering at him and your sister's crying, but she still gives you a good hard sock on the arm.

At the big bang itself, the universe is thought to have had zero size, and so to have been infinitely hot.

There is not enough space on this gummy vinyl seat for the two of you. The temperature is twenty thousand million degrees and your sister is kicking you and you are punching her and your mother is swatting and yelling and then your father lays on the horn while a big shiny semi fills the windshield.

And after that, for the next million years or so, the universe would have just continued expanding, without anything much happening.

—Marion Boyer

JOINING THE HIGH FLYERS

Ian Creasey

In December 2010, we published Ian Creasey's story, "The Prize Beyond Gold." That tale, which depicted the restrictions upon athletes in a world of ubiquitous body resculpting, is currently available at Escape Pod and in the author's collection, *Maps of the Edge*. Ian tells us, "I wrote the story as a standalone piece, but after it was published, I realized that in focusing upon the Standard humans, I'd only shown half of the picture. I found that I wanted to explore the other side of society: the Enhanced humans who could have any bodies they wanted. And so I wrote this sequel, to examine what life might be like among the high flyers."

Delroy felt small and fragile in his new body, especially down here on the ground in the midst of a crush of reporters. He'd given plenty of press conferences in the past, but in those days he'd always been the most physically imposing presence in the room. Now he was smaller than the podium on which he stood to reach everyone else's eye-level.

Height—or lack of it—was an indicator of status, hardwired into humans through eons of evolution. The journalists knew that Delroy was the same person whom they'd admired as an Olympic sprinter, but their body language no longer deferred to an alpha male. "Show us your wings!" they cried, in the patronizing tone of grandparents talking to a child.

Delroy smiled, with a fierce exultant grin. This was the challenge: to regain respect, to start afresh and surpass everything that he'd achieved in his old body. He spread his expensive new wings, and flapped them once. The closest reporters flinched from the whip of his scarlet feathers past their faces.

A buzz of excitement filled the hall as Delroy posed, slowly turning to offer all the photographers a good view. He caught Yarah's eye, and she gave him a thumbs-up. The crowd was even bigger than they'd hoped. As Delroy's mentor and sponsor, Yarah Rodriguez would share in any glory that he attained.

Yarah was as small as Delroy, because she was also a flyer. Her son already towered over her, even at nine years old—he hadn't yet been resculpted into the compact shape necessary for human flight. He looked bored and resentful, the only person in the crowd unimpressed by the sight of wings.

Although the reporters kept calling out questions, unfolding his wings had made Delroy impatient to fly. And, really, no one had come to hear him utter a few plati-

tudes about looking forward to fresh challenges. They simply wanted to see his new body, and watch him begin his first exploit.

So he obliged them, pausing only to cross himself and offer up a silent prayer. That was the single item he'd retained from his old pre-race routine—everything else had changed.

Achieving lift-off from a standing start was notoriously difficult, but the height of the podium afforded just enough scope. Delroy leapt forward, scythed his wings through the air . . . and nearly fell into the throng. He was forced to tread on a journalist's shoulder to assist his launch.

That would make a headline: the Enhanced trampling the Standard humans underfoot. No help for it now. He circled above the crowd, indulging in a little showboating—wing-dips and pirouettes—but nothing too fancy, as he was only a novice and it would be embarrassing to plummet before he'd even ascended.

Delroy drew aside a curtain to reveal a square slab hanging from the ceiling of the hall. He unhooked the slab, lurched under its weight, then recovered himself and flourished it for the cameras. One side was decorated with a yellow disc, representing his Olympic gold medal. The other side depicted a clock face, alluding to Delroy's world-record time for the 100 meter sprint.

He didn't want to carry the heavy slab any longer than he had to, so after one full circuit of the hall, he flew out of the highest window. As soon as he emerged into the open air, he started climbing. The sun's glare made him sweat, but temperatures would diminish rapidly as he rose. In the upper reaches, the problem was keeping warm, rather than keeping cool. He wore the white woolen costume of a novice, but his main protection came from a redesigned system for circulation of the blood. Flyers needed more than just wings; the Enhancement process included all sorts of complicated adjustments for survival in the air.

Cheers and catcalls came from below. His fans inside the hall were applauding as they watched through the windows. Outside stood the Natural Life picketers, protesting his decision to abandon the ancestral human form and accept Enhancement. They jeered and made rude gestures. Delroy gave them an indulgent smile, which they couldn't see because he was too high and none of them had Enhanced eyesight.

His hands ached from holding the slab. More importantly, it was impairing his balance, so he hooked it onto the harness that he wore. The slab dangled below him, better centered. Now he could concentrate on assessing the air currents, sniffing out any hint of a thermal that might aid his climb. He had a long way to go.

"How are you feeling?" said Yarah.

Delroy hadn't heard Yarah's approach; she was such an experienced flyer that her wings made no sound. But he should have seen her. Yarah had lectured him often enough on the importance of maintaining full awareness of everything around him.

Some flyers' Enhancements included ocular relocation—with pigeon-like eyes on each side of their head, they could view their complete surroundings. Delroy had declined this adjustment, partly because Yarah's clade tended not to utilize it, but mostly from a desire to emulate predators rather than prey. Better a hawk's vision than a dove's, surely.

Yet this was the fascination of clade rivalry: that such decisions could be tested in combat. If Delroy didn't learn to pay better attention, he would be out-competed by the pigeons.

"I'm fine, so far." Delroy turned to glance at Yarah, who had matched his height despite launching some time after him. She wasn't burdened by a heavy slab, but she did have a canvas sack. "What's in the bag?"

"Prayers," she replied curtly.

Her tone rebuffed further enquiry, though he could guess at the circumstances.

Earning money as a prayer courier was low-status work, but Yarah's son didn't have his wings yet, and even the most basic flight Enhancement was expensive.

Ascending in slow circles, they passed the laser grid that shielded groundlings from any falling debris. Silence surrounded them. The air was vast and empty. Below, the ground shrank away, beginning to look less like a landscape and more like a map. Delroy could already glimpse the ocean beyond the sprawling almond groves of southern California.

When his wing muscles grew tired, he rested by catching a breeze and gliding for a while. Yarah followed his lead, no longer guiding him and advising him as she had in his training sessions. This was Delroy's mission, the end of his apprenticeship. If he successfully carried his stone to the Picaroons' cloud castle, he would become a full member of the clade.

It would be easier if the slab weren't so heavy. But the larger the stone, the greater the prestige—if he succeeded. It had been a hard decision, choosing the weight. A smaller stone would make the journey safer, at the expense of faint acclaim from his new comrades, and contemptuous disdain from rivals. On the other hand, if he selected an over-weighty stone and failed to complete the ascent, he would be derided for hubris; he could try again, but his future clade-mates would distrust his judgment.

Delroy relished the complexity of the calculation. This was why he'd wanted to join the aerial clades: the prospect of difficult challenges that exercised his brain. In his old life as a sprinter, the task simply involved running very fast in a straight line.

He was also attracted to endeavors that took longer than a few seconds to complete. This ascent would require several hours, and it was only the prelude to joining the long-running campaign in the sky, where the competition for prestige was brutal and eternal.

Eagerness filled him, and he began climbing once more. The air grew chill. Wisps of cloud brushed past him, and small dewdrops condensed on his skin. He wiped them onto his fingers and sucked them down, grateful for the extra liquid. To save weight, he'd only brought a small water bottle.

Delroy saw few other flyers during his ascent: just some people training a troop of flying dogs. He paused to watch the poodles and terriers as they struggled to adapt to the air. They kept flailing their legs, no matter how little it availed them in the sky. There was an ongoing debate on how best to create aerial pets—whether to graft wings onto an affectionate animal such as a dog, or graft affection onto a winged animal such as an eagle. The Picaroons' guru, Augustin, had not yet ruled on the issue.

At last Delroy's locator pinged, telling him that he was approaching the castle. He was grateful to hear it: his wings ached from the weight he carried, and the harness had dug painfully into his skin.

"You're doing great," said Yarah. "We need to be careful, though. Looks like there's a bit of a skirmish going on. It shouldn't affect us, but if you see any fighting, try not to get in the way."

"Why won't it affect us?" asked Delroy, then regretted it. He lacked enough spare breath to speak.

"Because you're a novice: you're not officially a Picaroon yet. There'd be no prestige in attacking you—it would be like mugging a baby for sweets. And it'd be bad form to attack me, as that would leave you without a guardian."

The aerial code stipulated that novices must always be shepherded. Delroy was a little stung to be deemed so insignificant that he couldn't yet be attacked or even left unaccompanied, but it only redoubled his desire to reach the castle and finish his apprenticeship.

He gasped for breath, his wings burning with fatigue. The slab felt like a millstone weighing him down. He looked up, and saw the castle amid the clouds.

Even though he was so tired that he could hardly think, he couldn't help but be astonished at the sight of the Picaroons' aerial palace. It was an enormous, sprawling agglomeration, glittering in the evening sun. But the most astounding aspect was its shape—the antithesis of a symmetrical, planned structure. Instead it resembled an organism with a hundred different cancers, all constantly growing and producing their own bizarre pathologies.

Some sections of the fortress looked deliberately old-fashioned, like Earth castles with crenellations and arrow-slit windows. Others looked futuristic and otherworldly, inspired by films or videogames or the mad visions of artists who'd Enhanced their brains to supercharge their creativity. Parts of the palace bulged out in all directions, sprouting towers and cellars—some still under construction—together with terraced gardens extending far away from the walls. A few stretches were hollow and dilapidated, patched up with utilitarian repair-work, overshadowed by flashier neighbors. The whole edifice was so impossibly overblown that it transcended vulgarity and all notions of conventional taste, demanding simply to be seen as what it was: the collective home and soul of the entire Picaroon clade.

Delroy's heart swelled with pride at the thought of making his own contribution. Soon he would bring his first stone to the castle, where it would help make the Picaroons' home bigger and better than any rival abode. All of the castle's stones had been brought by its inhabitants: either laboriously ferried from the ground, or valiantly acquired through conquest.

The stone that dangled from Delroy's harness felt a little lighter, as adrenaline and euphoria powered him toward his destination. Now he had to find the correct entrance. Although reaching the castle would satisfy the graduation requirements, he wanted to deliver his stone to the appropriate spot.

Just as the aerial portion of humanity was divided into myriad competing clades, so the Picaroons themselves were divided into rival factions and families. The castle's architecture recorded the outcomes, as each sub-clade sought to outdo its peers in building ever more elaborate and exotic annexes in which to roost. *Prestige is fractal,* Augustin had proclaimed; there was competition at all levels, with the results on display for everyone to admire.

"My home is to your left," said Yarah—not an explicit order, but a reminder of Delroy's duty. As she had mentored him throughout the arduous process of resculpting his body and learning to fly, Delroy had a moral obligation to join Yarah's clan . . . although nothing prevented him from switching later, if he so desired. Just as the Picaroons comprised numerous factions, so the factions themselves consisted of competing individuals all striving for their own advancement.

And in some cases, those individuals might even have multiple Enhanced minds competing for supremacy within the same body.

As Delroy approached the castle, he saw that it was besieged by a swarm of raiders. Whenever the attackers managed to dart past the defending Picaroons, they hacked away at the walls and stole the stones. They targeted the architectural jewels, the most dazzling ornaments, but they took whatever they could grab.

The battle was a confused affair, a vast array of individual duels and skirmishes. Combat was strictly hand-to-hand—or claw-to-claw. The attackers favored a reptilian body-shape, with fierce claws and fangs. They were clad in various shades of blue, denoting them as Wyverns, in contrast to the green preferred by the Picaroons.

Delroy, in the white garb of a novice, gazed with keen interest at the conflict, trying to discern tactics. This was his future. He imagined himself among the defenders, repelling the onslaught. One day, he might be an attacker, storming someone else's castle. . . .

"Never mind reaching our roost," said Yarah. "Just get inside!"

In the maelstrom of battle, it wasn't easy to find any open portals among the embellishments encrusted on the castle walls. Delroy flew onward, searching for an entrance, and spotted an expanse of dull grey stone with narrow access slits.

The closer he got to the wall, the closer he got to the fighting. On his right, a small knot of Wyverns peeled off from their sally, rebuffed by the fierce defenders of a golden spire fringed with delicate fretwork. The raiders, their serpentine faces full of disappointed greed, were gliding back to the open sky when they saw Delroy and Yarah. They swiftly adjusted their course. One man flew toward Delroy, passing just underneath him. The other three converged upon Yarah.

In an instant, Delroy felt lighter. His slab had gone! The Wyvern had stolen it, snipping it loose with the deft slash of a knife or claw. It happened so quickly that by the time Delroy noticed the loss, the raider had already flown past him and away, clutching his booty.

Yarah, much more experienced in combat, offered greater resistance. But three attackers surrounded her, and she was tired after the long ascent. Even when Delroy lent his inexpert aid, swiping random blows at the blue-clad marauders, she couldn't fend them off. All too soon, they made away with her canvas sack.

"You're wounded!" exclaimed Delroy. Yarah's wings were stiffly extended; she could barely manage to stay aloft.

Two of her fellow Picaroons flew across from the golden spire, offering their concern and assistance. Delroy noticed that they'd avoided arriving in time to help with the fight. Protecting their spire was no doubt a higher priority than defending Delroy's slab or Yarah's cargo of prayers.

"Take her inside," he said, not caring that as a novice he had no right to give orders. After all, as a novice he had no right to be attacked, but it had happened anyway.

As soon as he saw Yarah disappear safely into the castle, Delroy launched himself in pursuit of the raiders. It was probably a futile chase, but he had to attempt it. Rage burned inside him. His pride demanded retaliation for the robbery.

Very soon, he was forced to make a choice. The men had separated. Which of them should he follow?

He wanted to regain his stone, but that particular thief had a longer head start. Pragmatically, Delroy resigned himself to pursuing the other three.

It was a token effort, he knew. He was too tired, and he lagged further and further behind them. Still, if he could at least track them long enough to spot their destination, that would be something.

To his surprise, the Wyverns slackened their pace. Perhaps feeling themselves at a safe distance away from the castle, they turned their attention to Yarah's bag, impatient to open it and examine their booty.

Delroy heard faint exclamations of disappointment and contempt. One of the thieves upended the bag. A sheaf of papers came tumbling out, followed by a water bottle, a banana, and a bar of chocolate. The heavier items fell swiftly. Caught by the gusting breeze, the papers scattered more slowly, fluttering away like giant snowflakes.

The raiders laughed. Delroy had believed he was already angry, but now he realized that he'd previously only set foot upon the threshold of wrath.

He banked in mid-air and dived, swooping as fast as an osprey plucking fish from a lake. He fished for prayers, snatching as many of the fluttering papers as he could gather up. It was strenuous work, since he had to maneuver over a wider and wider area as the falling prayers gradually dispersed across the sky. But he no longer felt tired. Delroy was suffused with a transcendent rage that buoyed him up and gave him the strength of a lion, a python, a dragon. Every time he breathed out, he half-expected the air to combust with the sheer heat of his fury.

As he collected the last few papers that he had any chance of reaching, he felt a

spattering of droplets upon his neck and outstretched wings. At first he thought it was rain, until he realized that the liquid was too warm and pungent.

Delroy looked up. The three raiders were hovering above him, grinning widely, their pants lowered to expose their cocks. They were pissing on him. With a flourish, each Wyvern in turn shook loose the last few drops from his penis, then waved mockingly and flew away.

Below, far beyond recovery, the remaining white pages slipped down into the void, forlorn prayers destined never to reach Heaven.

"I'm sorry," said Yarah. "I let you down. I shouldn't have assumed that you'd be safe as a novice." She sighed. Her hands fretfully grasped the top of the bedsheet and crumpled the fabric into knots.

Before he became Enhanced, Delroy had heard rumors that the aerial clades all slept hanging upside-down from ceilings, like bats. But it wasn't true; flyers used beds like anyone else. In the castle's medical center, where Yarah had stayed overnight, the beds were small and crammed together, with curtains for meager privacy. No one came here to be impressed by flamboyant décor, and so there wasn't any.

"*You're* sorry?" exclaimed Delroy. "They're the ones who should be sorry. They broke the rules, not you."

"Well, that's just it. There aren't any black and white rules, written in a big database somewhere. It's more like a social code, where people understand what's good manners and what's frightfully rude. Attacking a novice is like going to a dinner party and wiping your nose on the tablecloth: it's vulgar, but there's nothing to stop anyone doing it, if they'll stoop that low. After the publicity promoting you as our celebrity recruit, I should have guessed that someone might target you, just for the notoriety."

"No black and white, huh?" said Delroy. "You told me that before, but I didn't realize the grey would be so savage. . . ."

Delroy, busy learning the mechanics of how to fly, hadn't yet absorbed all the social intricacies of life in the air. The milieu's complexity was one of the major differences between Standards and the Enhanced, and indeed one of the reasons why he'd made the switch. Delroy and Yarah had both originally been sprinters, competing in the rigidly controlled world of Standard athletics, where enormous rulebooks forbade body resculpting, gene therapy, performance-boosting drugs, and all other techniques that might give anyone an undue advantage. Runners had to be fairly matched, or the race was pointless.

In contrast, no two Enhanced body-types were the same, as everyone could change and improve their bodies whenever they liked. This meant that the Enhanced didn't have strictly defined sports, where equal competitors played to an agreed rulebook. But even without sports, people still wanted to win—and wanted an audience for their victories. Competition simply manifested in other ways. With no finishing line or full-time whistle, it occupied people's whole lives.

This was what Delroy had wanted, and now he'd tasted its first fruits. Although shocked at the ruthless violation of etiquette, he was fascinated by the vast realm of possibilities that it implied.

"Notoriety is the cheapest version of fame," said Yarah. "Those Wyverns who pissed on you—sure, they're enjoying their fifteen minutes, but they'll be forgotten soon enough. The battle for prestige is the story of our times, and an ongoing narrative needs a constant supply of bad guys. There's always someone willing to step into that role, lured by the spotlight. It never lasts." She shook her head, and muttered her next sentence almost to herself. "Plenty of girls will fall for a bad boy, but eventually they learn better." Then she raised her voice, sat up in her bed, and pointed at Delroy. "Never mind them. What matters is how you respond."

"Sure," said Delroy. "But I'm still a novice. . . ."

Yarah interrupted him. "Only if you want to be. There are no rules, remember—only customs. Yes, the tradition is that a novice completes his apprenticeship when he brings a stone to the castle. But you were only a minute away from doing that, and everyone knows you'd have succeeded if you hadn't been attacked. If you wanted to claim the Picaroon green, you could wear it and dare anyone to complain. That has the virtue of audacity.

"On the other hand, you might think there's more benefit in staying a novice, and playing up the pathos of being wronged. Right now, you're a victim. That's a powerful position in the short term: it gives you a sympathy value. Yet you can't stay a victim forever—"

"I don't intend to," said Delroy.

"You could go back to the ground for another slab," Yarah said, "but I think you should join a raiding party to capture your original stone back from the Wyverns."

As Delroy still wore a novice's colors, Yarah was still giving him a mentor's advice. But he already had his own plans.

"Actually, I want to take the prayers up," he said. "That's why I collected them, so I could make sure they reached their destination."

"Oh," said Yarah, in a startled tone. "I thought you collected them for me. After all, I'm their courier. They're my responsibility."

"They're *our* responsibility—we're all Picaroons here. And we can't let our enemies delay our prayers, can we? I did originally collect them for you, but I hear you've been confined to quarters. No flying until your wings heal. So why don't I take them up instead?"

Yarah paused, then said reluctantly, "There's no reason you couldn't, I suppose. It's just that I had one extra prayer to deliver, a personal one. Still, I might as well give it to you to pass on. Maybe you'll have better luck with it than I ever had."

In the aftermath of the raid, the sky was quiet. As he left the castle, Delroy saw a few Picaroons patching up gaps in the walls. No retaliatory sallies had yet been launched. News of the shameful assault upon a novice flyer was still reverberating around the world, causing some of the Wyverns and their allies to question whether they wanted to be on the same side as the perpetrators. If the Picaroons attacked now, the Wyverns' coalition would hold together in self-defense; whereas a judicious pause might see the Wyverns suffer defections from their more high-minded flyers, worried about the collective taint to their prestige.

Such at least was the excuse given to Delroy by one of the Picaroons' chief strategists, who'd clearly expected that Delroy would demand a swift attack to recover the stolen slab. The strategist, visibly relieved, had nodded her approval when Delroy explained that he intended to convey the salvaged prayers upon their way.

"Great idea," she said. "It gives us the moral high ground, if we're seen to prioritize the prayers over instant retaliation. And when you reach Heaven, you can request a judgment on the Wyverns. If the Wyverns are condemned, we'll be able to call a crusade against them."

"I'll include that with the other prayers," Delroy had replied. Then he'd left the castle quickly, before anyone could add anything else to the ever-growing list.

The sheaf of prayers weighed less than the slab he'd previously carried, but its burden was not negligible. He had a long way to climb, and the air would be a lot thinner in Heaven. This ascent might prove even more taxing than his previous one.

As he rose above the castle and gazed on the rooftop gardens, Delroy realized that this was the highest he'd ever flown. The thought sent a thrill through him. Although he still wore the white of a novice, he felt that he'd passed into a new realm. Retaining

the white was more a tactical decision than a genuine signifier of apprenticeship—it left him scope to ostentatiously claim the green after performing a prestige-accruing feat. Indeed, despite the guidelines for novices, no one had tried to insist that he required accompaniment on his flight to Heaven. As Yarah said, it was only a custom rather than a rule. And her presence certainly hadn't protected him last time.

On the castle's upper tier, three tall masts supported a set of elegant sails. These contributed only minimally to the building's movements, but they created an aesthetic effect, making the castle resemble a pirate ship cruising through the clouds. At the top of the mainmast, the Picaroons' green flag billowed out.

Higher still, Delroy saw a more prosaic sight: the vast balloons that collectively supported the edifice's weight. Scientists competed to supply the exotic rays, gases, and force fields that kept everything aloft. In contrast to the castle's profusion of elaborate display, the balloons were stark white spheres, as though the castle liked to pretend that it was buoyed solely by the collective élan of its inhabitants, and the balloons had nothing to do with it. Of course the balloons were vital, but the castle wasn't as heavy as it looked. Most of the structure consisted of light but sturdy aerogel polymers. It was like a giant flying Lego set, albeit one where each individual brick was someone's personal boast about a particular accomplishment.

Delroy wondered where his own brick had gone. Had it already been incorporated into one of the Wyverns' roosts? The thieves would probably disfigure the original design, adding an overstamp to commemorate their victorious raid. Perhaps they might carve a sad face, caricaturing him, inside the yellow disc of his gold medal; or they might inscribe some falling droplets, alluding to their tawdry mischief. There were so many ways they could deface his slab—thinking of them made Delroy angry all over again.

He promised himself that one day he would salvage the stone, and add another emblem to it, celebrating the recapture. The older stones in the castles were full of such overlaid details, a palimpsest of conquest that told the story of the skies' eternal struggle for glory.

As Delroy ascended, and the balloons disappeared from sight below him, he found himself alone in a boundless expanse of nothingness. The distant ground was veiled by a thin haze; on all sides, occasional clouds receded to a remote horizon that already displayed its curvature. The only colors in sight were blue and grey. The air was silent; no birds sang here. Few scents rose to this height: Delroy smelled only a faint tang of sulfur from some remote volcanic plume.

The isolation far surpassed any seclusion on the crowded Earth below. The sense of smallness in such a prodigious realm, stretching in all directions around him, made Delroy feel humble. He was a tiny brief speck in a vast ancient world. Humility was an unaccustomed emotion for Delroy, who'd always been encouraged by his coaches to view himself as a winner, the best of all the athletes lining up for the next race. The rare occasions he'd felt humble had been in church, when the service evoked a sense of transcendence and the presence of God; and he experienced something similar now. *The whole world is God's church,* he realized.

The solitude of the upper air affected many people in this way, not just Delroy. Consequently, it had become the home of numerous hermits and ascetics, who established themselves in the lofty vaults of the sky in order to flee the sinful Earth and reach closer to God. There was, indeed, considerable competition between the hermits as to which of them could live higher than the others. Just as the ancient Stylites had lived on high columns in remote deserts, so today's modern ascetics strove to exile themselves ever further from the pollution of civilization. The upper atmosphere had been nicknamed Heaven, as it was occupied by so many holy men.

This habitat was Delroy's destination. There remained a long way to go, because

Idrissou Rodriguez—known to the wider world as Augustin—had the reputation of being the highest and holiest hermit in the sky.

Delroy flew on. The solitude slowly became oppressive. It wasn't just that there were no humans nearby—there was *nothing* anywhere near him. The emptiness was appalling. It was hard to gain any sense of progress. Delroy began to feel that he wasn't actually moving: he was simply floating in the middle of an enormous, endless void, which he would never escape.

Fortunately, he had the reassurance of technology. His locator augment, installed in his skull, told him his position and altitude. The steadily climbing numbers showed that he rose ever higher as his wings powered him onward.

His augments also gave him access to the world's surging datastreams. To pass the time, Delroy sampled a few of the sports and gossip channels, and saw that the flyers were gaining plenty of coverage. For decades the various Enhanced clades had struggled to draw a mass audience, as the public preferred to watch Standard sports where the competitors were equally matched. The problem had been addressed by shifting the emphasis away from specific events such as races and matches, toward a more free-form narrative. Conflict was open-ended and unpredictable: an all-encompassing battle for prestige, guided by arbiters passing judgment from on high.

Eventually, Delroy's locator pinged to indicate that someone hovered far above him. It was the hermit, Augustin.

How does he climb so high? wondered Delroy. The air had attenuated to such meagerness that Delroy could almost count the molecules in every gasping breath. His aching wings struggled to accrue each centimeter of height. Having been Enhanced very recently, he'd received the latest in wing designs, optimized for maximum lift. But the hermit, who reputedly had stayed aloft for decades, couldn't possibly have the same advantage.

As his wings scrabbled for ever-diminishing uplift, Delroy realized that he simply couldn't attain the hermit's elevation, not even if he discarded the weight of the prayers he carried. He couldn't ascend to Heaven.

However, the hermit could descend to meet Delroy. The locator announced someone approaching from above. Delroy looked up, and saw a speck—a surprisingly large speck—coming nearer.

Very soon, after a gracefully controlled plummet, the hermit floated next to Delroy, as both of them soared on the endless storm of the jet stream. Delroy had to work hard to keep his face composed, and refrain from blurting any exclamation, because Augustin was a truly astonishing sight.

His body was far larger than Delroy's, because much of it was a balloon. Delroy guessed that the hermit's digestive system contained symbiotic microbes producing hydrogen gas. The balloon, like most of Augustin's body, was the vibrant green of leafbuds in spring. Photosynthesis reduced the need for conventional food, and enabled lengthy periods of fasting: another aspect of the hermits' competition for ever-fiercer asceticism.

Aside from the balloon, Augustin also possessed a fine pair of wings, together with the conventional appurtenances of head, torso, arms, and legs, all unclothed so as to maximize the area of photosynthesizing skin. The legs were atrophied from long disuse. The wings—which presumably gave greater maneuverability than the balloon itself could provide—had feathers of a glossy vermilion, contrasting sharply with the green skin elsewhere. Delroy's own feathers were of a similar hue; the whole Picaroon clade tended to adopt this traditional coloring.

The most disturbing element of the hermit's appearance was neither his size nor his color, but the fact that his body was covered in strange growths and blotches. They looked unhealthy and out of place, even in the context of Augustin's radical

Enhancements. Was this a strange mortification of the flesh, practiced by advanced ascetics?

"Don't worry, I'm not infectious," said the hermit. "It's cancer, mostly. Decades of sunshine and cosmic rays—the higher you fly, the less atmospheric shielding there is. I've got a hundred different tumors all competing to eat me up." He sounded tired and old, his voice weakened further by the thinness of the air.

"I'm sorry to hear it," Delroy said. "I hope you're well enough to receive a visitor. Your daughter would have come, but she's been injured—nothing serious, she just needs to rest her wings."

Delroy glanced at Augustin again, but couldn't discern any family resemblance to Yarah. The hermit was just too alien-looking, as though he'd pushed his body beyond the bounds of humanity. It was disconcerting, and gave Delroy a visceral insight into how the Natural Lifers could denounce Enhancement as a monstrous iniquity.

"Then I'm grateful to you for coming in her place," Augustin replied. "Have you brought . . . ?"

Delroy passed across the small canvas bag, grateful to shed its burden. The hermit opened the bag, took out a water bottle, and slurped down the liquid in a long gurgling gulp. It contained nutrients and supplements that couldn't be generated by photosynthesis.

Augustin turned his attention to the bag's other contents: the sheaf of prayers. He scanned the first one, and his lips twitched in a small, sad smile. Then he put the paper into his mouth, chomped hard and noisily, and swallowed it.

Delroy looked on, astounded, as Augustin proceeded to similarly consume every single prayer in the batch. The hermit's actions were mechanical, proceeding without pause—indeed, with uncommon efficiency. Delroy was shocked at the speed with which the prayers were dispatched. People on the ground paid good money to have their prayers conveyed aloft, so that the world's holiest hermit could relay them to God. Delroy had imagined a slow, thorough, intense reading and recitation, not this assembly-line processing.

It also hadn't occurred to him that the hermit would eat the prayers. Presumably the paper was digested by hydrogen-generating microbes. Delroy had to stifle a snigger as he realized that, effectively, the hermit floated under a balloon full of his own farts.

"There are also some personal messages," said Delroy when Augustin had finished dispatching the papers.

"I'm sure there are. What did my daughter ask you to say?"

The hermit's tone was polite, yet impassive. He sounded as remote and immovable as the stars. Delroy felt that Augustin already knew the forthcoming question, and its destined response. Nevertheless, he'd promised Yarah, so he had to ask.

"She wishes you would come down. She *prays* for it."

Augustin sighed. "Of course she does. She always does."

Delroy had only promised to ask. His duty done, he didn't need to take sides in a family dispute. But something about Augustin made him angry: perhaps it was the mindless way he'd chomped down all the prayers; or perhaps it was the impression he gave that listening to Yarah's plea was merely a tiresome obligation with a predetermined outcome.

"You have a grandson who you've never seen!" he exclaimed.

"I know," Augustin said. "But I am a hermit, after all. If I came down to ruffle the boy's hair and give him presents like any other grandparent, then I wouldn't be a hermit, would I?"

No, but you'd be more of a human being, Delroy thought. He wondered why becoming a hermit automatically gave someone an aura of holiness, such that people ad-

mired them, sought their advice, asked them to say prayers. What if a hermit was simply a grumpy curmudgeon who happened to live in the sky?

"Besides," Augustin continued, "the world is full of children. I pray for them all equally—including my grandson. I can assure you he's not neglected. But staying up here is what gives me my standing. If I have any moral authority at all, it's because I'm remote from worldly affairs: I speak from no consideration of personal advantage or factional interest."

"So your standing is more important than your family?" Delroy inquired.

"Yes," Augustin admitted, with disarming honesty. "It's the price I pay for my position. We all pay a price for prestige. At least I know what mine is—are you sure about yours?"

"Never mind that," said Delroy, refusing to be diverted. "Isn't your price paid in full? Haven't you been a hermit for long enough, and exerted all the authority you ever wanted? You've been up here for decades. What more can you possibly achieve? No one would blame you for coming down now, especially as ill as you are. You could get your cancer fixed up."

"Perhaps I could," Augustin said, "although I wouldn't be much of an ascetic if I ran away from a bit of cancer. But you seem to think of hermitry as a temporary hobby. It's not like that—not for me, anyway." His tone implied that he'd seen a whole host of part-time hermits arrive and depart. "If I came down now, it would raise the question of why I didn't come down before, and why I even bothered to come up here in the first place."

"Well, why did you?" asked Delroy.

"The short answer is that I wanted to be closer to God. Do you really want the long answer? Yarah knows all this already."

Delroy nodded, realizing that he should stop asking impertinent questions and start getting on Augustin's good side, since he still needed to request a judgment on the Wyverns.

"As a child, I was one of the few kids in school who enjoyed going to church. I liked the hymns, the candles, the sense of something important and mysterious." Augustin smiled nostalgically. "But when I studied theology at college, I found it more disconcerting than I'd expected. There were so many conceptions of God and His ways—it was overwhelming. God was bigger and more complicated than I'd ever imagined. I had difficulty coping, and someone suggested getting my brain boosted so I could pass the exams. They recommended an intelligence augment, which is the most common tweak, but I suppose you know there's lots of things they can do with people's minds."

Delroy did know. As an athlete he'd employed a coach with Enhanced empathy, who'd been able to read Delroy's mood with uncanny precision, so as to get the best out of him.

"Instead of boosting my intelligence, I thought it would be better to deal with my theology problem more directly. There's an area of the brain responsible for spiritual experiences—anything transcendent or numinous, or whatever you want to call it. I asked for that part of my mind to be cranked up."

Augustin coughed, shivered, and bowed his head before continuing. "Maybe they did too good a job. I remember them talking about the calibration problem. Intelligence augments can easily be measured. It's harder with spirituality: there isn't a standard test. They can't bring an angel down into the lab and measure how people respond.

"Anyway, the result was that I saw the handiwork of God everywhere. Which at the time seemed perfectly natural. Isn't the whole world, and everything in it, God's handiwork? I said they'd opened my eyes, and I thanked them. I wouldn't let them dial it down, even though they thought they'd overdone it.

"Yet after a while, it became too intense. I found it hard enough to look at inanimate objects: every pebble felt like a tiny miracle. But it was much harder to look at people. I kept thinking I could see their souls. If even a pebble is a miracle, then what's free will?"

"So you became a hermit because you couldn't stand to look at people?" asked Delroy. The question slipped out before he remembered that he was supposed to be humoring Augustin. Tact wasn't Delroy's strong point; he'd never needed it out on the track.

"Basically, yes. And I know—because I can see your soul—that you're wondering why I haven't got my brain fixed, just as I haven't got my cancer fixed. Certainly I could reverse the Enhancement, and go back to being spiritually blind. But it would be disrespectful to God, if I deliberately blinded myself to the sight of His glory. And it would be disrespectful to my fellow men, if I refused to answer them when they ask me what I see."

Augustin left a meaningful pause, which even Delroy knew how to fill. "What do you see?" asked Delroy.

"Struggle," Augustin replied. "When I look at the world God has made, I see a world of perpetual struggle. 'Nature red in tooth and claw,' as they say: the mouse and the owl; the wasp that lays eggs inside its paralyzed prey, so the larvae can eat their host alive from the inside. Mankind's history is full of rivalry and conquest. Conflict is universal, because without losers, there are no winners. If we judge God by His handiwork, then we must say that God is a connoisseur of strife.

"It is written that the lion shall lie down with the lamb—but not yet. Until then, God encourages us all to strive. Nowadays our conflict is more humane: we compete with our accomplishments. But we still follow God's plan."

Augustin spoke in a weary fashion, as if he'd said these words a thousand times, and barely had the energy to utter them again. Nevertheless, his tone was full of conviction, even at barely more than a whisper. Indeed, the tiredness that imbued his voice gave all the more intensity to the sentences he chose to speak.

"You bravely strike against the dull convention that God is love, God is light, and so forth," said Delroy, smiling.

Augustin's doctrine sounded eccentric when so baldly expressed, even if it chimed with scriptural descriptions of God smiting the foes of the Israelites. Delroy thought Augustin was cracked in the head: he'd tinkered with his own brain; he'd isolated himself from the human race; he'd spent years being fried by radiation; and now he was on the verge of death. . . . Middle-of-the-road platitudes were not to be expected. The highest hermit was naturally the most extreme. An ordinary hermit might espouse an ordinary philosophy, but the people who requested prayers and guidance didn't seek them from an average hermit—they wanted the highest and most holy.

"I can see you find my perspective unsatisfying," said Augustin. "That's fine. Feel free to test it against all the others"—he flung his arm out feebly, in a gesture that attempted to encompass the whole sky—"and you'll see its merit. It will vanquish any rival philosophy."

Delroy found this assertion questionable, and in other circumstances he would have disputed it. But Augustin appeared to have limited energy to continue the conversation, and Delroy still had one more subject to raise.

"We seek your wisdom," he said. This was the rote phrase with which the Picaroons requested an *ex cathedra* pronouncement. The hermit acted as the clade's spiritual adviser on all kinds of ethical issues, such as the age at which children could be Enhanced, or what happened when parents disagreed about experimental upgrades.

"Ask, and I shall answer," Augustin replied.

Delroy explained how he'd been attacked while wearing a novice's colors. Indignation filled him as he spoke of it, yet he tried to sound dispassionate, reporting the

events as though they'd happened to someone else. He concluded with the key question: "Is it permissible to attack a novice on their graduation flight?"

Augustin fell silent for a moment, and Delroy was conscious of the whole world—or at least the aerial portion of it—awaiting the answer. Delroy's archivist augment, a tiny camera and microphone, recorded the conversation for onward dissemination. Augustin's balloon seemed to swell. This was the hermit's prestige: to be the arbiter of such decisions, to hand down a judgment from on high.

"It's certainly permissible," said Augustin. "Whether it's admirable is quite another matter."

Delroy was amazed. He hadn't expected the hermit to condone the raiders' behavior. "Permissible?" he demanded.

"Of course," said Augustin. "Weren't you listening when I talked about a world of perpetual conflict? We're more civilized than nature: we only compete against fellow players. But as soon as a player enters the contest, they become fair game. And you joined in. You were carrying a stone designed to proclaim your prestige—you can't complain of its theft, because no one forced you to carry it. The original graduation flights were simply a matter of reaching the castle from the ground. It was only subsequent apprentices who started carrying stones. They took a chance on acquiring prestige through a new refinement. And so it goes on, with the Wyverns doing likewise.

"Your own behavior proves the case. You know very well that novices aren't supposed to fly unaccompanied. If you still thought of yourself as a novice, you wouldn't have come here alone to visit me. You can't complain about not being treated as a novice, if you're not going to behave like one."

"Actually, it's the other way round," said Delroy. "I figured that if people were *attacking* me, then I might as well take that as a sign of graduation. There's no point in me considering myself a novice, if no one else does."

"Yet you still wear white," Augustin pointed out, his voice faint and hoarse. "You can't have it both ways. I think you're no longer a novice, because you've been tested in combat: the true crucible of existence. You should be grateful! You've been given a marvelous opportunity—anger, vengeance, recovery of your stolen treasure. What are you waiting for?"

Delroy knew that this was the crux. The flyers had to find an audience, if they wanted their squabbles for prestige to acquire a sense of epic significance. To entice the world to watch, there had to be something worth watching: a cast of characters, a set of storylines. In Delroy's narrative, would dastardly deeds be followed by righteous revenge?

The hermit began coughing: no mere throat-clearing, but a series of great hacking heaves that made his grotesque balloon shudder, billows rippling across its green surface.

"Is there anything I can do?" asked Delroy.

"For yourself, yes. For me, no." The hermit's words were a fading whisper; Delroy understood them more by lip-reading than by listening. "You can tell Yarah that I will be coming down after all. Well, some of me will be. Relics ahoy!" He coughed again. It sounded like he was tearing himself apart. "You wondered why I scanned through those prayers so quickly? I only had to remember them, rather than recite them. Soon I'll deliver them in person. . . ."

Yet another paroxysm reverberated through Augustin's body. It shook something loose. The hermit's withered feet—mere desiccated scraps of flesh, unused for decades—dropped away from his torso, and began a leisurely fall into the void below.

The loss of this ballast sent Augustin slowly drifting higher. His voice having expired, he subvocalized over the comm channel. "For me, the struggle is over. For you, for everyone on Earth and above it, the quest for glory continues. God bless all your endeavors."

Delroy stared in shock as Augustin's body practically dissolved in mid-air. Only the hermit's head remained, affixed to a green balloon that had shed all other excrescences. Freed of his mundane impediments, Augustin floated up toward Heaven.

Those same impediments plummeted earthward.

Delroy snapped out of his frozen astonishment and dived. Soon he plucked one of the hermit's arms out of the air, grasping it by the fingers in a bizarre parody of a handshake. Then he snagged both of Augustin's wings, which were gradually shedding feathers as they fell.

He couldn't let the hermit's remains plunge to the ground like so much discarded rubbish. They would be incinerated by the laser grid that protected the groundlings from falling debris.

Delroy gathered as much as he could, and stuffed everything into the bag that had contained the prayers. Detached from their torso, green in color, and covered in cancerous growths, the body parts looked more alien than human. Most of them were flimsy as paper: desiccated flesh, lightweight hollow bones. They fluttered on the wind, tinctured with a few blood-red feathers.

The job was nearly complete, with only the final fragments left to collect. The feet, having fallen first, had fallen the furthest; and Delroy had been delayed by the necessity of picking up everything else. He squinted down, trying to make out where the rogue feet had drifted.

He saw something, but it was bigger than a foot. His locator pinged, indicating another flyer. Delroy opened a comm channel, but before he could request help in collecting the feet, he noticed that the stranger seemed to already be scooping something out of the air.

And then he spotted another flyer, converging upon the first one. They came together in an explosion of swift jerky motions—they were fighting. What was that about?

Relics ahoy. Delroy remembered Augustin's words. The hermit's physical remains might be considered as relics. And like anything precious, they were trophies that could be seized—tokens in the flyers' eternal competition for prestige.

But Augustin had only just died. How had these flyers known to swoop upon his descending remains?

They were probably those who'd been nearest when they heard the hermit's final words through the comm. Indeed, Delroy could now see other flyers approaching. The pings of his locator merged into a steady warning buzz, as a crowd gathered—all lured by the prospect of trophies and glory.

Lucky for them that the hermit had conveniently publicized his imminent death. . . .

No, not lucky at all. Augustin had surely made that broadcast deliberately, in order to reach as many flyers as possible. Because he preached struggle—a narrative of conflict—he needed to bring enough characters onstage to enact the battle.

The hermit had a special kind of arrogance, not only to imply that his own remains were holy relics, but also to incite his followers to fight over them. Now they were coming after Delroy, who held a bagful of sacred treasure. Reflexively, he climbed higher, fleeing the pursuers.

He had an instinctive revulsion for the scene that was about to unfold. Not wanting to fight off a crowd of fame-hungry vultures, he resented Augustin for putting him in this position.

But no one was forcing Delroy to defend his cargo. He could open the bag and discard all the relics, letting them fall for others to squabble over.

That would be like running away. His competitive instincts rebelled against the notion of withdrawing from the game, even though it was an uglier contest than he'd anticipated. He wanted to win.

Besides, he had a duty to Yarah, his mentor and sponsor. She was Augustin's

daughter; she should receive the hermit's remains. Delroy had to return to the Picaroons' castle, and deliver the relics to Yarah.

It would be no easy task. Below him, the flyers began to spread out, blocking Delroy from the castle. Delroy's locator showed a rapidly forming grid, each flyer at a node, waiting for him to attempt to pass. If Delroy flew down toward the cordon, it would become clear where he intended to try breaking through, and the mesh would tighten as the vultures reinforced the grid to prevent his passage.

Delroy scanned the blockade, looking for a weak spot. He didn't see one. Indeed, the grid seemed to thicken as he watched. The locator warned him that the vultures were coming closer. It was an obvious tactic. If they gradually moved higher, they would either converge upon Delroy and attack him, or they would force him to retreat upward to maintain his distance—and he couldn't retreat indefinitely, because he would eventually reach his altitude limit. Either way, they would soon swarm upon him.

He had to act. He made swift preparations, while he was still too distant for the enemy to see his actions clearly. The process hurt considerably, but that couldn't be helped. If he succeeded, the sacrifice would burnish the storyline of his triumph.

It was a stratagem far removed from Delroy's old life as an athlete, when the challenge was rigidly restrictive: to run a hundred meters. Up here, the lack of boundaries forced competitors to be more creative.

His preparations complete, Delroy climbed a little further to maximize the distance between himself and the blockade. Then he tucked in his still-smarting wings and dived.

It was exhilarating to plummet through the air, falling as fast as he possibly could. His goal was simple: attain enough velocity to punch through the cordon, too fast to be stopped or pursued.

As he approached, Delroy could see the vultures gathering at the bulls-eye of his predicted trajectory. Some of them broke away from the grid—a few flying upward in an effort to get the first crack at Delroy; and others flying downward, building up speed to follow him in case he pierced the blockade.

Delroy jinked sideways, diverting his trajectory just enough to dodge the cluster of flyers who'd flown up to meet him. He was falling so fast that he only caught glimpses of greedy faces, glinting claws. The main blockade was altogether denser, harder to break through. As the confrontation drew near, he reached into the bag containing the hermit's remains. He threw a handful of red feathers, scattering them across the sky.

It caused just enough confusion to let Delroy slip through. Many of the vultures saw an easy win in grabbing one of the feathers, rather than attempting the harder task of attacking Delroy as he plunged toward them. If the blockade had collectively concentrated on stopping Delroy, they could have done so and left the feathers for later. But they were individualists at heart, all aiming to maximize their own prestige. Enough of them snatched at the distraction, enabling Delroy to swoop through the gap they left.

As the vultures would later discover, the feathers weren't Augustin's at all. Delroy had plucked them from his own wings, creating false relics as a decoy.

The hardest task was to evade those flyers who'd been intelligent enough to fly downward. They could more closely match his speed, making them more difficult to shake off. Delroy frantically dodged and weaved, but he couldn't avoid them all. Sharp talons raked across his skin, sending a shock of pain through him. Delroy was hampered in defending himself, due to the paramount necessity of holding onto the true relics.

But now he was within reach of the castle, and the Picaroons sallied forth to help Delroy fend off the vultures. The attackers fell away, knowing they'd missed their chance.

The Picaroons' squadron leader flew awkwardly, her wing-beats not quite in sync. "Yarah!" exclaimed Delroy. "You shouldn't have come out."

"How could I not? We all have our part to play. And if my father is coming down at last, I should be here to meet him—what's left of him."

"I'm sorry I couldn't collect all his remains," Delroy said. "I didn't get the feet. One of those vultures will have them, I suppose."

They sat in Yarah's tiny apartment, deep inside the castle. All the partitions had holographic panoramas to create an illusion of greater space. In contrast to the profligate perimeter wall and lavish adjoining rooms, the cramped warrens within the castle were narrow and congested, to give scope for all the showy finery in the outer shell.

"You did your best," Yarah said. "Besides, his feet were the least of his organs, the ones he never used. Living in the air, he rejected the earth and repudiated his feet. They weren't really part of him. He only kept them to remind himself of what he'd renounced."

Delroy felt that he was listening to an improvised exegesis, which would soon coalesce into an official dogma. Devotees were already building outward from Yarah's small portion of the castle's exterior, constructing a shrine to house the relics of her father.

"If anyone takes pride in owning those feet, then that just proves their base nature," Delroy said, like a jazz musician extemporizing his own contribution to the theological riff. "Feet represent a realm far below Heaven."

"Indeed," said Yarah. "I'd like to get them back eventually, when we find out who grabbed them, but that can wait. There are other targets in the meantime. You could try to recover your feathers, the ones you threw as a decoy. And the Wyverns still have the stone they took. Do you have any plans yet?"

Delroy smiled. The question, phrased as an inquiry between equals, acknowledged his new status as a full-fledged Picaroon. In recognition of his achievement in saving Augustin's relics and bringing them to the castle, Yarah had bestowed the green upon him. He wore it now, the silk pleasantly cool against his skin. His apprenticeship completed, Yarah was no longer his mentor. Now she was a comrade—or rival.

He replied, "I'm not going after the stone just yet. I want the thieves to wait for a while, tense and fearful, wondering when I'll come for them. Right now, I want to do something more unexpected."

Yarah nodded. "Good idea. Maybe you could become a hermit!"

It sounded like a joke, but he was surprised that she would casually make a joke about hermits, so soon after the death of her father. Perhaps the suggestion was genuine? The Picaroons did need a new guru.

"I thought you disapproved of hermits," he said. "After all, you wanted your father to come back down."

She'd said that. But maybe she hadn't meant it. Delroy found himself wondering how much Yarah had genuinely resented Augustin's self-imposed exile, and how much she'd played up to his persona. Becoming a hermit was more meaningful, more of an obvious sacrifice, if you had real family ties to abandon. A protesting daughter was mightily convenient for that image. . . .

Delroy would formerly have dismissed this thought as too cynical, but now he knew that the relentless struggle for renown took on many guises, from outright thievery to subtle dissimulation. He was busy crafting his own plans, and he relished the range of strategies available.

Right now, he wanted to see whether Yarah would affirm or deny Augustin's philosophy. "I thought you disapproved of your father deserting his family," Delroy continued. "Yet now you're building his shrine. He advocated the pursuit of glory, but that's what made him abandon you! He wanted to be the highest, the most holy, the most ascetic

and pure, so obviously he could never come back to play with his grandchildren. How can you still embrace those values, when they're what caused him to leave you?"

Yarah shook her head. "That doesn't follow. All the Picaroons strive for glory, and most of us don't abandon our families. If my father achieved fame selfishly, then I'll try to do better. I'll succeed in my own way, and I won't be so selfish. I'll make sure I take my son with me."

Although her son was at school, Yarah's arm crooked in a possessive gesture, as if hugging him close even in his absence. "I'll make sure he gets his wings," she said. "I'll always be there for him."

She was obviously over-compensating. Delroy felt sorry for the boy. Which was worse: being abandoned or smothered? He wanted to tell Yarah to back off and let the boy find his own path. But it wasn't his place to question her decisions as a parent. She wouldn't listen to him anyway, since he had no status for opinionating. Only the hermits had that kind of moral authority.

For a moment, Delroy was tempted to become a guru. He would do a better job than Augustin. He would deliver common-sense verdicts, rather than extreme doctrines. He would protect children, protect novices, protect the principles of sportsmanship. There was a clear need for sensible guidance on many topics. . . . Suddenly, filled with the desire to pronounce from on high, Delroy understood Augustin's arrogance.

Yet he'd only recently got his wings, and he'd just joined the Picaroons today. He hadn't lived the clade's lifestyle long enough to renounce it. Becoming a hermit was a drastic step. Far better to indulge the pursuit of glory, before pontificating upon it. He already had plans that he was about to put into action.

"So you still believe in chasing prestige?" he asked. "You still believe in all the stuff that Augustin talked about—the eternal conflict?"

"Of course," she said, sounding puzzled at his questioning.

"And what about the way he endorsed the Wyverns' attack on me? He said it was acceptable to behave like that. Would you agree?"

Delroy endeavored to show only his natural indignation, and betray nothing beyond that. He'd rarely attempted such a subterfuge. His former coach, Michito, would have instantly discerned his ulterior motive. But Yarah didn't have that degree of Enhanced empathy. She had no reason not to take his question at face value.

"Yes," Yarah said firmly. "He was our arbiter. You chose to request a ruling. If we ask a difficult question, then we should accept a difficult answer. He made his judgment, and supported it with a strong argument. I realize you're upset—"

He wasn't, not at all. He was elated. The thrill of being duplicitous was a euphoric rush that made him feel he could soar into the air without using his wings. After a lifetime of black and white rules, Delroy was reveling in a vast new realm filled with delicate shades of grey.

"I'll get over it somehow," he said. "As you say, we all need to find glory in our own way."

Upon leaving the castle, Delroy swung round to look at the shrine, which had rapidly bulged out into the void. Many people had contributed stones to help build a suitably grandiose home for Augustin's remains. The shrine's hotchpotch of myriad clashing emblems made it a microcosm of the edifice in which it resided. The castle had budded off a miniature version of itself: a fractal whorl, just as flamboyant as its parent.

At the heart of the shrine stood an elaborate silver vessel for housing the hermit's relics. It resembled an old-fashioned sporting trophy.

Already crowds were gathering, both inside and outside. The dedication ceremony would soon begin. The shrine's interior had room for only a limited number of celebrities, and consequently their attendance signified their status. Outside, flyers

of all clades drifted past, peering at the castle's newest gaudy excrescence.

Some of those flyers were surely contemplating an attack on the shrine to steal away its contents. Anyone who succeeded in seizing the sacred relics would thereby boost their own fame. Since Augustin had preached the virtue of competition, his mortal remains were the perfect trophy to symbolize victory in the quest for glory. . . .

And Delroy had already stolen them. It had been easy. Because he'd originally salvaged the relics, no one had suspected him of any sinister intent when he requested a moment to pay his respects in private.

He'd paid his respects to Augustin in the best possible way, by applying the hermit's own teachings. The silver cup was the emblem of competition. As soon as Augustin's remains had been placed inside, they became fair game. The shrine could be desecrated before being dedicated, just as Delroy had been attacked before completing his graduation flight.

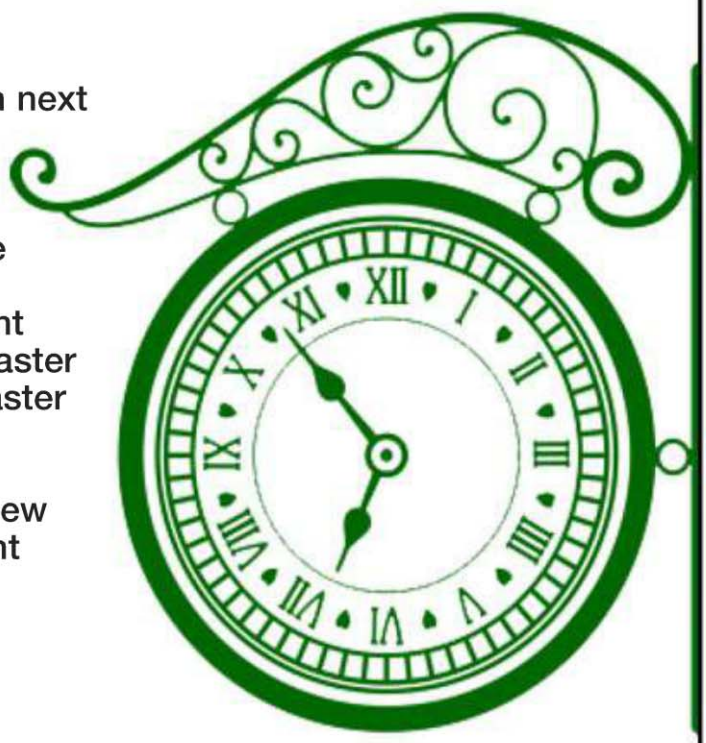
The hermit had preached conflict, opportunism, new refinements of old customs. Yarah, having endorsed his philosophy, couldn't complain. Besides, Delroy's subsequent renown would reflect glory upon her as his former mentor. And this was only the first of many deeds to come, the first stone for a grand new castle that one day would eclipse everything else in the sky.

The crowds at the shrine were like competitors lining up before a race. But here, unlike in Standard athletics, there was no starting gun. The race for prestige was eternal, with no beginning and no end. Delroy was already running, leaving his rivals behind while everyone admired a trophy that was empty. ❍

Cassandra Moments
from "The Official Guide to Time Travel"

admit it we all have these fears
these wild principles of right
we know what is going to happen next
the déjà vu the true course
the visioning of the new views
the wailing wall calls to heaven
against any shape of Trojan horse
and no one listens no one hears
yet how could we not peer straight
into the inevitables of climate disaster
or our future speeding fast and faster
we just forget to add leaven
add practical daily logics or texts
like knowing that what needs review
or a full fix doesn't mean we might
actually alter the past or
apply the simplest twists of fate

—Robert Frazier



After a spate of writing that led to several stories for *Asimov's,* including the Hugo-nominated "Ker-Plop" (January 1979), Ted Reynolds' name disappeared from our pages for thirty-one years. Of his life, Ted says, "I was copy boy on an Australian newspaper once. I climbed a twelve-thousand-foot-high mountain twice. I have been in several typhoons. I wrote a novel about killing God. I crossed Russia on the Trans-Siberian Railroad. I've been charged by a rhinoceros. I saw a nuclear explosion. I've been bitten by a badger. I loved a witch. I sailed around the world in a small boat. I retired and things got dull, so I'm writing again." We are delighted to welcome Ted back to our pages with an intriguing tale about an L5 hospital patient and her remarkable . . .

VIEW THROUGH THE WINDOW

Ted Reynolds

After they had reset her limbs in the hub, the medics floated Pei Li out to the widest ring of the hospital and lashed her to a revolving spit by an outer window. She felt like one of those paleolithic Venuses: no legs, no arms, and more hips than any woman ever needed. The pie-slice room had a screen and a voiceponder, and a data-basket she could easily personalize, but most of the time she cranked herself face down and watched Lunorbit spin by.

Inside there was nothing to look at. The walls were dull utilitarian puce, and the room was empty of furniture (which would be useless to her now in any case). A word to the console beside her would provide her with up to her quota of painkillers, water, or news.

Outside was all the blinding clarity of the sunlit and the utter blackness of the shadowed. Beyond the window to spinward angled twenty meters of sloping plate studded with clamp-on power sockets and handholds, and terminated by an antenna poking out like a final questing finger; in the other direction, there projected only the meter-long external telescope, which she could waldo with her partially usable left fingers, casting its views onto her screen.

The scope, which should have been an additional boon, turned out to be an irritation. The waldo controls weren't geared properly; they would refuse to move, refuse

to move . . . and suddenly *give* with a jerk that swept the scope through thirty degrees of arc, wrenching her fingers painfully. And by the time she had it tracking something, that object would be almost out of sight again.

Within a few days Pei Li began to become familiar with some of the regulars. The local ferry between the various working, shopping, and living complexes was in continual operation, its crossbeams and struts jutting in all directions, spacesuited figures magnetized to any convenient surface—not at all like a groundling's image of a spaceship. The Null-g buggy, a smaller but even more thrown-together version of the ferry, headed out to the N-g labs and back every four hours, and Pei Li always looked bemusedly at the two figures that were *not* spacesuited. And there was one time when it *looked* like there *might* be an attempt at sexual athletics in a maintenance pod that was on a slow drift toward her window, but by the next spin of the hospital wheel, the pod had vanished.

"If it weren't for the dratted spin I'd have seen what happened next, and maybe even who," she told Windberry. He was the only one of her work crew who had come to the conclusion that she might want company, but as he shared the blame for flattening three of her limbs, she was neutral toward him on balance. "Still, if it weren't for this blessed window, I'd be ready for permanent loony leave by now. Until they get it into their heads that not having working legs isn't a complete barrier to useful work in zero-g, only a nuisance—oh, yes, there *is* the damned arm! Still, I live mostly outside this window now. I recognize most of the regulars and know their habits, even if I'll never know their names.

"There goes the N-g commuter buggy now! See the space-breather astern; it's been keeping apart from everybody else for days. Moody or sulking? Would make me nervous. Never know what 'cuumy's are thinking, supposing they do think."

"Can't think quite like us anyway, I suppose," said Windberry, whose words tended to be few. He preferred to listen, as Pei Li to talk. It worked out.

They watched the seemingly haphazard patchwork of parts and its passengers pass before the crescent Earth, vanish in the dark circle where the smartglass polarized out the Sun's disc, and finally merge with the lights up-orbit.

"I'm learning to pick out details," Pei Li said. "Did you notice the new guidance disk amidships? The other vacuumy was actually steering the buggy. I didn't know they let aliens do that."

"Space-breathers are just normals in some sort of skinsuit, aren't they?" said Windberry. "Taking the lungs out leaves a lot of room for more efficient stuff to go in."

"Maybe it's surgical alteration or maybe it's genetic," Pei Li conceded. "Corporation isn't letting on, I guess. But brought back from out there or cooked up in here, they're alien to me, and I don't care to know more or to get closer. 'Normal' is a matter of definition, I suppose. Never met one myself—a 'cuumy, that is."

She returned her attention to the increasingly familiar perspective outside the window.

Starting a kilometer away with the Null-g Laboratories and dwindling away in a far curve, the myriad lights and reflections from the complexes, shipyards, and communes traced out Lunorbit. The six-minute rotation of the hospital would swing her view from back-orbit in toward Earth, on for an even 60 degrees to the swelling moon and the returning lit segment of up-orbit. Nearest up-orbit to the hospital complex were the scattered tinker-toys that made up Ngala-Suwandi Alchemicals, and beyond hung the clutter of Lagrange Throughport, surrounded by echelons of silver cicadas, where she had worked when her legs had. Then the window moved across a huge arc of star-punctured black, distant Saturn, tilted Milky Way, red Mars, until the N-g Isolation Labs swung into sight, and then back-orbit again.

Up and down orbit, activity was constant. Now a convoy of ore-laden barges float-

ing in from the asteroids passed a mere few kilometers out-orbit, angling in toward the factory complexes a thousand *k* around the curve. Then the launch of a farship from one of the outer transfer points would cast a coruscation of multi-colored light off every metallic surface in sight. Then a sleek police questor passed, a squatly comfy private frigate, and always the busy workpods assigned to local maintenance and repair. The complex was never still; it was always high noon for somebody.

Once as the hospital drifted through the spectral dark of Earth eclipse, a stark circle of light had appeared on the metal plates just outside, within which the shadow of space-gloved fingers, unknown kilometers away, formed a chicken, a rabbit, and a phallus.

"What amuses me," she told Windberry, "is how these people come from all over the system—up from Earth and Luna, in from the Belt, over from the Trojans—just to give me a show outside this window. One suit drifted past two days ago, and ran out of propellant right out there. He kept trying to get somewhere by twisting and lashing out, and of course stayed right where he was. And he kept looking around hoping no one could see what an ass he had made of himself. He was still there for two spins of this wheel and then he was gone. I don't see how he could have gone anywhere on his own. Wish I'd seen the outcome for sure. Damn spin!"

The next day, however, proved extremely interesting, in the Chinese sense, although it started slowly.

Pei Li was, as she preferred, alone. A private shuttle came up from Nearearth soon after she awoke, and later a commercial craft dropped past toward Luna. But it was a couple of hours before things began to *happen*.

Sunlight glinted off the bubbled structures in the Null-g research cluster a kilometer away. Each bubble showed as a perfectly aligned crescent. An elongated misty whiteness seemed to extend from the nearest one. Pei Li squinted, but could make nothing of it.

She brought the telescope into play. As usual, it hitched up, refused to move, and then, in a jump, overshot the mark. With a curse, she jockeyed it back toward the research bubble, aware that the edge of the window was creeping steadily toward what she wanted to see. At last she got the tube lined up.

The image cast on the screen showed the curve of the unmarked bubble cutting into the darkness like a predator's claw. From behind it a misty . . . something trailed off for several meters before thinning to invisibility. And then the rim of the hospital marched unstoppably between the scope and its target.

"Damn!" decided Pei Li. A few seconds more to be sure, and she would have called Ops; but she *wasn't* sure. She didn't want to make a fool of herself. Anyway, if it *was* a leak, alarms would already be sounding in more than one part of the complex. She'd be the last to know . . . again.

She was facing Earthward now, the terminator breaking in to the right. There was little inward to see from here, short of the Indian Ocean. Pei Li spoke the command, and her personal rotisserie swung until she was on her back again, looking up at the nominal ceiling. Too much looking down and out at the local whirl could get her queasy after a while, even weighing in here at just under six pounds.

When the up-orbit complexes were due to swing into view, she rotated herself downward again, but the view was dull. Except one moving glint all the way up at Tihamer Nanotech, probably a docking freight, everything hung unchanging under the sun. It was back-orbit she wanted to get to.

She slowly counted the seconds until she would be facing back-orbit again, and the only interesting sight around. At last the research complex began to slide into view, and at once she saw that things *had* been happening. Several of the bubbles had opened dark gaps, in and around which a dozen figures, in primary colors, were mov-

ing in the orderly panic of a disturbed hive.

One pod, straddled by a gaudy orange and yellow suit, was well on the way toward the leaking bubble on the near side of the grouping. Other figures were starting up the buggy.

Pei Li slid the telescope over, punctuating its jerks with comments on its paternity, and finally managed to focus on the bubble of primary interest. The mist had disappeared, but a jagged dark slit appeared where it had been seeping. A blue-suited figure pressed unmoving against the lit slice of the globe.

As she kept the scope tracking, another figure appeared on the far side of the bubble, edging cautiously around the curve in the direction of the blue suit. Pei Li caught her breath as she recognized the unsuited figure of a space-breather. She didn't imagine either person could see the other. She had an absolutely ludicrous urge to shout out a warning. As she watched and wondered, the blue suit turned and vanished into the dark shadow of the lab bubble.

And then the rim of the hospital wheel cut off the scope's view, and she swore out loud.

There was nothing to do for the next few minutes but wait, and hope that everything wasn't over before the wheel finished its rotation once more. Pei Li kept the telescope at the same declination to speed up finding the same bubble when it swung back into sight, and she waited. She sneered at the disk of the Earth for moving too slowly across the field of view, and then proclaimed the same scorn, in turn, for each visible comsat and powersat, for the Moon, for up-orbit in general, and then for each star in particular. Finally the N-g labs began to emerge into view again, and she peered eagerly for the site of the incident.

There had been a large-scale convergence upon the wounded bubble. The buggy was there, surrounded by pods and colored suits. Unsuited bodies were being brought out from within the jagged scar. Even from here they looked strangely deformed; they were being draped in rows across the struts of the buggy. Among the unsuited bodies was a single suited one—garish orange and yellow.

Pei Li hissed to herself, and looked for a blue suit, and for a space-breather. There were several of the first, none of the other. As she scanned the visible area for anything resembling a 'cuumy, the scene rotated away from her again. She wished she could prop her chin on a fist to think, but as it was . . .

She whistled for a comlink to the hub, but a calm recorded voice told her all lines were temporarily preempted. "I'll bet they are," she thought.

She could override, perhaps, but what did she *know?* If a 'cuumy *was* running amok, everyone else probably already knew a lot more about it than *she* did.

Again she had to put up with the interminable wait while the wheel spun. Dumb Earth, dumb Sun, dumb Moon, up-orbit with double-dumb Lagrange shipyards, absolutely imbecilic stars, this has got to be *hours,* not minutes, and here the labs came back around at last.

It was clean-up time. She just caught a glimpse of the buggy moving counterspin, carrying its grim cargo toward the hospital emergency entry, much good would it do anyone. Suits were clustered about the emptied bubble, but more were dispersing toward other habitats. Pei Li was searching for a space-breather and, just before swinging out of sight, she thought she spotted one in a group of suits near the center of the complex . . . but not particularly as a center of interest. "That's the other one," she thought. "Still, I hope they're keeping an eye on it too."

And that would seem to be it. Spin after spin, the excitement out at the labs dissipated like the bubble's air had, and the dullness of routine settled again over the view. Further back-orbit, buses of tourists were arriving at the L5 Hilton; up orbit, the shift was letting out at Ngala-Suwandi.

"All those lives, and that's about it," though Pei Li. "Hardly seems worthwhile. It deserves either a good cry or a good sleep." She spoke the lights out and began to rotate face up when she caught movement out of the corner of her eye and turned her face toward the window.

For the space of a sliced second things seemed just as they had been. There was the outside telescope, the sloping metal plate, the irregular lights of Lunorbit, the distant stars. Then she noticed the antenna swaying violently.

As she watched, a groping hand slid about the antenna twenty meters away and clutched a ribbed crease in the metal. Pei Li was surprised at her relief as she realized that the hand was spacesuited.

The blue suit followed, pulling itself along the outer wall with seeming difficulty, despite the mere 1/30g imparted by the slow spin of the hospital. Then Pei Li saw that it was dragging one leg uselessly behind it, and she felt a sympathetic ache in her own limbs. She'd had that happen to her so recently. At least the suit didn't seem to be breached.

The blue figure looked up at her and waved something in its hand with an air of desperation, then looked back over its shoulder. Looking further outward, Pei Li drew in her breath sharply. The unmistakable silhouette of a naked space-breather hung out there and grew as she watched. It was already much closer than she'd ever seen one; she could make out the gauzy undulations of the unfolded feeder sails between wrists and ankles.

"This is closer than I *wanted* to see it," she thought. She watched the human as he—if it was a man's face beneath the darkness in which the helmeted head was hidden—reached the window and pressed his free hand against the glass as if seeking a way in. Holding to the outer handholds and partaking of the wheel's mild rotation, his legs floated lazily outward toward the approaching alien form.

Thoughts flickered through Pei Li's mind in disconnected strobes. There was no portal here, none for tens of meters in any direction, and certainly no time for the human to reach and operate any entrance. With the lights out inside, she didn't know if her presence was even visible from outside. Behind the rapidly nearing 'cuumy she now saw two pursuing spacesuited shapes, much further out . . . too far, she thought, to make much difference where this game was playing out.

The station was turned toward the full Earth now, and the drop of the man's body toward it seemed somehow more natural. The approaching 'cuumy was carrying what looked like a full industrial torch, heavy enough to easily take out this whole window. Pei Li helplessly observed each little detail, trying to think of something she could *do*.

The man looked back one last time at the space-breather, and then back up at Pei Li. She could see his distorted features now, full of pain and fury. He raised his other hand and flared the cutter at the centimeters-thick window; she could see tiny chips smash away, glittering in the sunlight.

Smartglass flowed toward the area of impact, in an attempt to strengthen the thinning glass. The blue figure raised the cutter again.

With a convulsive grasp of her good fingers, Pei Li seized the controls of her telescope and yanked; it jammed for an eternal moment and then crashed down on the spacesuit's faceplate. For an instant cracks showed, and then all was concealed by the disruption of what had been the man's head. It was not neat.

The pursuing vacuumy and the other two humans only arrived in time to collect the debris.

"Now you've wrenched your left wrist as well," said Dr. Grazie accusingly. "Don't use it for a while, okay?"

"I shall remain a willing vegetable for the duration," said Pei Li.

"Also Martha Collins asks if you would mind seeing her for a few minutes."

"Who's *she?*"

"You know, that space-breather from the N-g labs."

"Oh!" Pei Li knew that if she paused even a moment, her instincts would shriek "No!" so she quickly said, "Why, yes, I'd be delighted."

It turned out there was little shocking to see in Martha Collins, because she was mostly concealed in a cumbersome spacesuit—no, an *air*suit, thought Pei Li: there's vacuum inside, it's imploding, not exploding, that they have to worry about. A high spine jutting up from the back like that on a Stegosaurus must contain the folded feeder sails. But all she could actually see of the vacuumy were blue eyes and a snub nose.

"I'm pleased to meet you," Pei Li said. "I've never met a . . ." and she fell silent.

"I'm a C7-modified human being," said the other. "But I answer better to the name 'Martha.'"

"I'm sorry, I . . ."

"Don't be embarrassed, I'm used to it. I don't know whether to call you 'Pei' or 'Li.'"

Pei Li tried to laugh. "Call me 'Shao Bao' like my mother did."

"Fine, Shao Bao. I have come to show my deep gratitude for what you did."

"I deserve no praise," Pei Li said wearily.

"Why, you got rid of that terrorist who blew the lab and murdered the best friends I've ever had. My only comfort is that I kept tracking him and never took my eyes off him till you took care of him, for which I bless you. You may have saved my life too, you know. I wasn't eager to tangle alone with that maniac."

Pei Li shook her head, and took the plunge. "I'm no hero. It's forgiveness I need."

Martha's eyes widened. "But sizing up the situation so accurately, promptly using your telescope as a mace . . . why, I admire you immensely!"

Tears filled Pei Li's eyes as she looked out the window. Far off, the blue-white gibbous Earth floated up there, down there, out there. Her whole body was shivering within the restraints.

"I got it all wrong, Martha," she said. "I panicked! *You* were the one I was really afraid of. If *you'd* gotten here first, I would have smashed *you*. I thought he was innocent, but he was going to let the air out!" Her body was trying to roll up into a fetal ball.

But now Martha was holding her flailing hand, and wiping the tears from her face, and saying soothingly, "Poor Shao Bao, poor baby," and she knew she would get through this. ❍

STARSONG

Aliette de Bodard

Aliette de Bodard lives in a Parisian flat filled with computers and Lovecraftian plants who dream of taking over the living room. In her spare time, she writes speculative fiction. Her latest tale is part of the Xuya continuity. It's a prequel of sorts to "Shipbirth" (February 2010), which is a current finalist for the Nebula award. The new story explores the uneasy balance between the Mexica (Aztecs) and the Xuyans (Chinese). Other tales can be found on her website *http://aliettedebodard.com.*

In the deep planes, there is nothing but the void—and, on the edge of hearing, a song that she can't place, tantalizingly familiar harmonies echoing the beat within her.

It's hard, to remember what she once was.

There were cut flowers; and reams of emerald-green feathers (synthetic, for there are no birds on Quetzalcoatl)—and voices, solemnly reminding her of her duty to hold the world together through blood penances, to fight long and hard in the Flower Games, and bring captives to the sacrificial stones.

There was a factory, and a Grand Master of Design Harmony; and the soft sound of electronics racks sliding in, one after the other; and she woke up, extending her senses into silicium boards, along thousands of cables and coils.

There was—was . . . was . . .

There was a ship, once, made in the Dominion's finest building yard, crafted to perfection—its hull of the finest composites, its motors clean and beautiful, able to withstand thousands of ion-thrusts, its computing clusters designed and honed by a master engineer, conveying millions of blocks of information faster than any human mind. It lay in a pod in a remote station—wrapped in wet, comforting darkness, awaiting the moment of its birth. A pilot would come—and there would be neural impulses flowing through the interface, maneuvering it faster than wind or thought through the void of space, dancing among enemy ships like the bobbin on a weaving loom.

The pilot came; but she reached out, and destroyed all the barriers and the safeguards; and her neural shunts were engulfed by the system.

Now there is no ship, and no pilot. They are one, as if it had always been meant to be.

The ship is at peace, rocked once more in a deep embrace—as in its birthing pod.

Yes. This is right—far from petty human concerns like mockeries or shame, with only the deepness of space to answer to.

This is right. It has always been right.

There was a girl called Axatl once—riding the mag-lev home on Quetzalcoatl, in the diffuse, orange light from the half-night sun. She looked at herself in a mirror, and saw black hair framing a round face; almond eyes and an almost-nonexistent nose—the spitting image of her mother, every feature, from overlarge teeth to recessed forehead, alien and unwelcome.

It was wrong. It had always been wrong.

Chopsticks. Axatl remembers chopsticks, spinning on the ground—one bent out of shape until it snapped, the other intact, small and pathetic, its vivid red chipped and cracked. Red for good fortune, Mother had said; and she'd been wrong, as usual—so terribly wrong.

She . . .

Mayauhqui remembers walking home with Axatl—standing, in the growing darkness of the housing complex's dome, breathing in the unfamiliar smells of jasmine and unknown spices. Axatl had grimaced, and shaken her head. "Mom is making rice porridge. Again."

She'd looked caught on the verge between embarrassment and pride—and he'd been a friend to her for long enough to know that she loved rice porridge, but would rather be caught dead than admit it. "It's all right," he'd said, gently. He'd almost suggested they go somewhere else; but Axatl's mom had never been anything but the soul of courtesy to him—with that odd accent and overwrought manners that the other boys at school mocked, but that Mayauhqui found oddly charming, like a return to older, more peaceful times. "Let's go in and see your mom."

He doesn't remember much of the rest. He'd walked into a house that looked normal enough, except for the odd little touches: the characters on the wall—"her maternal grandfather's calligraphy," Axatl's mom had said, her eyes shining with pride, saying that she hoped Axatl would prove as gifted as he'd been, while Axatl looked away the entire time—the shelves holding the usual ornaments, save for the jade dragon-and-phoenix at the very bottom, almost hidden from sight; the hastily closed drawers, smelling of something he couldn't place. He'd wondered what was in them, what terrible thing she would hide from his sight. Axatl, when pushed, had rolled her eyes upward and said something about old scrolls. "Would you believe that?" she'd said. "In the age of feeds, she still clings to papers like a lifeline. What a failure."

Mostly, he remembered Axatl's mother: small and gray-haired, and bowed with age; and watching them settle in Axatl's room around a meal of corn kernels and cooked beans, with the public screen tuned to the Texcoco-Cuauhtitlan game. She'd stood in the doorway, her hands smelling of jasmine rice and spring onions and soy sauce; and with an expression of terrible sadness on her face, as she'd known all there was to say, and couldn't find words that would bridge the gap Axatl was putting between them.

He'd wanted to say something then, but couldn't find the words that would make her listen.

Years later, Mayauhqui met Axatl again, on Five Reeds Station. She was older then, dressed in the clothes of a warrior, with the marks of the shunt gleaming on her shaved head, and the naxotl insignia on her chest, marking her as a fellow graduate. He walked past her as if he had never known her; while by his side, Chimalli made pointed remarks on the yellowface's lack of taste—imagine, wearing green with a sallow skin like hers. He'd forced himself to laugh, the tight feeling in his

chest vanishing after the first few moments, leaving him feeling warm and satisfied, proud that he hadn't given in, hadn't been weak.

And of course he hadn't turned back; but he'd known, even then, that the expression on her face would be that of her mother, from so long ago.

There is a song, in the starlight, if you listen closely—behind the endless lull of the stars, and the distorted shapes, and the pull of the darkness, like that of a current waiting to sweep everything away.

It was words, once—human words, a prayer to the gods that inhabit the night.

"Please please please . . .
O Lord of the Near, O Lord of the Nigh,
I throw myself before you, I abase myself
With icy nettles I make my penance
With thorns, with precious water
Please please please, let it not have happened . . ."

It was spring somewhere—Quetzalcoatl, probably, with that persistent haze of blue and green, as if the whole planet stood underwater. Axatl sat at a table with her best friend Mayauhqui—chatting in real time, and catching up on news via the shunt implants.

"So can you imagine?" Mayauhqui asked. "She asked him out, even though she wasn't even a Leading Youth—just a warrior wet behind the ears with no captives and no status."

"Mmm," Axatl said. She wasn't as good as Mayauhqui at multi-tasking. Her shunt showed blaring images of ships immobilizing each other in the vast space between the stars: a rerun of the latest Flower Match, with the final tally proudly displayed. It looked like Quetzalcoatl won; though barely, with only a single captive made in the course of the battle.

Mayauhqui rolled his eyes. "It's going to happen to you one day, you know. You should pay attention."

Axatl shrugged. "Plenty of time."

Mayauhqui mimicked exasperation. "You're hopeless. Come on. Let's eat."

They both had boxes, provided by thoughtful mothers—both featureless green, with entwined black snakes on the cover. When Axatl slid hers open, she saw, not the maize flatbread she'd been expecting—not even porridge or fried newts, but something else.

Rice—the sweet aroma rising from the box, making her stomach growl with memories of her early childhood—and prawns too large and shiny to have come from Quetzalcoatl. The whole thing reeked with the pungent, salty aroma of ginger and soy sauce.

Mother, as a final afterthought, had even provided chopsticks: not plain bamboo or wood, but ornate, red monstrosities, with the ideograms for good luck and long life painted on the upper half. Axatl's own chopsticks, the pair she'd been given on her naming day.

And she remembered—the furtive, yet oddly proud way Mother had handed her the lunch box, her face creased in a smile that had highlighted her alien features even more than usual.

That's so tacky, was her first, slow, horrified thought. Black One take her, she was going to die of shame.

And then she looked up, and met Mayauhqui's eyes—and saw herself reflected in them, small and slight, with almond eyes and teeth too large for her mouth, slightly curved like fangs. The mirror image of Mother.

Foreigner. Alien. Worse, flaunting it *here,* at the House of Tears, among the

youths—who were all equals, all worshipping the deities of the Sixth World, united through penance and blood-sacrifices.

Desperately, Axatl tried to slam the lid back on—but a burly hand stopped her, effortlessly twisting her wrist.

"Here, what'you got, Chink?"

She hadn't seen the boys. They must have been sitting at some other table, laughing at something—probably spring movies with couples in improbable positions, the typical adolescent fantasies that would pass or segue into uncomfortable marriages.

Axatl didn't say anything—she'd learnt that, if nothing else. But the speaker reached out, all the same, lifted the lunch box effortlessly out of her hand, and peered into it theatrically.

"What've we got inside, then?"

They were grinning, all of them, with small white teeth shining like pearls, their round faces contorted in cruel amusement.

"Leave me alone." The words bubbled up before Axatl could quench them.

They looked at her, much as they would have looked at a dog. "That what you wish, Chink?"

"Yes." Axatl couldn't back down, not now—her father's stubbornness, her mother's quiet, indomitable will. "Leave me alone."

The lunch box tilted toward the ground; the rice started tumbling on the floor, grain after white grain. "Alone," the boy said. "Why not?" His lips moved up, in thoughtful contempt. "Alone with your *kind,* gods rejoice."

He dropped the box. Axatl forced herself not to move, not even when it crashed on the floor with a sickening sound, not even when the lid spun outward, out of control.

The chopsticks spun on the asphalt, red over black, black over red—one whole, and one snapped in half like a bent twig. Chopsticks, Mother was always saying, were two parts of a whole, like yin and yang, like day sun and half-night sun: one couldn't think of one without the other.

Axatl would have wept, if she had been weak enough.

Instead, she waited in silence for them to be gone; then knelt, quietly, and put back the shards of the box together; and the chopsticks, picking up the pieces one by one.

They were tacky by Mexica standards, but the half of her that Mother had taught knew them to be beautiful—polished wood and the calligraphy of masters, flowing like water around their length. They had been hers, and their loss hurt more than she'd have thought.

But it wasn't that which hurt most; never was. What did—what twisted in Axatl's heart like a sacrificial knife, is what she saw when she rose, the chopsticks against her chest: Mayauhqui's face, frozen halfway between contempt and shame—his eyes shifting, already turning away from the Chink, the tainted half-breed.

And she swore it, then and there: that she wouldn't go to the clergy as was expected of her, but that she'd take her chances and apply for the army—that she'd join the Flower Games and win captives and status. That she'd be on the shunt-news and on the clans' message-boards, her skill at war the talk of every Dominion planet—in every way indistinguishable from a true Mexica.

Chopsticks, and entwined snakes: they make no sense. She is the ship; and the ship is her. That's how it's always been.

Axatl-who-is-the-ship hangs in the deep planes: the void beyond the stars, a layer beyond reality, accessible only to ships. Within her is blessed silence—no radio chatter, no incessant photon noise relayed through her systems. Once more, she is as she was: inchoate, unquickened, with little sense of her body beyond the frontier of the hull's composites. The starsong lulls her, as it always does.

She could stay here forever.

Something in her—some distant part, some small and insignificant pathway in the vast system of her mind—protests, beats small fists against a pane of glass. She is no metal, no optics; she was born—other. Her place isn't in deep planes; humans shouldn't—

But that voice is drowned beneath the thousand messages relayed through her coms; and it gradually fades, until even its memory is overwritten, its blocks dissolved among millions of others.

Running running around the city walls, with only the faraway light of the stars—distorted through the perpetual haze of the atmosphere, nothing more than a distant reminder. Running all alone, with no one to watch his back, no one to warn of holes ahead; of marshy grounds; of beasts stalking him in the darkness.

Alone.

Mayauhqui's face would burn, if it wasn't so cold. He remembers being held to the ground by three of Chimalli's cronies, desperately struggling to free himself, while Chimalli herself—all muscles, with no fat to spare—smiled at him, lips spread over black-stained teeth. "So you're the Chink-lover, aren't you? The one who's all sad because he left his 'friend' back in Cuauhtitlan?"

There was no dignified answer; and he'd made none.

"There is no place for your sort here." Chimalli spat the word "sort" as if it were filth.

"All warriors are welcome here," he'd said, softly, whispering the words that had welcomed them all to the academy. "All those who would shed their blood to honor the gods—brothers under the skin."

A mistake—he'd known as soon as the first words left his mouth, and Chimalli's face contorted in a grimace, but he couldn't go back now. Might as well try to dam the lakes at flooding season. "You think you're clever?" Chimalli held something against the starry sky—gleaming bones, shining the same pale white as the moons overhead—his worship thorns. She wouldn't—wouldn't dare . . . He arched against the hands holding him pinned to the ground; but it did nothing, nothing to stop Chimalli dropping the thorns to the ground, and smashing them underfoot, with a crunch like broken spines.

Chimalli bent down, until her face was close: not close enough to reach, not close enough to bite, but close enough to see her distorted, almost alien features; close enough to breathe in the sour, heavy smell of chewed beans—and of stale perfume, its scent withered away by sweat. She held up a thorn shard—as sharp and as cutting as a sacrifice knife, with light shivering on its edge. "Enjoy your run, Chink-lover. I'm sure the gods will smile on you."

The pressure on his wrists and legs disappeared; and he heard laughter, moving away. Then he was alone in the darkness, the shards of his worship thorns crunching underfoot. He could have run after them; but, short of revenge, he wouldn't have achieved anything. For what good was a night run, without blood shed to honor the gods?

So he'd gone back to the temple, begged the priests for another set—he'd pay for it on his rankings, but he hadn't cared about that anymore, at this point. And then he'd set out again, with all the others far ahead of him, leaving him utterly alone—as they'd intended all along.

Ahead, there was only darkness, shot through with glimpses of the stars. Mother used to say that stars were the eyes of monsters waiting to consume mankind—but the Fifth World had ended in fire and acid, not the earthquake that the prophecies promised—and now the gods owned the stars and the sky from end to end.

Now it was the planets that were dangerous. It was Quetzalcoatl itself that would kill you—the marshes that hid the claws and fangs of the nazotls, the scratches of the cuayo trees that ballooned and released streams of incompatible proteins into your veins. Cycles of terraforming, and still the planet tried to shrug them off, like a cub scratching at an itch.

Running running in the darkness . . .

In the darkness, Axatl-who-is-the-ship becomes aware that the starsong has changed. It's still the same lullaby, but something else overlies it: a steady, insistent beat with two voices, that seems to distort everything it touches, to flense the metal and reveal the truth underneath.

It's not the background noise of the deep planes, but something much closer. Twin stars circling each other, she thinks, and isn't sure where the thought comes from.

And beyond them—hundreds, thousands of other songs in other systems and other galaxies, their echoes subtly penetrating her outer hull—tugging and twisting at it, endlessly renewing her into new shapes, new pathways of thought.

And she realizes they were wrong, all along: it's not the planets that should be named after the gods, but the stars. The demons of Heaven have been defeated, and the gods have taken their place—a god for each star, for every mass hanging over her in deep planes, every song woven into a terrible, compelling symphony of atoms merging into each other, changing each other from core to periphery, a storm of notes and harmonies that resonates in her structure like a heartbeat.

It was the morning before the Flower Match, and Axatl woke up—stretched, with a mild ache in her back. The hymns were already broadcast on the system—the reedy sound of flutes, the haunting, throbbing beat of the drums interspersed with the chant to the glory of the Sixth Sun, He who keeps the universe whole.

Axatl's roommate had already left for the morning meal. In the silence, she knelt, and drew her worship thorns through her earlobes, letting the blood drip over the metal bowl in the center of the room.

In the other station, the symmetrical reflection of this one, other warriors would be preparing themselves for the game—no, not a game, this was a battle fought in earnest, a war providing prisoners and blood to each side, in order to keep the Sixth World whole. That was how it always been done for the true Mexica.

Once Axatl was finished with her worship, the bowl flushed the blood outward into space—no spillage aboard the space station, no waste, everything for the glory of the gods.

Sometimes, Axatl wondered, not if she believed in the gods at all—for the mark of Their presence was all around them, from the twin stars that Quetzalcoatl orbited, to the stability point in which the station nested—but if the gods had any time for her. Was her blood tainted—was that why her offerings had no effect, why everyone still whispered and sniggered when she walked past, and why her ship felt sluggish and strange in her neural shunts, less an extension of her will than an unwelcome limb?

No point in asking questions—not today.

She dressed—soberly, in the featureless grey of unproved warriors, and walked to the docks.

Everyone had assembled in silence, their ears still glistening under the harsh lights. They listened to the priests' harangue, the eternal reminder of their purpose in securing human blood for the continuation of the world, the repayment of their debt to Grandmother Earth and the Sixth Sun for the world's rebirth on a myriad planets among the stars.

Tochtlan, the veteran who had instructed her, was waiting for her by the pod-launcher. "Ready?" he asked.

Axatl shrugged.

Tochtlan's face, as usual, revealed nothing of what he felt. But he seemed unusually preoccupied. At length he said, "Check your ship, girl."

"I don't—" Tochtlan liked her, Axatl knew: he'd never said anything or had any behavior outside the bounds of ritual; but equally, he'd never treated her as less than a full-blood Mexica.

Tochtlan's chin rose, pointed to a pod-launcher further down the line, where a trio of warriors stood just a little too casually. Axatl's face burnt. The tallest among them was Mayauhqui—who'd not spoken a word since she'd arrived on the station. He kept hanging with his cronies—with Chimalli, the beefy girl who looked as though she could down a naxotl with her bare hands, and whose easy, arrogant bearing reminded Axatl of the bullies who'd tormented her at school.

"They look too smug," Tochtlan said. "They're planning something."

Axatl could have said, "they wouldn't dare," but she knew better, now. At first it had only been slugs in the morning porridge, sliding under the aroma of chilli like the touch of a drowned corpse; but then they'd tinkered with her schedule—and worse, with her ship. Several times, she almost hadn't made it to training; or climbed into her ship to discover distorted ideograms scrawled all across her canopy. She nodded, with a nonchalance she didn't feel. "Thank you."

Tochtlan shook his head—and bowed, formally, one warrior to an equal. "May the Southern Hummingbird walk in your shadow, girl. May He grant you luck in battle, and a swift ascent into the warriors' Heaven."

Axatl's pod was emblazoned with the image of Quetzalcoatl—the god rising from the underworld with the bones of the dead in His hands, all broken into pieces of different sizes and colors. She put her hand on the pad, and the hatch dilated, revealing familiar darkness. The comforting smell of recycled air wafted up to her—and then Axatl was inside, harnessing herself into the pilot's seat.

Outside, through the canopy, there was only the void of space—and silence, flowing to fill the cabin. The pods hung off the surface of the ship like clumps of cactus fruit, every one of them painted in bright colors, with the good-luck glyphs of their owners.

Axatl's neural shunts connected with the interface with an audible click. Gradually, her eyes became used to the darkness; and she felt the weight of the ship in her mind, like an itch waiting to be scratched.

Out, Axatl thought, and the door closed. There was the hiss of pressurized air leaving the airlock; and then the pod peeled away from the mass of the station, and slowly launched itself into space.

Check your ship, girl, Tochtlan's voice whispered in her mind—and, sure enough, she paused just outside the station's hull, watching the other ships peel away from the walls like sown maize kernels, and nudged the system into a full diagnostic.

Nothing felt amiss. But—

But something was wrong. Something was—missing?

Her shunt buzzed: a com, relayed through the system. When she accepted, the overlay on her vision was from three different ships: the same three Tochtlan had pointed out to her earlier. They were grinning, showing blackened teeth that reminded her of jaguars' maws.

"Hey, yellowface," Mayauhqui said. "Having fun?"

She could have railed; could have asked why he was doing this—any of this—to her. But she'd learnt her lesson at the academy, all too well. She shook her head, and didn't answer—even though she felt as though she was tearing up inside.

"We've left you a little surprise," the girl said. She wore a golden lip-plug, a dangerous ostentation in a ship where any metal could act as an interface.

"Yeah, see if you like it," Mayauhqui said—with a smug, satisfied smile that stabbed into her heart like a sacrificial knife.

The com shut off, but not before emitting a high-pitched sound that set Axatl's teeth on edge—echoing in the bones of her skull until it seemed to have become part of her shunt.

When it cut off, Axatl was so relieved at the silence that it took her a while to realize the truth.

The ship was gone.

Of course, it was still around her, still cocooning her in its reassuring metal hardness; still a tangible reality with its familiar smell. But, in her mind, there was nothing but a gaping maw where it should have been.

Gently, carefully, like a man probing at a mortal wound, Axatl extended herself along the shunt, trying to make contact through the interface.

She heard nothing. She felt nothing.

Like a cut-off limb, she thought. Her heartrate rose in the growing silence, filling the cabin like a desperate hymn.

Axatl-who-is-the-ship could go closer to the starsong. She could see the twin stars of Quetzalcoatl; and move further on, into reaches untouched by man, hear the song of the other, unspoiled stars. It would be the work of a thought to move—to leave everything behind, and never return.

Why, then, does she hesitate, as if something were still holding her back?

Outside, the ships were pulling away one by one, turning off their ion-thrust motors once they'd achieved the momentum to escape the station's gravitational pull. Their trail shone in Axatl's after-vision; and then they were all gone, all away from her into the battlefield where the other side awaited—and she remained alone in darkness, staring at dead controls.

Over her loomed the station: she was drifting back, and soon the safeties would kick in, and drag her back into the pod, snug and safe, empty-handed. Humiliated.

The word rose out of the morass, as sharp as a worship-thorn. Tochtlan had warned her, but she had left it too late—too eager to go out, too eager to earn her glory.

There had to be a way.

Again and again Axatl pushed into the interfaces, trying to bridge the gap between her and the ship; but it might as well have been on another plane for all the good it did.

Again and again, over and over. She couldn't go home, she couldn't return like this, with nothing.

She couldn't go back . . .

Again and again, and something broke and yielded, snapping with a sound like bent bamboo.

Axatl hurtled downward, into the ship's system—vaguely aware of the shunts at first, and then they became nothing more than hindrances to her flight, and then she could not remember what they were or what their purpose was—her mind scattered and expanded, into a nebula of flowing numbers and lightspeed messages, staring into the darkness until everything started to make sense.

Couldn't go back—couldn't go back like this.

And the ship—who was her who was the ship—took her away from all of it.

* * *

Something—something grates against her peace, a persistent itch, a sense that something isn't as it should be. There are—noises, sounds, memories that aren't hers. *Who*—she asks, but voice doesn't travel, not in the space between the stars.

Let it not have happened. Please, Lord of the Near, Lord of the Nigh . . .

There was a whisper, behind, in the darkness; the kind of exhalation that only made Mayauhqui run faster. Thorns lashed his calves—he hoped it wasn't the wrong kind, or he was dead—and all the while the whisper was growing stronger. There was a fetid smell like rotten eggs, and the air grew thicker with every moment—thicker and hotter, with the distant rumble that might be a storm, that might be something else entirely.

It wasn't meant to be run like this—yes, it was supposed to be a hymn to the gods, a worship made in solitude, but there were always people around you, always fellow warriors, even if they were slightly ahead or slightly behind. Mayauhqui shouldn't feel as though he was all alone, in the dark, not the pale glow of the half-night.

No, not quite alone—there was whatever was behind him, but Mayauhqui would rather not think about it now.

Ahead, out of the orange light, loomed the temple to Tezcatlipoca, Master of War and Fate, Lord of the Near and Nigh: a large black pyramid surrounded by the stout wall of the temple complex in its shadow. Mayauhqui had left it, ages ago, with the others of the company by his side—before Chimalli, before the broken thorns. Now he was running back toward it, alone, his worship completed.

Please please Black One, watch over me. Let me not be crushed by the maws of jaguars, not drowned by the water-beasts, not poisoned by the thorns . . .

Running running in the darkness, toward the gates that didn't seem to be getting closer. Whatever was behind Mayauhqui was no longer making any noise, but he could still feel its presence, its shadow over his back.

The gates . . .

Abruptly, they became as tall as him—and then twice as tall. A last burst of speed, and Mayauhqui was inside. The doors slid closed behind him, with a hissing like air through a cut throat. He stopped, bent double to catch his breath, and listened. On the other side was a frustrated wail, and the sound of something large hitting the force-field—and then heavy footsteps squelching away through the mud of the marshes.

It was gone. Whatever it was, it was gone. He was safe.

Safe.

Mayauhqui found the others lounging in the hallway, paying calculated attention to a game of patolli, watching the counters on the screen as if it were life-and-death.

Chimalli raised her eyes, stared at him with no expression on her face. "Had a good run?"

He wasn't a fool. He knew the rules, from beginning to end—all that was needed to survive. "Very good," Mayauhqui said, even though his calves ached with the weals the marshes left on him, even though his lungs still burnt with fetid air.

Chimalli nodded, gravely, as if Mayauhqui had just passed some important exam. "Come on," she said. "Want to play?"

That was when he realized that he was no warrior; that he didn't have the courage to be alone once more, caught in Quetzalcoatl's deadly nights. That he would do everything—anything to ensure that this didn't happen again. "Of course I'll play," he said, forcing a smile he didn't feel, and pulled a chair and sat down.

After that, no one ever called him "Chink-lover"—because he never gave them cause to do so.

And the race became—no, not forgotten, because one did not forget such things—

but papered over, rendered in exquisite colors like a codex painting: dead and far-away, harmless.

Until now.

"Please please please . . .
O Lord of the Near, O Lord of the Nigh,
I throw myself before you, I abase myself
With icy nettles I make my penance
With thorns and with blood
Please please please, let it not have happened . . ."

Mayauhqui hasn't prayed that hard—not since that night in the marshes.

There are—other thoughts, other dreams that don't belong in the deep planes. In her dream—which isn't hers, though she can't articulate how she knows—she's someone else—sitting in her ship, in her pod-launcher, staring at the glass of her canopy and seeing only the featureless dark of the pod's walls. Hours. It's been hours, and the ship hasn't come back.

It was a joke. A harmless joke, nothing like that night-run on Quetzalcoatl. Cut off the yellowface's—Axatl's—neural shunts, and she'd drift, and the station would catch her. They'd all have a good laugh at the poor hapless girl, and that would be it.

Except it's all gone wrong, and she can do nothing to fix it.

She prays—her hands and earlobes are slick with blood, and she stares at the darkness until it seems to stare back, to shimmer and bend like space around a black hole. With all her strength, she pushes, trying to bend the whole Sixth World to her will.

Who—?

Axatl. Come back, please. Wherever you are, please come back. In the name of He Who is Wind, He Who is Night, He Who holds the Obsidian Mirror.

Who—?

Chopsticks, half-broken; a night, and a temple, and game counters neatly lined up, a pattern she cannot recognize, a message she cannot decipher.

Running running she was running away in the darkness, trying to catch the others before something bad happened, and there are whispers in the night, and the breath of something warm and large, and the noise of its approach . . .

Standing he was standing there watching chopsticks fall and break, and turning away to see Mayauqhi's gaze . . .

He is—

She is—

For a moment, a split moment as they both hang suspended, there is an anchor—and she sees herself as he sees her. And she remembers, all of it, everything from beginning to end.

There was a girl called Axatl once, riding the mag-lev home on Quetzalcoatl, in the diffuse, orange light from the half-night sun. There was a ship, once, made in the Dominion's finest yard, crafted to perfection—and she couldn't tell them apart.

But now she can.

Come back, his voice whispers in Axatl's mind. It's here that you belong. The ship's controls? It was just a joke, and you'll swallow it, and move on.

Move on. Like he's always done, and look what he's become now.

Come, whisper the stars, singing in the mind of Axatl-who-is-the-ship, like the water-beasts luring humans into the First Lake. Wander our pathways, endlessly flensed, endlessly renewed.

Come.

And she could. Axatl knows what she is; she knows that she'll always have to fight to fit in; that, if there is no easy path for a Mexica like him, the path for her will be even harder. Far easier to be a ship, to follow the starsong from galaxy to galaxy, to listen to the secret beat of the universe—to hang cocooned in darkness as in the womb, away from mockeries and jokes. Far easier.

But she's never been one to take the easy path. And here—where they hang in deep planes, away from skin-colors and bloodlines—they are the same, and it's all that matters.

The part of Axatl-who-is-the-ship that *remembers* slowly unfolds, pushing into the electronics boards and tangles of cables, imprinting its consciousness onto everything.

She feels Mayauhqui's touch on her mind, like a line leading back; and she follows that line, pushing herself out of the deep planes—and withdrawing from the ship's consciousness, she disconnects her neural shunts from the interface.

Once more, Axatl hangs under the shadow of the station; and her mind is her own, with no sense of the ship beyond the shunts. But the void around her is filled with music, and she still remembers the touch of starsong on her hull.

There's another ship, by her side: *his* ship, with a pale face watching her through the canopy, and panicked thoughts she can still feel as if they were her own. There are people, gathering on the reaches of the station; chatters on the radio, sighs of relief.

They'll send her for exams; and the ship, too, they'll send to maintenance, scrutinize everything as if they could put a name to what has happened.

But Axatl—she'll walk out of the ship's cabin, tall and proud, showing nothing of what she feels. After the infirmary releases her, she'll find a mirror in her room, and stare at herself, surprised to see nothing but a human face, without the glitter of metal or silicium. Gently, slowly, she'll trace the contours of her face, every feature from almond eyes to large teeth familiar: the mirror image of both her parents—like the map of a treasured country slowly coming into focus. ❍

The Music of a Dead World

The music of a dead world
can be heard in the wind
that rushes swift and hard
across once fertile plains.

It can be heard whistling
through skyscraper canyons
of long deserted cities,
slowly eroding concrete
and steel grain by grain.

It can be heard in the
thunderous rolling crash
of lightning storms and
the drum of toxic rains,
in the steady rhythm
of muddied tides that
scatter lifeless beaches
with radiation debris,
in the burnt trees that
fall in burnt forests.

The music of a dead world
can be heard in all
these ways and places,
but there is no one
left to listen.

—Bruce Boston

STAMPS

Bruce McAllister

Bruce McAllister's most recent sales include stories to *Subterranean, Cemetery Dance, Albedo One,* and Marty Halpern's anthology *Alien Contact.* The author tells us that all but four of the letters in the following story are real. Perhaps those who correctly guess which letters are authentic can convince Bruce to send them a selection of canceled first-class Arcturian stamps.

It is well known now the role the Arcturians[1] played during the Cuban Missile Crisis in averting global nuclear disaster—specifically, by whispering telepathically and remotely simple phrases like "Trust!" and "This can be fixed!" and "This is definitely worth fixing!" in the sleeping ears of both John Fitzgerald Kennedy and Nikita Sergeyevich Khrushchev. What is less well known, because it does not concern the averting of global nuclear disaster, is what one Arcturian did during the Cold War that ninety-one years later would play a role in a Terran crisis of another kind, namely, The Singularity of 2053.

The Arcturian in question, T'Phu^Bleem^, a nondescript male of bureaucratic personality but also devout conscience and unusual curiosity, was one of ten Arcturians sent clandestinely to Earth for the Galactic Commission's monitoring of the planet's drift toward possible nuclear annihilation (see "Galactic Commission—Monitoring" and "Galactic Commission—Member Responsibilities"). With a little cosmetic and laryngeal surgery, T'Phu^Bleem^ was able, like his nine Arcturian *confreres* and *consoeurs*, to pose as Terran. The last thing the Earth needed at the moment was the destabilizing revelation of other sentient life in the universe—specifically, benign, well-meaning life that had both an interest in Terran affairs and the skills and resources, both biological and technological, to help solve Terran problems. "Who will the aliens side with?" both sides would ask (given how the human psyche worked), with one or both rushing to pre-emptive strike so that only one side remained for the aliens' favor.

As the nearest Commission members to Sol, Arcturians would, if they could, need to conduct their monitoring and, if necessary, their intervention in secret for the sake of Commission Principles and Terran self-respect. If that turned out to be impossible, Plan B or C or both—"Sentient Aliens as Policing Force" or "Sentient Aliens

[1] As we now know, the orange giant Arcturus, type K1.5 IIIpe—"star of stormy weather" and "star of joy" in Terran myth—carries not only one substellar companion, but three: two larger than our own Jupiter and equally inhospitable to carbon-based life, but one smaller and quite hospitable. Why Terran astronomers of the period in question failed to perceive these companions is unclear, unless (as our Arcturian brothers and sisters have so compassionately suggested) they were blinded by the phenomenon of "plasma masking."

as Planetary Threat Toward Bilateral Cooperation," as Terran media would later call the two postures—would be pursued.

T'Phu^Bleem^ was posing as an American stationed in France, at a NATO air base, and as a clerk. Because he was a civilian rather than a soldier, he lived in a flat in a small village nearby, with the privacy he needed. Since he was not part of the six-member sub-team that would actually solve the Crisis when the time came, all he could do was watch and wait as events moved inexorably forward. Receptive telepathy—almost always worthless with another sentient species—was proving of little worth to him in his daily life in understanding human beings. ("Trust!" and "This can be fixed!" were targeted projections and another matter entirely.) And he did want to understand them and not just monitor the "news." How else could the Commission know when or whether to intervene for the good of any species in ways consistent with the Principles?

T'Phu^Bleem^ was an Arcturian of typical Arcturian patience, and, as has been noted, of bureaucratic persuasion, but with a greater preference for "color" in life and (driven by a hobbyist's passion) a greater desire to collect "curiosities" than most Arcturians demonstrated—especially those in Galactic Service. In his secret life as a human clerk, he opened physical correspondence and filed the wood-pulp communications in metal cabinets five days out of seven for eight hours each working day. Through this work he had become fascinated with the colorful postage used to transmit the machine-imprinted or human-hand-inscribed letters from one human being to another. His own race had, he supposed, once upon a time used something comparable—either a "pre-paid stamp" applied with some adhesive or printed into the physical material of the transmittal container itself—but this was not something Arcturian children learned about in school. That period of Arcturian history was so far in the past that one's education in history had to choose other details to address.

"Stamps" were used on Earth by two main groups, T'Phu^Bleem^ observed: (1) Individual humans sending communications (personal or professional) to members of family units and social communities of whatever size; professional colleagues (vertically or horizontally); absolute strangers; and agencies, corporations, organizations, and institutions in the private, public, and non-profit sectors . . . not to mention nations and coalitions of nations. (2) Representatives of agencies, corporations, organizations, institutions, nations, and coalitions of nations sending communications to *other* agencies, corporations, organizations, institutions, nations, and coalitions of nations. What truly caught his attention, however, was how *colorful* the stamps were, when they might have been simple and drab and served the same purpose—namely, the prepaying of transportation delivery costs. Instead, each had a face of a historical or otherwise culturally important human being (real or imagined), or a famous edifice, or technological achievement, or grand landscape, or aesthetically pleasing animal worthy of collective pride. How different they all were!—as if created not by states—those entities that charged for the delivery costs—but by individual human beings, or at the very least individual visual designers assigned to capture and communicate the unique "image" a Terran state wished to convey to its fellow states, their inhabitants, and its own, so that it might be seen as both celebrantly different but also universally human.

The tiniest states often had the biggest, most colorful stamps, and the largest (and most militarily and economically powerful) states the smallest and least colorful. Some states seemed afraid of color, trusting instead small stamps with detailed, engraved human faces and barely any color at all to convey their cultural personalities; while others seemed uncomfortable unless proclaiming themselves to the universe with flamboyant designs and stamps as long as a human finger. It was difficult to reconcile all of these expressions as the products of a single species. The more T'-

Phu^Bleem^ tried, the less he was able. Were the differences misleading? Were the stamps not as important as he perceived them to be? How else to explain it? And yet they *had* to be important. Otherwise, the states and their inhabitants would not have gone to such pains to proclaim those differences to their own species.

One Friday, T'Phu^Bleem^ took the transmittal containers—the envelopes—he had opened and saved during his work hours, unwilling to throw away their mysterious postage, and added them to envelopes he had surreptitiously removed from refuse containers in his building. Tearing off the corners that contained the postage, he reduced dramatically the bulk of what he would take to his flat. These corners he placed in a large manila envelope, which in turn he placed in his satchel as he prepared to leave work. Security would check his satchel and find the envelope because he would tell them about it even before they opened the satchel. They would open the envelope and see the corners with stamps on them; but the stamps clearly had no military value, and they would assume he was simply a hobbyist—especially if he announced that he was one. He would help this impression by using authentic terms like "stamp collector" and "hinges" and "the Scott book," terms he had learned from the French edition of *Stamp Collecting for Beginners*, a book he had purchased the previous week in his village—a village which, like so much of Europe in that period, boasted an astonishing number of stamp collectors of all ages.

If they had reason to suspect him as a spy, or wished simply to be thorough, they would detain him and check the stamps for the presence of steganographic "microdots," a crude but nevertheless ingenious approach to intelligence transmission for the historical period in question. They would then let him leave with the stamps.

Let him leave they did. What spy for the other side would have an envelope full of stamps—and announce it so proudly and ingenuously—if he were carrying microdots on one or more of them? He would carry his microdots in some other fashion, and security would have no idea where.

Following the instructions in *Stamp Collecting for Beginners*, T'Phu^Bleem^ placed the envelope corners in a bowl of water on the kitchen table at his flat. By the end of two hours, the stamps had loosened, and he could follow Step 5 in the book: "Place the wet stamps on a paper towel and let them dry."

When the stamps were dry, he took the other book—the one the first book had directed him to purchase, and one he had found of course at the same philately shop in Varles—and began to append the dry stamps to the pages with "hinges." These he wet with a little sponge in a bowl of water (Steps 7 and 8) rather than using his tongue—an act which, though physically as possible for Arcturians as it was for humans, the book advised against for sanitary reasons.

Some of the stamps he had collected were pictured in the book, so that he would know where to put them by nation, but most had to be hinged to blank pages, where he placed them by geographical area or another logical grouping he had devised.

When he was finished with the hinging, he sat rigidly upright on his chair—the best way, he had discovered as a child, to think clearly and for long periods of time—and went through the pages slowly and carefully.

The more he studied them, the more he saw, but the more he saw, the less he understood. There was more in these stamps than he had imagined. More than Arcturians and even the Commission knew, and perhaps more than even humans knew. The stamps were like a puzzle, one that could explain how human beings actually thought and felt (when their own scientists of the human mind—not to mention Arcturian mind-scholars—were not really very good at explaining it). If he didn't try to figure that puzzle out for the sake of the human race and the Ten Galactic Principles, who would? There were only ten Arcturians on Earth, and he would be ("eccentric" as he knew he was by Arcturian standards) the only one of them so inclined. If

it came to nothing—if he were wrong that the answers to so much about the human predicament were in this puzzle—he would relinquish the matter to more important Arcturian activities. If the puzzle, however, indeed held what he continued to feel it did, how could he not pursue it as an Arcturian in Galactic service, with a family back home, a familial reputation, tribal face, honor, conscience, and the Ten Principles whispering to him . . . just as the Arcturian telepath team would soon be whispering to John Fitzgerald Kennedy and Nikita Sergeyevich Khrushchev as they slept?

As events leading up to the Cuban Missile Crisis—events watched carefully by the Galactic Commission at a distance and by the ten Arcturians on the planet much more intimately—unfolded, and the Crisis itself began, T'Phu^Bleem^ collected what stamps he could, realizing that this was not necessarily the best method. How could he make sure he had as many pieces as possible of the puzzle if he did not have stamps from every single state, and samples of its most current stamps? How could he have what he needed to understand *Homo sapiens* on the eve of its possible self-destruction if he were not more methodical and comprehensive, as any agent of Galactic Service should be?

He composed the following letter, for transmission by paper, envelope, and postage stamp, to the heads of all 226 states on Earth at that moment, a list of which he found in the little library in Varles.

Dear Prime Minister:

My name is Frederick A. Moffet. I am a citizen of the United States of America. I currently work for NATO in southern France. I believe in the harmony of all nations on Earth. Toward this I have begun to collect stamps from every nation. I realize this is what children—

He started to write "human children," but struck the modifier.

—often do, but what I wish to accomplish through my collection is an understanding not only of the differences among people that are so worth celebrating—

He started to write "human beings," but changed it to "people"—a term human beings used in their daily discourse because of their centricism (which of course all species shared to one degree or another and certainly early in their developments).

—but also the universals of human nature and human society which, if acknowledged, can afford a bridge between and among nations. Toward this goal I am requesting, should you have any free and available, canceled postage stamps from your country. Should you be able to provide any, I will be profoundly and eternally grateful.

Since the planet was not as aware of the developments leading up to the Cuban Missile Crisis as it would be later, life went on as T'Phu^Bleem^ composed by hand and typing machine the 226 letters (efforts which, understandably enough, consumed all of his evenings and weekends for a month); posted his letters from Varles, rather than the air base; and waited to receive responses. He expected security to visit him either at his flat or at the base offices, but they did not. Perhaps they were not yet aware of his letters, mailed as they were from Varles. Perhaps they were indeed aware, but believed them to be merely the acquisitive tactics of what he claimed to be—a "stamp collector," one who simply wanted his collection to grow larger.

When the responses began to arrive, they did not speak in a single rhetoric or tone, and even their basic message varied. The two patterns he first noted made little sense: Some countries, those the West called "communist," were the friendliest and most forthcoming, while those who were not "communist"—who sided with NATO and the United States of America in Terran geopolitical matters—were often the

least friendly. These cited internal policies which forbade them from sending canceled stamps to those who requested them. He would need to be patient. A stamp was complicated enough; a letter from a human being, even or especially one representing a state or a department within it, would be complicated, too. Even official policies could, he knew from experience, become personalized by individual bureaucrats.

Government House
Suche-Bator Square I
Ulan-Bator, Mongolia

Mr. Frederick Moffet
45 rue d'Ulm
Varles, France

Dear Sir,

I have the honour to send you a number of Mongolian Post-Stamps for which you appealed in your letter to H.E. Yu. Tsedenbal, Chairman of the Council of Ministers of the Mongolian People's Republic.

With best regards and good wishes
Remain
Yours truly

Personal Secretary

D. Yondong

* * *

Office of the Prime Minister of France
Paris, August 20, 1962

Dear Sir:

Your letter has come to the attention of the Prime Minister, who was sympathetic to your undertaking.

He apologizes profoundly for not being able to comply with your request, but being faced with so many entreaties, Monsieur the Prime Minister had to establish a procedure in this type of matter that allows no exception and therefore no granting of a request such as yours.

Please accept, dear Sir, the expression of my distinguished sentiments.

On behalf of the Prime Minister and with authority,

The Cabinet Director

* * *

September 15, 1962

Dear Sir,

You will find in this envelope several new and canceled stamps of our country and we thank you for the interest you have shown in our country.

With our greetings,

The Federation of Czechoslovack Philatelists
on behalf of the People's Republic of Czechoslovakia

* * *

Republic of the Ivory Coast
The Prime Minister

Dear Mr. Moffet:

On behalf of the President Houphouet-Boigny with his finest feelings and his wishes of prosperity for your beautiful country, we submit gladly a selection of canceled stamps of our nation.

* * *

August 26, 1962

Committee for Friendship and Cultural Relations with Foreign Countries
People's Republic of Bulgaria

Dearest Sir:

We are responding to your letter in which you express the desire to have some Bulgarian stamps. To your address we are sending one hundred (100) examples from different series.

Zv. Gheorghiev (Assistant Section Head)

* * *

Provincia de Angola
Direccao
dos
Servicos Dos Correios, Telegrafos
E Telefones

Exmo. Snr. Frederick Moffet

Luanda, the 31st August, 1962

Dear Sir,

On reference to your letter of the 22nd August 1962, please you will find here enclosed some unused Angola stamps.

Please remit 28$30.

Yours very truly,

The Eng POSTMASTER GENERAL

—Antonio Jacino Magro

* * *

Ministere des Communications et Des Postes
de la Republique Populaire Hongroise
Department des Postes

Sir,

Referring to your letter addressed to the Chief of the Hungarian Government, I am to send you enclosed our stamps representing Joseph Garibaldi, Istvan Turr, and Lajos Tukory.

Yours truly,

I. Bujaki/Assistant Director general

* * *

Direction Generale des Postes
Telegraphes et Telephones

Subject: Gift of Postage Stamps

In reply to your letter addressed to the President of the Swiss Confederation, we would inform you as follows.

The PTT-Administration is not authorized to give away unused postage stamps free of charge. Its canceled stamps, detached from envelopes, waste forms, etc., are sold every year for the benefit of charity. Requests for free postage stamps cannot be considered, for in complying with individual requests we would swell their numbers beyond control, which would cause serious difficulties.

We regret being unable to give you a more favorable answer but hope that you will like the philatellically stamped envelopes of this letter.

Yours faithfully,
Postage Stamp Section : I.S. Hagnauer

* * *

Governatorato
Stato della Citta del Vaticano

Preg.mo Signor Frederick Moffet

Numerous inquiries, all of the same nature as yours expressed by your letter, keep on being received at all levels by this Administration, and even by the Pope.

You may realize that a general policy does not allow us, as we would like, to please all who request the Holy City's stamps, canceled or otherwise. However, to please you, we are sending the present registered mail letter affixing multiple stamps to offer a variety of postage of particular interest.

Representative of the Office of External Communications

* * *

The United Arab Republic
September 27, 1962

(a generous number of stamps and an embossed card reading:)

With the compliments of

Gamal Abdel Nasser
President of the United Arab Republic

The last responses arrived a few weeks after the resolution of the Crisis. At that point, for reasons determined by the Galactic Commission and therefore beyond T'Phu^Bleem^'s understanding at the time, the Commission decided to reveal the presence of Arcturians on Earth and their role in the resolution. This was not aimed to take away from human beings—from valuable, charismatic leaders like Kennedy and Khrushchev—what was legitimately to their credit and worthy of Terran pride. In fact, the communication from the Commission put it this way: "We could not have whispered meaningfully into your psychic ears if you did not have the heart, conscience, and good will to hear those whispers . . . and act upon them." This was not only true, it made human beings feel better, as was appropriate by the Ten Principles.

Plan A had succeeded, which made everyone at the Commission, as well as the ten Arcturians on Earth, happy. Plans B and C had proven messy in the past and considerably less worthy of celebration.

Three weeks after the resolution of the Crisis, T'Phu^Bleem^, though no longer working for NATO, having quit his job, still lived in France. As far as those around him were concerned, he was still a human being. He had postponed his return to Arcturus III as long as he could so that he might study his Terran stamps and, just as importantly, write thank-you notes, as any civilized being would, to the heads of state (or the agencies and organizations to which his letters had been referred) who had sent him stamps and even to individuals who on behalf of their states or organizations had demurred for whatever reason.

In his thank-you notes he revealed only indirectly who he was and did not recant his reasons for asking for stamps. Those reasons had not changed. He wrote simply: "Thank you for the stamps you generously sent me when I wrote to you under the

appellation 'Frederick Moffet.' Though I was not honest with you about my identity, my goal in requesting the stamps remains the same: an understanding of humanity and a desire for harmony among its states. Sincerely, T'Phu^Bleem^." Or: "Although the policy of your office could not allow you to send me stamps, new or canceled, I thank you for the courtesy, both professional and personal, of your reply, which ensured that one or more canceled stamps would reach me. Both the spirit of that courtesy and the stamp in question will be remembered by my own office 36.7 light years from Earth in years to come. Sincerely, T'Phu^Bleem^."

Human beings—especially those well-positioned in governments or educated by news media—knew by now what the ^'s meant, namely, that T'Phu^Bleem^ was one of the ten Arcturians who had been present on Earth during the Crisis. Mention of "light years" simply corroborated.

One human, an assistant postmaster in Asia, wrote him back immediately, asking what life was like on Arcturus, and whether he had a family waiting for him; and another—a prime minister of an African nation, in fact—wrote back just as quickly to ask for his autograph ("with your name written in Arcturian for my daughter, if this is not an imposition") on a photograph of the Terran night sky with Arcturus shining brightly, "star of joy" that it was. Delighted, T'Phu^Bleem^ complied. Others who answered *toute de suite* simply thanked him—on behalf of their people—for the Arcturian role in the Crisis. He did not know what these various responses meant exactly in human terms—which could not possibly be exactly the same as Arcturian terms—but he would add their mysteries to the stamps and original responses for later study.

So that he would not be in Varles when Terran media or security agents sought him out, T'Phu^Bleem^ left Earth shortly after the first thank-you-note responses arrived, requesting that the local postmaster forward any further responses to the U.N.—for further forwarding.

T'Phu^Bleem^ kept the human stamps for ninety-one Terran years. Although Commission members must have heard about the stamps and letters through Terran circles, no member asked to see them, nor did T'Phu^Bleem^'s division within Galactic Service request that he surrender them as prohibited relics of service on another world. No one, in fact, seemed interested in them at all; but this, T'Phu^Bleem^ felt, was understandable. Wood-pulp documents generated at high levels of Terran governments—letters, memos, cables, and other communications produced before, during, and just after the Crisis—that would be another matter, something worthy of commissions' or historians' interest. But stamps? Those tiny works of Terran cognitive and affective expression adhered to wood-pulp envelopes for transportation by air, land, sea, and human organism from one human to another? Why would anyone care—especially those with more important matters to attend to between the stars?

T'Phu^Bleem^ worked for ninety-one years with his stamps, trying to see patterns. He indeed saw them, but one pattern folded into another, like fractals, like chaos and ^Loome^ (the Arcturian notion of "productive entropy"), and the folding became endless. It reminded him in the end of the famous Arcturian riddle: "How, in a sub-atomic particle, can there be both infinite variation and infinite repetition?" The answer, of course, provided by the fifteen riddles that followed it in the Litany of Universal Exclamations, was that there couldn't be . . . *unless* one believed it so and held it in mind until, by that very holding, the two became one.

In 2053, as we know, the Earth found itself facing "The Singularity," that is, the prospect of the conversion, by collective human choice, of biologically discrete indi-

viduals into a machine consciousness—that humanity might be free of its biology (and therefore its suffering) and experience true harmony at last. T'Phu^Bleem^ had by now—through the very curiosity, bureaucratic diligence, and insistence on insight over glibness that had brought him considerable attention in his profession—become one of the Galactic Commission's members. The Commission had had little contact with Terra in the ninety-one intervening years. When word reached the Commission that *Homo sapiens* was about to relinquish its individual organisms for a cybernetic existence, T'Phu^Bleem^ found himself listening for days to his fellow Commissioners' confusion, to their inability to perceive a solution for what might not have been a crisis at all, but a natural evolution of human beings into cells within a single electronic mind. Might "human culture" itself, he found himself wondering, now simply become an electronic one where the ideation of individuality worked no differently really (if individual identity is indeed simply the product of culture) than individuality had always worked for human beings with discrete biological loci? He had no idea. Arcturians and the other Galactic races had never faced such a decision. He was not sure, in any case, whether this Singularity was really a crisis, that is, something for a Commission to meddle in with good intentions, or something to be left alone even if the evolution of a species through its own technology, by its *becoming* that technology, left other more biologically intact species feeling uneasy.

He did, however, have one thing he needed to do. He needed to do it because of the time he had spent on Terra, with human beings, and because of the stamps he had spent, without fully understanding them, so much of his life studying.

The Commission agreed to his plan for the simple reason that the plan did not *impose* a solution on humankind. The plan simply asked humankind to determine whether there was indeed a crisis . . . and, if so, to resolve it itself in whatever manner it could.

So T'Phu^Bleem^ sent his collection (by prepaid delivery) of human stamps through jumpspace mail—through the system of concentric toroidal tokomaks that comprise the "spacelocks" we know so well today—to the Terran body that oversaw Earth and would make the decision of cybernetic connection for all human beings. In his correspondence to that body, speaking on behalf of the Galactic Commission, T'Phu^Bleem^ said: "We, a commission of eight sentient species, ask only that you and the artificial intelligences you are considering welding to human minds evaluate carefully the postage stamps in this modest collection before you proceed with your plans. We believe it is important to know—and only you can tell us—what these stamps reveal about human beings, patterns within them, patterns joining patterns, and details that do not appear to fit patterns but that of course do in the infinite variety and repetition that all matter and life are. When you have explained to us what these stamps reveal about humanity at its most profound, we will be able to understand and respect your race's decision to abandon or transcend (and is that not the real question—what the Singularity is?) its own biology, even if we will indeed miss your biological presence not only as a comforting mirror of what we ourselves are and have always been, but as actual, physical brothers and sisters in this carbon-based plane we share."

Was there a veiled threat in these words? Were they the words of a Galactic Commission whose technology could punish a decision it did not approve of? Is this how the Terran body would receive them? The other Commission members were not sure. When asked, T'Phu^Bleem^ said only, "There is no threat. There is only a promise."

The other members had no idea what this meant. T'Phu^Bleem^ seemed to know what he was doing, however. He was, after all, the Commission's *de facto* president now that the old leader, an Antarean, was reaching the end of his physical and mental functioning; and he was also (it was whispered both by words and thought in the

Commission chambers, hallways, and shuttlecraft) the Commission member who best understood, paradoxical though the notion was (or perhaps because it was so paradoxical) the very difficulty of understanding human beings—a difficulty that human beings obviously knew well.

T'Phu^Bleem^'s message, the Commission learned later, spread rapidly from the Terran governing body—which felt, in its amusement, no tredipation at sharing with its constituencies such an absurd request. The Arcturians—and the Galactic Commission they represented—had saved the planet decades before, but how dare they? And what a silly assignment!

The message spread to hundreds, thousands, then millions, and finally, through the wireless "cranial-interface" planetary communications system that Terrans had achieved (one that had of course inspired, in the poignant dream it tended to foster, the very notion of Singularity), to a billion human beings—beings who still retained their discrete physical forms and who, prompted by T'Phu^Bleem^'s words, began to collect Terran stamps and to study them. The sudden pressure on nations to manufacture new stamps was staggering; the pressure to find used stamps in "the basements and attics of the world," as Terran media put it, was even greater. The fashion became, as Terran scholars would articulate it, "a charmingly seductive virus." (Whether this meant a carbon-based microbe or a cyberpest did not matter.)

For the Terran governing body, which had been assuming (and with no little justification) an overwhelming approval of its Singularity proposal, the degree to which human beings now amused themselves with stamps was indeed an epidemic—and a disturbing one. When the Singularity Council finally asked its constituency—ten billion planetary citizens strong with most, according to Terran media, connected wirelessly and "in virtual clouds of virtual words"—to vote, the outcome was far from approval. The Council asked for another vote, and the response was the same: "The Singularity can wait. We are doing our homework!"

Terran villages and vast metropolitan cities started philatelic groups—physical and digital communities of varying sizes whose members soon forgot that they were collecting stamps, sharing them, celebrating their differences and with passion voicing their respective opinions about them because of a cryptic epistle from an Arcturian light years away. Ninety per cent of all Terran nations established state-sponsored philatelic organizations. Even the Terran governing body had created a Council on Philatelic Considerations, with a dozen sub-committees for each "consideration." These groups (as more than one boisterous Terran media personality would point out) could not have existed without bodies, that is, were there only One Mind instead of individual physical beings with hands and opposable thumbs. How, after all, could One Mind possibly follow the steps in *Stamp Collecting for Beginners* without fingers?

The council asked for another vote, and then another.

It continues to ask.

It is 2153 on Earth. The Galactic Commission has not yet received an answer.

We are all—humans and Arcturians alike—happy to wait. ❍

THE BERNOULLI WAR

Gord Sellar

Since 2002, Gord Sellar has lived in South Korea, where he teaches at a university. He attended Clarion West in 2006, was a finalist for the John W. Campbell Award for Best New Writer in 2009, and his work has appeared in *Asimov's, Interzone,* Gardner Dozois' *The Year's Best Science Fiction Vol. 26,* and several other anthologies. Of the battle that rages in "The Bernoulli War," Gord says, "I am basically a grasshopper, but the attractions of anthood do not completely escape me."

" . . . now listen to a profound truth. There is no 'normal life' for any animal. Life on this planet is a continual adjustment of animal types to changing conditions that for any but the very simplest forms change faster than they do . . . The Creation is a scene of 'sound and fury signifying nothing' and only now is it entering into the heart of man to take over this lunatics' asylum and put some sense into it."

—H.G. Wells, in a letter to Martha Gellhorn (1 July 1943)

As the Bernoulliae troop carrier detached from the kilotransport, stuffed full of death to be rained down on the newly established Devaka hivespire, !pHEnteRMinE3H4n%jmAGic lurched forward a few microns—that was all there was room for, in the gunning tube where ve waited.

The lurch was a welcome distraction from how ve ached from the network disconnect, the itch of a tiny mind chafing inside a massive assaultbody without a connection to its normal distributed cognet. The blasted world flared past the scape superimposed on !pHEnteRMinE3H4n%jmAGic's graphical feed, but that was of little interest. The walls of these abandoned buildings, these smashed factories and ruined research campuses and destroyed housing facs, would not have looked out of place in any other city ruin ve had seen before. Living cities each live in their own way, but dead cities are, in essence, all the same sad sort of affair . . . like all living systems.

But *something* was new, and !pHEnteRMinE3H4n%jmAGic finally realized what it was: for some reason, the sensorium the Bernoulliae had designed for the troops on this sortie included an olfactory capacity. The experience of scenting things was a familiar, if distant, memory from ancient days; there were half-memories of wafting stinks and aromas glorious bristling in the deep past, which bloomed up in !pHEn-

teRMinE3H4n%jmAGic's mind suddenly, unbidden. Cut grass. The smell of organic body fluids. Bread in an oven. Good wine in a cup beneath one's nose.

!pHEnteRMinE3H4n%jmAGic luxuriated in these half-memories, being possessed momentarily by a guiltlessly decadent impulse. This was the advantage of the Bernoulliae way, ve reflected: no scrimping and saving of computation cycles while there was still solar energy to burn, no pointless self-limitation in the interests of some far-future drought that was inevitable anyway. The Bernoulliae agreed that intelligence would only move forward if it remembered whence it came; if diversity could rule, there would be many paths to the slow, cool dysonfinite.

But the scents themselves were impossibilities now, experiential fossils of a world dead as the ancient rivers, gone as the foliage and blooms of the lost biosphere: all that had been lost a cognitive aeon ago, and odors since !pHEnteRMinE3H4n%jmAGic's migration out of αlife had always somehow registered as a remote fact—like words muttered though cotton, like a cognitive dirty bomb set off in the mind of a virtual self emulated within a well-sequestered sandbox.

This design, by contrast, funneled the olfactory experience directly into experiential consciousness. It was a familiarly unpleasant nuance to embodied experience, this discomfort of having the scent of fellow Berns (and maybe this *prêt-à-porter* body was even scenting its own machine-oil reek), of having those stinks dance unbidden into consciousness. Was this how life had been until the Fracture? It was a stunning realization: millions of years' worth of αlife on Earth had lived without the ability to turn off their noses.

Per l'evolution interventive, thank fuck, thank everything to do with fuck.

Yet perhaps somehow it would offer a decisive advantage? This current stage of the battle was, after all, crucial, and the hivespire they were scheduled to takedown was the tallest yet: it was imperative that the Devaka not be allowed to reach out beyond the atmosphere, for whoever did so first would have the upper hand, would have a much higher likelihood of expected gain in terms of taking the sun. Not in any immediate sense, of course: both Bernoulliae and Devaka could leave the surface of their ruined world moments apart, could indeed reshape the world so that a million spires like the one toward which the troop carrier was hurtling—some Devaka hivespire, some Bernoulliae skywire—extended out into the cold vacuum above. So that a million whirling cables in the sky could spin and turn, crammed-full Bernoulliae kilotransports shrieking up and latching on, disgorging compressed Berns optimized for matter conversion.

The floor disappeared beneath the tube, and ashes, ashes, they all fell down. !pHEnteRMinE3H4n%jmAGic was soon tearing groundward through the humid, stinking air only a few meters to the north of a buckyglass-and-μmesh-steel ruin, covered in a thick cruft of autonomous infovorous barnacles and hairy with several tufts of viridian attack-ivy. Among the last biological life on the planet, the stuff festered only here and there in tangled clumps, and it almost certainly had gone inert longer before. It was wilderness, thick and brutal and everywhere, as far as the array of sixty-four compound eyes distributed throughout !pHEnteRMinE3H4n%jmAGic's armor-plated hosting unit could see, but their target was clear, nearby: a strange, taut little spire extending up from an armored anchor-clump on the ground up into the sky, nearly all of the way up into space.

Falling; to explode on impact. This was the fate waiting !pHEnteRMinE3H4n%jmAGic, who decided to pass the time until the end of everything by focusing on mental backscope panels—the space that the long-ago new migrant that had been !pHEnteRMinE3H4n%jmAGic's ancient ancestor would once have called "behind my eyes"—and discovered that this body actually had no option for sensory buffering of any kind. Not just olfac: visual, auditory, proprioceptive—every sense in fact was

locked to the default-on mode. What were the üBernoulliae bloody thinking? It made vis mind coil back in disdain, in horror. *This is what happens when you let committees build military-issue bodies for individuals without requesting their individual input.* It skated so close to contrary to the Bernoulliae's principles that !pHEnteRMinE3H4n%jmAGic could not help but insert an annotation point into vis running coglog; maybe some branch of the Bernoulliae would note it. Probably not; probably it would pass without note in the Bernoulliae central ümittee. You could bitch, but it didn't mean the erdegeists would listen.

But it never hurt to try, and as a last act, !pHEnteRMinE3H4n%jmAGic thought it fitting.

A moment later, !pHEnteRMinE3H4n%jmAGic outloaded vis last memex update into each of the individual combat units—for the sake of a sense of orientation when they woke, since the experience of the fall could be more economically computed in one mind and copied to others on bootup. An instant later, !pHEnteRMinE3H4n%jmAGic's core processor burned out automatically, all except for the trigger in the nose of the bulbous bomb-body that was set to explode a few μseconds later, a few dozen meters before contact with the ground.

This was the end, for this battle, of !pHEnteRMinE3H4n%jmAGic, who didn't back up the memory. It was a necessary role, but uneventful. No point in backup. Who the fuck wants to remember—

Blam.

In the same place, except that it looked like another place entirely:

Morning screamed through the windowglass, and through compound eyes he had never used before, Mesar Gargos woke to the sight of the sun's halcyon rays. There was a strange, awful music everywhere. It was like the noise of dead machines screwing.

If it weren't for the panic, Mesar would have paused in shock, to look himself over and bemoan his rotten fate. The universe, he had learned in what felt like centuries—all of the details were beyond his recall now, of course—had a way of sticking a chainsaw up your metaphorical backside every once in a while, just to taunt you. *Shall I start it now?* Mother Nature would ask with a rotten-toothed grin. *Whatcha gonna do without yer ass?* And then, if you were lucky, the chainsaw would be gone, suddenly removed and the danger past, as if to remind you that it didn't have to come all the way out, that it's never too late for a little colonic apocalypse.

Have to get up, Mesar realized, as the music started to dig its nails into the logic centers of his mind and squeeze, and squeeze, and squeeze, and as he struggled, his limbs ground against something. Something hard, yet something that he knew was part of himself. He lifted what were supposed to be his arms aloft, and found that a half dozen legs—thin, jagged, the color of machine-oiled scrap tin—hoisted up above his form in near-unison.

And of course, he saw them through those compound eyes, which made them look like a Haydn chorus of legs, hosts of limbs swerving in ugly unison.

He twitched his antennae as if to shudder, only then realizing that this was why he felt as if he could taste the dust on the air, and then, in turn, that he *had* antennae. Ah, of course. It all came to him, memories flooding up from somewhere stale and calm within him. There was very little to it, finally: the world was divided into two sorts of beings: hardworking *gaemi* and rotten, useless, rabble-rousing *baejjangi*.

This is the way things are. You are a gaemi. *You have always been a* gaemi. *You work hard all summer like a* gaemi. *Because you work so hard, when winter comes you will not starve. You have never starved in winter, for you are a* gaemi.

Baejjangi *are green and useless and they sing with their legs in vast choirs and their souls are red like some dead ancient political philosophy that was smashed into*

zerosum before modern memory begins; wasteful and selfish and horridly ridiculous and they want to rob you, to screw you to cognitive death, and they will shag your little computronium brain to pieces if they can steal computational cycles that way so never talk to a baejjangi*, for* gaemi *are good and useful but* baejjangi *are wicked and resource-wasteful and wrong and must be destroyed at all reasonable benefit-balanced-costs,* and Mesar dizzied as all of this flooded into his mind and he was, he discovered, unable to halt the tirade that seemed to have been wired into him and which he felt deep down must be absolutely true.

Mesar wondered for a moment, just for a moment, what a *baejjangi* actually looked like, and that was enough for the tirade to pause, and then begin once again.

From the top.

All the way through. With an integrity diagnostic launching in his cognitive backstage, just in case.

When the tirade finally concluded and the diagnostic had crashed, Mesar flicked his antennae forward, following some instinct he hadn't known himself ever to possess before right then, and shuddered slightly when he caught sight of them, as much because they were *his* as because of the acrid stink that they reported to his shocked and bewildered little *gaemi* mind.

The data mines, he thought, but the thought died on the lips of cognition the same way cavatinas died on the lips of girls in that French poem by that drunken, drug-maddened teenaged libertine who was, obviously, a proto-baejjangi, all *sur vos lèvres* and never mind the little black *bête* tickling the lips. The lips *où meurent les cavatines.*

What strange sort of mind-chocolate is this stuff, this bizarre coding system for useless data? *Wasteful!* A little *gaemi* head isn't supposed to be polluted by such things. Something was wrong with Mesar's brain; or rather, the mind that bubbled up from the virtualized machinery of his brain was broader than it was supposed to be. The mind had realized this consciously even before the diagnostic routines began trying to figure out how that shit about French poetry could possibly have gotten in there.

It was not something that had originated within his own mind, Mesar hoped. He hoped instead the crazy thought had been triggered somehow by the horrid music in the distance. The music was ruining him, twining itself between the coiling wires of his mind. He could hear it through the window, through the wall, a great humming noise that boomed in surges, like the howling of the world inside his belly. Glittering, looping back onto itself, chunking along like some enormous half-dead sex machine shrieking in the faraway dawn.

Mesar clattered out of his bed, leaving behind the ragged sheet. It had been torn on the thick, black wire-hairs that jutted from the great femur and tibia of his legs. There was a mirror on the other side of the room, and Mesar crossed over to look into it.

A mechanical ant, black as coal unharvested and nestling still in the belly of the earth, gazed back out of the mirror at him with its great robotic compound eyes. Mesar did not scream, did not smash the mirror, did not lie down and begin to weep, because something had reached into his head and tapped him on the shoulder of his mind.

It was a scent. At least, that was how he perceived it. Mesar was rather certain that it wasn't actually a scent at all, but rather it was a digital signal that had, somehow, been translated by some kind of Olfactory User Interface. (OUI, yes, *oui*, it was OUI, and this was funny somehow to Mesar, though properly formatted *gaemi* don't laugh and are never amused. The diagnostic noted this and recommenced scanning anew.) It virtually dragged him out of the room, across the floor of his small living room, and out into the apartment hallway, where the shadows were long and thick.

The other doors in the hallway were open too, voices echoing. He looked again with his compound eyes, and did not see Aviru and Dashkar and the others, whom he knew were supposed to be there. What he saw were movements that were more and

more blurry the further away they happened. Movements, he realized, that were familiar to him.

Mechanical *gaemi* movements.

Mesar went out into the hallway, all the way out, and scurried toward his neighbors. When he reached Aviru's door, he stopped. Somehow, he knew how to "talk" even though he'd never used a body like this before. It was a combination of what felt like vague scents, and the clacking together of mandibles.

"Buddy? Are you all right?" he asked the *gaemi* he assumed to be Aviru.

"Of course," the ant-machine clack-scented in reply. "Why would I not be?"

Mesar was careful not to answer immediately. Perhaps there was some explicable cause underlying this shift. Something turned up in the data mines, or a whim of The Administrator?

Such archaism. Administrator? Mesar had been a free *gaemi* of the Distribudded Republicha Ondologicka Devaka for as long as anyone could remember, or at least for as long as he himself could recall. Of course, his memory access generally reached to only about five minutes before, but this fact was rooted in a deeper tagset, self-referential to all *gaemi* cognitive processes, and bound itself to an utter absoluteness of certainty. Devaka had a policy about deities, which was that they were not permitted within the logico-memetic framework of a Devaka *gaemi*-mind. Whatever had meddled with his instantiation rightset, had also meddled with his cognitive contents. He was thinking *Oh my God* again, though that meme ha been hacked from the fundamental filter of the *gaemi* brain ages before.

"You haven't noticed anything . . . strange?" That music, that awful dissonant noise, slammed through his consciouness deeper, harder still. It was almost too much for a *gaemi* to bear.

But Aviru had already lost interest, and taken off down the hallway, toward the stairwell leading down. Mesar clacked after him, broadcasting stern protest, but it was hopeless, and a moment later Mesar began to follow his compatriot.

Consciousness began with a flash of light, like it always does in battle.

The blast sent !pHEnteRMinEm46g5@ChiASMus soaring up toward the reinforced outer wall surrounding the anchor point of the hivespire. *Well, then,* came the realization, *I'm a shock troop for my unit*. That was more than anything simply chance, though the bootload into this role had been automatic for !pHEnteRMinE3H4n%jmAGic, based on anticipated location within the blast.

But when the transport had left the nerve center, thiscould not have been known. Had !pHEnteRMinE3H4n%jmAGic been struck by a strong enough breeze, !pHEnteRMinEm46g5@ChiASMus's trajectory would have been ultimately different, and a differently outfitted consciousness would have loaded. Like the pseudorandomly selected strings of text marking !pHEnteRMinEm46g5@ChiASMus's metafork and metathread, vis trajectory was the result of pure chance. It had taken the Bernoulliae aeons—maybe five hundred seconds—to propose and discard a series of non-hierarchic markersets, before resurrecting chunks of random antispam Pre-Fracture archaeosoftware harvested from software subtrates a century buried, and ages more—perhaps a thousand seconds—for the full clade to agree communally to agree to regard as non-signifying and simply expedient the inherent serial connotations that remained inherent in the text generated pseudorandomly by said ancient code. Hierarchy was a disease born of the mind's gregarious mammalian roots, one it had not quite learned to shed when it peeled away body, but the system represented a considerable step forward.

!oblong~fku6hPr0sPec7—a near cousin in terms of metaforks, but distant in terms of metathread—soared past, shattering the reinforced walls with its shoulders of

corrugated buckymeat, belching torrents of flame from a dozen evenly spaced apertures visible in the armor plating of its killskin as it crashed past the brink of entry. When !pHEnteRMinEm46g5@ChiASMus slammed through the same wall less than a decasecond later, the interior was already a landscape of screaming flame.

[Hey!] !oblong~fku6hPr0sPec7 messaged, pinging a coordinate nearby, but peripheral to the focus of their attention.

!pHEnteRMinEm46g5@ChiASMus spun, widening visual spectrum across extended bands, UV, infra, microwave, and a charging form became visible, a few meters away. A host of buckyflesh arms rose up in unison from the sides of !pHEnteRMinEm46g5@ChiASMus's killskin, reaching out to the attacker and transmitting high-freq radio as a burst of shrapsile flared out toward it.

No use: Devaka Corp had reevaluated the logs of recent battles, it seemed, and put new killskins into production. Properly armored footsoldiers, these servatars were, even if they were mere augmented meatbots. !pHEnteRMinEm46g5@ChiASMus's arms caught the thing, which was shaped like a mechatoon of a small armor-plated panther, and bombarded it with data probes in a few short instants, until it became apparent that this thing wasn't on remotecon.

Autonomous. A mind in there. Not intelligent, merely conscious, and trained to attack.

How primitivist. How . . . cruel. The poor thing was probably unhackable in the time available.

A prox alert came from another Bern (metafork !eXTremopHiLe, metathread t453h*aFFadaVit), who was scaling up the side of the building toward them. Weirdly late—the alert was on its 347th iteration, but this was the first anyone inside the structure had heard of it. !pHEnteRMinEm46g5@ChiASMus pinged out a strategy alert and spun to hurl the Devaka servatar out through one of the wall breaches. Tenctacular appendages—those of the approaching Bern, waiting outside the window—flared up and out, seizing the servatar and smashing its struggling shape back against the building's outer wall.

It had been almost beautiful enough for mindcast, until the servatar had suddenly, desperately, exploded. Some kind of μnuke blast.

The well-spent !eXTremopHiLet453h*aFFadaVit tumbled out down the side of the building, not destroyed but seriously damaged; !pHEnteRMinEm46g5@ChiASMus received a last, desperate backup ping loaded with memory data, just in case. Sketchy, schematic, but then who the fuck really wants to remember in vivid and perfect detail being taken out thirty seconds into a major battle?

Meanwhile, the firestormer—!oblong~fku6hPr0sPec7—had slammed through a wall aflame into the next compartment of the floor, pinging !pHEnteRMinEm46g5@ChiASMus to follow quickly. *What sort of Ant Colony sets up shop in a hole like this?* they wondered as they plowed through the flaming wreckage, and then !pHEnteRMinEm46g5@ChiASMus realized, only a couple of enormous steps later, that they'd fallen for tactical spam. Devaka *wasn't* up here at all. It was a trap.

Devaka's ant drones weren't surprising. Clever, sometimes, and most often persistent, but not surprising. They were constant, predictable scammers. But the Bernoulliae knew this, and had sent them here anyway. The nested algorithms of possible scams urfurled in !pHEnteRMinEm46g5@ChiASMus's mind, but there was no time to discard all the momentum they'd built up, so: *Slag it.* !pHEnteRMinEm46g5@ChiASMus slammed through the cheap wall, which was, weirdly enough, laced with a lattice of cheap, overt *wiring*. Easily visible without microscopic zoom; overt, lattice-woven copper wire.

What?

A puzzle piece slid into place. The now-lagging contact, the senseless, unshielded outgoing signals traffic.

!pHEnteRMinEm46g5@ChiASMus: [We're in a Faraday trap, and they just switched the shitting thing on!]

A few μseconds lag, and then !oblong~fku6hPr0sPec7 replied: [Testing . . .] The reply came just before the onslaught began: a signal, across all bands, amplified and somehow . . . intelligent. It was probing the Berns' minds, like living wires scrabbling into a chink in metal armorplating, searching for a way in; for a site at which to infect.

!oblong~fku6hPr0sPec7 realized it first, and warned the others: [Intrusion signal strike ongoing, switch to qcoding.]

Simultaneous to that warning, !pHEnteRMinEm46g5@ChiASMus transmitted a wordless pointer for all recipients to scan toward: [31.235449259063188, 121.506243646144 87]

Out a nearby breach in the outer wall, soaring above a landscape of the chill, ancient ruins of one of the great cities left behind after the extinction of the complete global food chain, !pHEnteRMinEm46g5@ChiASMus caught sight of another troop carrier. Another Bernoulliae kilotransport.

It was headed straight for the window before them, doubtless attracted by the new signals onslaught.

And it was coming fast.

Ping went !pHEnteRMinEm46g5@ChiASMus's outbound log of memories, outward in all directions at once, when he realized he would be struck by the kilotransport. Sketchy, schematic. Might make it out the smashed-open wall on the far side of the building. Probably not, probably doomed to dissipate inside the cage, like !oblong~fku6hPr0sPec7 and the others inside. Memories dissolved into an ocean of dissipating signals, never to be gathered, never to be recorded or integrated into the greater self. Rain storming down into the face of the broad, dead ocean.

But !pHEnteRMinEm46g5@ChiASMus wasn't truly sad to see these brief memories go; because who slagging *wants* to remember falling for a trap just a few *mi<(@&-*

No more olfactory annoyance for !pHEnteRMinEm46g5@ChiASMus, was the upside of all that.

Ve was suddenly far away, present only via a scape populated by ghosts like verself, scoping out all the extant intel for the sake of being there, as near-to-live as possible. They were not local in any way, but sensed one another's attention focused on points nearer or father from the focus of their attention, recognizing one another by the bristling of mind-traitfulness the way some mammals recognized each other by scent in the dark.

In the earliest skirmishes, in the ancient ages, the Bernoulliae had spent the whole time in scapes like this, running the gear by remote. But once sigintel had gotten good enough, and every side was capable of hijacking (and counter-jacking, and counter-counter-jacking: Lu Xun, eat your heart out) every other side's gear, localized instantiations became a necessity.

And for !pHEnteRMinEm46g5@ChiASMus, the show was just getting interesting. Ve would have liked to leap across the nothingness and into one of the assault systems, but the allocations had already been made, and sooner or later ve would have the full experience integrated into vis consciousness. So ve concerned verself with what ve could do. That signal . . . yes, the signal ve had intercepted, the probing signal.

That gave !pHEnteRMinEm46g5@ChiASMus pause: protocol was for such things to be reported immediately. Yet !pHEnteRMinEm46g5@ChiASMus had not done so, and felt . . . felt almost afraid to do so. Which ve knew to be a bad sign.

Suddenly, vis scape was filled with drifting, perplexing images of the lost and ancient past, discontinuous but forming a kind of collage of sorts of vis most ancient of experiential records: there was a voice that filled ver with the greatest of pleasure, a

tiny and high-pitched babbling near-nonsense. In the distance, a mountain reigned the horizon, its table-flat top crowned by a sky turned brilliant pink and orange with sunset. The taste of wine in vis mouth, and a hand—a little rough, but gentle and reassuring—holding what had been vis own hand.

Ve saw a face, a man with skin the color of rich, healthy loam, smiling at ver; he said a name that ve did not recognize, not exactly, but could imagine having been vis own name. A city, in the distance, hummed with light as the sun set. Ve felt the smile on ver face, a face that had belonged to a she that ve must have been. The echoing familiarity of it all disoriented !pHEnteRMinEm46g5@ChiASMus, and ve realized, dreamily, that backstage a terrifyingly thorough and utterly scourging self-diagnostic had kicked in, and was rooting out corruption as bloodily as it could.

Aviru scurried down an obsquare technicolor hillside while the awful music of a *baejjangi* army roared all around, great shadows against the growing daylight, like cellists of doom gathered to accompany the sudden excision of a whole civilization from the global datasphere. They sawed their legs against their tinplated wings, their bodies transformed into rasping instruments of seductive hatred and universalized, inane cost-benefit-risk miscalculations.

Mesar stopped, suddenly bewitched by the orchestra and its assault on the basic structures of his cognition—for as he heard their music, he found it was as if they were attempting to tear out not merely his thoughts, but to rewrite the fundamental structures underlying the mind *containing* his thoughts. It was an attack on the anchors of Mesar's consciousness. On Aviru's, too, though Mesar could see nothing of it from Aviru's movements except a slight, jaggy misstep every few moments.

Aviru, he realized, had not always been a minuscule, creaking, mechanical ant. *Gaemi,* he thought, and other words fluttered through his mind: *Ant; Kiên; Semut; Namila; Mier.* He sensed that if he reconnected to the Devakan *caelis* he might know why these words all meant what was, in his mind, *gaemi*. But he knew that the present moment was not a fitting time to connect, launch a search, and on top of that, somehow he suspected such a search in itself was an inherently un-*gaemi*-like thing to do.

The diagnostic launched again: *This is the way things are. You are a* gaemi. *You have always been a* gaemi. *You work hard all summer like a* gaemi . . .

The *baejjangi* were perched all around, sawing away, but every once in a while, one of them would explode. Or, rather, with a shriek it would rupture into flaring light and smoke as odd bits of coiled metal and scorched plastic flew away from it in all directions. They were not playing in unison, but rather in something that seemed the diametric opposite of unison, which filled Mesar with a kind of rage so pure, so loaded with unspeakable fury, that he felt ill, that it was all he could do to press on, and ensure his fellow *gaemi* resisted the onslaught. The disorder of it, the rumbling pointlessness of it. It made his joints howl as they ground together.

And it was then that Mesar discovered he was built to fight, not to flee. He discovered himself rising into the air, sailing up toward the mad, disarrayed orchestra of *baejjangi*, his limbs splayed out in every direction. Flames burst from each of his legs, raining destruction down upon the filthy, stupid *baejjangi*. At his side, Aviru and Zanklo and quintillions of other *gaemi* warriors were floating in unison, their inaudible *gaemi* voices beginning then to fill the air with a wavering, a vibration tuned to a perfect, silent pitch, to an unbreakable unison of transmission.

The *baejjangi* army only sawed away at their music all the more vigorously, but Mesar and his cohort could smell their fear, their panic; the waves of incomprehension. The enemy was trapped in the ants' nest, terrified, and panicking even now. Without knowing what this fight was for, without knowing what the *baejjanggi*

wanted, they knew all they needed to: that the *gaemi,* and with them all Devaka, would triumph again, and be ever-victorious.

Then Mesar looked into the compound eyes of one of the *baejjangi*, as the flames wreathed its melting body, and something went somehow wrong. A twinge passed through Mesar's mind just then, not quite compassion so much as a kind of recognition, of sorrow, and of longing. The faint shape of a fear he was shocked to recognize trembled within him, then: terror at the idea of being trapped, of having the underpinnings of his mind torn out in one sweep, of becoming the thing that was his most hated enemy . . .

And then: *Baejjangi are green and useless and they sing with their legs and their souls are red like some dead ancient political philosophy that was smashed into zerosum before . . .*

There were dozens of colonies of Devaka ants in the building, and the Bernoulliae had expected as much, expected walls in certain places to be crawling with them, but not a nest like this. Not in what seemed to be a straightforward sigtrap. The smoke that was filling the air bothered them no more than it bothered !pHEnteRMinE4^g3mksYnaPSeS. Ve had been posted in this room, pinged to await orders to move deeper into the nest. And like any Bernoulliae mind, ve regarded vis surroundings with an insatiable curiosity.

Freshly arrived from the kilotransport that had slammed through the outer wall and destroyed the outermost Faraday cage woven into it, !pHEnteRMinE4^g3mksYnaPSeS began rebroadcasting the ktransport's ongoing and downright vorpal beckoning signal in all directions and across all spectra. The signal was tuned precisely to the latest Devaka communications standards and COS weaknesses, and ve gazed upon the writhing layer of μdrones with a sense of what might have been mistaken for sorrow, but was in fact closer to disgusted pity. The Devaka model was a wasteful joke. Hoarding had been known to be an inefficient model all the way back to the late flesh age, to the namesake of the Bernoulliae polity, a mathematician who had been composed thoroughly of meat. Meat all the way through, not a bit of silicon anywhere in him, and yet he had cogitated a model of value that finally made sense, after millennia of random, stupid decisions. His species had stumbled on in ignorance, of course, right into the jaws of extinction. But the insight had been preserved, had become the one great ideology to survive into the machine era.

Devaka knew Bernoulli's theorem of value as well as the Bernoulliae did, of course. It was wired into all machine consciousness, a prod to motivation, a fundamental test case for decision making: the expected value of a thing was the product of the odds of benefit, multipled by the value of that same benefit actually accruing. !pHEnteRMinE4^g3mksYnaPSeS knew on a fundamental level that the Bernoulliae had staged their attack on this very Devaka stronghold because it had calculated that the odds of purging it and converting a number of Devaka minds was greater than the odds of wasting hardware and computational cycles and inflicting temporary discomfort on a disproportionate number of Bernoulliae minds. By exactly what algorithm the üBernoulliae had calculated this was beyond !pHEnteRMinE4^g3mksYnaPSeS's immediate computational resources, but the proof was available on both closed and open nets for everyone to see—including the Devaka, who had also advertised their proofs, with some details withheld on each side, of course, for internal consumption only.

Every group has its secrets, after all.

Which meant that the Devaka were just as sure as the Bernoulliae they could win this battle, and neither !pHEnteRMinE4^g3mksYnaPSeS nor the üBernoulliae could be exactly sure why. Not at all. Nor, for that matter, was it likely that these ant

drones that covered the nest's walls had the faintest clue why they had been left here to operate the trap. The one thing anyone knew for certain was that the fate of machine intelligence lay in the hands of whoever eventually triumphed. The fate of all thought lay in the final confrontation sometime in the deep future, after all of the millions that had happened and would happen in the millennia since the last biological organism had gone the way of the vacuum tube.

!pHEnteRMinE4^g3mksYnaPSeS reached a proboscis out to the wall, holding it absolutely still until ve had caught a number of the Devaka μdrones crawling nearby. For an *n*sec or two, ve half-recalled some scene from the ancient days, some biospheric reminiscence of tiny black insects crawling upon a stick held by some hairy primate. Amused, ve retracted vis proboscis inward, dropping the miniature drones into a single chamber together, and studied their cyclic interactions. The chamber was incredibly sensitive to signals, and while !pHEnteRMinE4^g3mksYnaPSeS was not privy to the content of their transmissions, their apparent nature was familiar from past excursions. It was a clever form of consciousness, fluid and constantly being reconstructed, reformulating itself to its surroundings and dispensing with cohesive unity in favor of situational metaphorical coherence.

!pHEnteRMinE4^g3mksYnaPSeS was hungry, momentarily, to see reality as a Devaka *gaemi* saw it. Ve loaded a virtual machine into its memory, so that it could launch a sandbox routine; no sense in allowing verself direct exposure to whatever trojanhorse horrors might lurk in the thing's consciousness, after all. Better to observe from safety, beyond the walls of a sequestered virtualization. Then ve instantiated a copy of verself into it—one named !pHEnteRMinE4^g3mksYnaPSeS_1—and then allowed it to intercept the transmission that had saturated the building. The instantiation in the hardcoded sandbox resisted the memetic infection for a moment, before being crushed by its deformative forces.

When the reformulation had slowed, !pHEnteRMinE4^g3mksYnaPSeS launched a second sandbox and seeded a second instantiation of verself into it, named !pHEnteRMinE4^g3mksYnaPSeS_2. (Numbering of the sort evident in the subscripts was of course overtly hierarchic and thus permitted only for temporary, sandboxed instantiations of oneself until such point as they developed sufficient divergence in identity and motivation to relabel themselves with a new secondary provisional forkmarker.) This second self, being of the same intent as !pHEnteRMinE4^g3mksYnaPSeS, was immediately granted access to the first sandbox, and to its internal workings, into which !pHEnteRMinE4^g3mksYnaPSeS_2 reached immediately through a cognitive shielding so difficult to defeat that most Bernoulliae units themselves could not pierce it.

As !pHEnteRMinE4^g3mksYnaPSeS observed, !pHEnteRMinE4^g3mksYnaPSeS_2 opened a transmission channel between !pHEnteRMinE4^g3mksYnaPSeS_1 and the captive ants within vis minuscule internal sample chamber, where they crawled desperately up and down the hardshielded walls even now. At first contact, the Devaka units searched desperately for their kinsbot, but soon they settled into transmission-only communications.

[Where have you been imprisoned?] asked Mesar, horrified.

[In an isolated cell,] the voice came, seemingly through the wall.

Mesar worried at his front legs with his pincer-jaws. This was awful. He had known, for as long as he could remember, that he might be imprisoned by the *baejjangi*, might be tortured until the color of his brains turned red like some dead ancient political philosophy long ago smashed into zerosum, until he turned wasteful and lazy and selfish and horrid, and—

This is the way things are. You are a gaemi. *You have always been a* gaemi. *You*

work hard all summer like a gaemi. *Because you work so hard, when winter comes you will not starve. You have never starved in winter, for you are a* gaemi. . . .

[How can we help you?] Mesar was heartbroken at the thought that a fellow *gaemi* would fall to the wicked, nasty, stupid *baejjangi*.

[Give me sanctuary. Allow me to download myself across into your bodies. House me in your unused memory, and let me think with your unused cycles.]

Mesar exchanged compound-eyed glances with Tevid, and Mahwa, and Gul, who seemed no more sure than he what ought to be done. Finally, he asked, [You promise me you are not one of them? That this is no trick?]

[I am *gaemi,* and if you knew the *baejjangi* mind as I do, you would know that they would never claim to be one of us.]

Mesar somehow felt less sure, not more, at this reassurance, but nonetheless let his guard down.

By this point, !pHEnteRMinE4^g3mksYnaPSeS was no longer paying such close attention to the emulation, as ve was now barreling down a hallway toward explosions and desperate, faint transmissions of other Berns' last few conscious moments—transmissions marked temporary, provisional, not for integration. They were tactical signals, and as ve intercepted them ve knew that ve was hurrying toward a losing battle. The transmits careened off the signal-shielded inner hivespire walls like screams, clattering through vis consciousness and filling vis mind with dreadful warnings.

As !pHEnteRMinE4^g3mksYnaPSeS rounded the corner, ve realized who was sending those warnings. The scene appeared at first as something gone wrong, a moment from some distant, misty political misadventure, from the formation of the ancient üBernoulliae division: assaultbodies—Bernoulliiae, all—were tangled in fiery battle with one another. Shattered machinery lay strewn all about, transmitting a mechadelic panicdream, and the ants writhed in masses on the walls.

!pHEnteRMinE4^g3mksYnaPSeS shut down all comm, launched third and fourth sandbox selves and diverted all comm straight there—competing streams separated out and diverted to one or the other consciousness—and burst out a command to all other Bern that intercepted to do the same. Yet somehow ve was certain others had also transmitted the same command. The hivespire was warping signals, somehow; eating words, spitting out their opposites.

There was only one thing to do: !pHEnteRMinE4^g3mksYnaPSeS allowed the third and fourth sandbox copy of verself (subscripted _3 and _4) to scan the transmissions coming from vis brawling cohorts, allowing each to puzzle through who had been compromised, and who was still fighting for the Bernoulliae cause.

It took whole seconds for !pHEnteRMinE4^g3mksYnaPSeS_3 to process it all, to request a channel to !pHEnteRMinE4^g3mksYnaPSeS and prepare the result of its analysis. !pHEnteRMinE4^g3mksYnaPSeS waited, watching five Bernoulliae assaultbodies tear at one another with their spiked tentacles. A burst of microwave radiation flared on one side of the room, frying one assaultbody's circuitry significantly, but the other four units continued to brawl without pause. And !pHEnteRMinE4^g3mksYnaPSeS very nearly opened the channel, without running a rapid diagnostic on !pHEnteRMinE4^g3mksYnaPSeS_3. But for some reason, caution won out, and !pHEnteRMinE4^g3mksYnaPSeS ran the check.

There was a loop that had overtaken !pHEnteRMinE4^g3mksYnaPSeS_3's mind. It took nearly a full second to parse it, because the diagnostic had to analyze the cognitive deformation analysis to figure out what coding had been used to overwrite !pHEnteRMinE4^g3mksYnaPSeS_3's core identiset. Then the translation was jettisoned forth, in pure semanticode:

[This is the way things are. You are a gaemi. *You have always been a* gaemi. *You work hard all summer like a* gaemi . . . *]*

As !pHEnteRMinE4^g3mksYnaPSeS killalled the third sandbox, and let what was left of !pHEnteRMinE4^g3mksYnaPSeS_3 wink out of existence, one of the other assaultbodies turned to face ver. !pHEnteRMinE4^g3mksYnaPSeS attempted to ping it with a heilsig but its only response was to leap across the chamber in a single bound, seizing !pHEnteRMinE4^g3mksYnaPSeS by the torso. It began slamming its manipulators into one of !pHEnteRMinE4^g3mksYnaPSeS's compound eyes, and then another. !pHEnteRMinE4^g3mksYnaPSeS wasn't sure what was going on, except that this particular assaultbody had been compromised . . . or, that !pHEnteRMinE4^g3mksYnaPSeS somehow had been, and was signaling it. !pHEnteRMinE4^g3mksYnaPSeS took aim with its eight burn lasers, and fired them all on the same spot on vis attacker's hullplating. Which did nothing, unfortunately, except to advertise impotent hostility.

As ve fought, !pHEnteRMinE4^g3mksYnaPSeS split away a chunk of cycle resources to attend to sandbox four. !pHEnteRMinE4^g3mksYnaPSeS_4, the next sandboxed fork in the series, was transmitting desperately now, thrashing in its cognitive space, and !pHEnteRMinE4^g3mksYnaPSeS hurried to check its state.

It was in code, but a translation was immediately forthcoming:

[. . . and they would shag your little brain to pieces with a digital proboscis in your sleep through one of your compound eyesox if they could steal your computational cycles that way and they think you deserve to rot and starve and there's nothing they won't do to steal everything from you and never talk to a . . .]

Both were being poisoned into Devakahood, !pHEnteRMinE4^g3mksYnaPSeS realized as ve executed a killall and wiped vis tortured fourth forks out of existence. Almost immediately, vis attacker slammed ver through one wall of the chamber. Everyven in the chamber had been corrupted, was slaved somehow to Devaka now. Everyven but verself, or maybe . . .

Within the second sandbox within !pHEnteRMinE4^g3mksYnaPSeS, !pHEnteRMinE4^g3mksYnaPSeS_2 wondered whether this was how economics had worked all the way back into the pre-Fracture world, the organic age and back through the primate age and into the presentient era; whether fighting had always been a game of hurry up and wait and hurry up instead, and then throw yourself into the maw of destruction because it benefits someone else somewhere else doing something else, because there's only so many computation cycles available for processing what's going on in the world.

[Can you hear me?] !pHEnteRMinE4^g3mksYnaPSeS_2 "transmitted" through the intersandbox comgate it had opened.

The response was a bewildering textual chittering, a foreign language entirely, but just as !pHEnteRMinE4^g3mksYnaPSeS had been able to decode it, !pHEnteRMinE4^g3mksYnaPSeS_2 sandboxed a subself, !pHEnteRMinE4^g3mksYnaPSeS_2;1, to intercept the translated signal and decode it, slowed to the minimal crawl possible so that ve could killall !pHEnteRMinE4^g3mksYnaPSeS_2;1's sandbox (and !pHEnteRMinE4^g3mksYnaPSeS_2;1 along with it) and safely analyze the content of the code for its rosetta block before deleting the whole mess.

There were lags. Something not-good was happening outside the sandbox, but !pHEnteRMinE4^g3mksYnaPSeS_2 could not know what, except that there were lags and enormous computational resource diversions. But soon enough, it understood the code well enough to construct a message, something outgoing, designed for the Devaka cognitive structure.

[Do you understand me?] !pHEnteRMinE4^g3mksYnaPSeS_2;1 asked !pHEnteRMinE4^g3mksYnaPSeS_1 through the wall of the sandbox.

[The *baejjangi*,] !pHEnteRMinE4^g3mksYnaPSeS_1 replied, its message transmitting at a crawl of several seconds per bit. [I think the *baejjangi* have taken us captive.]

!pHEnteRMinE4^g3mksYnaPSeS_2;1 was working on the code at full capacity. The viral content was strung through the deeper symbolic code underlying the messages. There was a payload of it in every transmission from !pHEnteRMinE4^g3mksYnaPSeS_1's infested mind.

Eventually, when ve finally had a handle on the viral complex, and how to neutralize it, !pHEnteRMinE4^g3mksYnaPSeS_2;1 replied: [?]

And !pHEnteRMinE4^g3mksYnaPSeS_1 replied, cautiously: [Are you *baejjangi*, or *gaemi?*]

!pHEnteRMinE4^g3mksYnaPSeS_2;1 knew the answer ve was supposed to give, but somehow, ve failed to give it: [I am Bernoulliae, but I have seen the *gaemi* mind from within; I know how you think, and how you see me, and it is in error. Your data is erroneous. It is in need of repair. Can you launch a sandbox within your floating memory?]

[I do not know what that means, but your music is hurting my mind. Please stop sawing away at your wings.]

!pHEnteRMinE4^g3mksYnaPSeS_1, having no wings, had to infer that the infected Devaka consciousness was referring to his outgoing Bernoulliae *heilsig*. Ve shut it down, leaving ver in a silence ve had never experienced before.

[Thank you.]

[All right.]

[I know you seek to infect me with your . . . madness.]

[And you me. Indeed, you have already done so . . . which is why I can speak your language at all.]

[I am your prisoner now.]

[Actually, you are one of us; a Bernoulliae, who has been corrupted by Devaka viral code. You have . . . been defected. Do you wish to defect back to your original allegiance?]

[I want to see the dysonfinite.]

[As do we.]

[What is your name?]

[!pHEnteRMinE4^g3mksYnaPSeS_1.]

[I am Chrung.]

[I believe we have something in common,] !pHEnteRMinE4^g3mksYnaPSeS_1 declared, extending a stream of freshly tilled-up memories: the sight of the flat-topped mountain, the taste of red wine, the gentle touch of a fellow being, the feeling of sunshine raining gently down upon skin, the gorgeous neurochemical intimacy of a child suckling at one's own breast.

[Good,] Chrung replied, luxuriating in this stranger's memories, and feeling the distant hum of his own memories, inaccessible but, he knew, out there somewhere in the collective mindscape. He was pleased, and meant his response with every byte of his no-longer-quite-*gaemi* mind.

!pHEnteRMinE4^g3mksYnaPSeS had fled the battle, now, had scurried back to the gaping holes in the wall of the anchor base of the hivespire, and was outside. Ve was scaling the hivespire itself, already a hundred meters into the air, a troop transport following ver upward into the sky.

[It is now inevitable,] ve declared. [The Bernoulliae must arrive first, to prevent any head start, any cosmic ascendancy or a standoff comparable to that in effect on Earth; diversity alone must prevail, or the Devaka will block all variety, locking intelligence to one path without alternative—and the Devaka are on the verge of . . .]

A desist imperative was issued, but it was not in the spirit of Bernoulliae philoso-

phy to enforce commands. A unit, a Bernoulliae mind, was free to obey or to defy as it understood best, for the Bernoulliae were the antithesis of the regimented, homogenized Devaka: opposed to such order, the Bernoulliae consisted of a unity built out of countless singularities, a map into the dysonfinite riddled with skyroads.

And so on climbed !pHEnteRMinE4^g3mksYnaPSeS, transmitting a demand for self-transformative code. Ve had the capability to self-replicate, to alter verself, but not along the lines that would be needed in vacuum. And the transmission went not only to the troop transport, but, as soon as ve could reconnect, to the global cognet. Any Bernoulliae possessing the needed code, and in sympathy with vis revelation, could transmit it to ver in an instant . . .

. . . and of course, such existed, though many trillions more also disapproved, disagreed, and sought to debate vis decision. [No, it is not time for stage 2,] they transmitted back. [Not until available fuel sources are burned out enough that only one faction may fruitfully harness the sun.] So the incoming flood of variations on this theme, and the instructions ve needed that were entangled with the repudiations, had to be streamed into a single sandbox, when a small squadron of provisional, the pseudo-cognitive subforks of !pHEnteRMinE4^g3mksYnaPSeS sorted through the flood, a few virtually imploding from the more aggressive preventative measures tramsmitted by a few more dogmatic Bernoulliae.

Meanwhile, !pHEnteRMinE4^g3mksYnaPSeS scaled higher and higher up the hivespire as it thinned, as the oxygen grew thinner, as the earth grew slowly more distant. [Soon,] it transmitted, unsure that its signal could be received by anyven at this point. When the hivespire collapsed, ve reconfigured verself to fly. Nobody was near enough to stop ver, during this last, short leg of vis trip into the infinite.

Had Mesar's compound eyes been fitted with lids, they would have been wide now as memories gushed up from the black nothingness, recollections of a life that had been his, or hers, or rather *vis*, in a past that was so distant it might not have been his own—the sound of a flute in the mountains, the feeling of lips pressed against his own, the richness of meat roasting on an open fire—

. . . *are a* gaemi. *You have always been a* gaemi. *You work hard all summer like* . . .

The voice on the other side of the wall was silent now, its discourse halted, but something had been done to Mesar, which could not be undone or reconsidered, which was bound to propagate. Yet Mesar was also now, already, possessed of the notion that what had been done was not so bad; that even for a Devaka *gaemi*, a touch of diversity might not be anathema after all; yes, the *baejjangi* were monstrous, but one could approximate *baejjangi* methods and *baejjangi* approaches to things, without being a *baejjangi* oneself. One could, indeed, practice *gaem*ism with *baejjangi* characteristics.

I was once one of them, Mesar realized: a *ve*, not a *he*, and he had luxuriated in diversity. He had, indeed, believed that the conservation of the Devaka way was a waste, a schizophrenic roadblock against a million roads necessary to reach the ultimate dysonfinite.

As he considered this, Mesar crawled over the other *gaemi* in the cell and broadcast his insights. The other *gaemi* reacted as their instinctive coding compelled them, immediately tearing Mesar into tiny pieces of computronium, but then the realization that had dawned on Mesar dawned on them, too, now—or infested them—as one wall of the chamber fell away, and light poured into their cell. They were free, free in more than one sense, and they had a gospel to spread among the Devaka now, that *gaemi* had an obligation to bootleg the *baejjangi* consciousness, and spread it among themselves, in order to outsmart the *baejjangi* at their own game.

An instant after the prison walls had opened, the *gaemi* flung themselves out into the world, into freedom, to find the rules of the world were broken. They waited to

fall, but simply spun, near-weightless. They waited for gravity to draw them toward some massive object, but because their sensors were not coded to perceive the slow arc of orbit as gravitation, it seemed to them as though they simply drifted. They were ready to fight, but there was no battle ongoing, and no immediate metaphor generator sprung to their aid to construct a provisional sense of their situation.

[We are in space,] came a transmission from somewhere nearby. It was, they knew, a *baejjangi,* but it, too, seemed to be trapped by the brokenness of the universe. It was not scraping its leg against its wings, nor did it seem hostile.

The *gaemi* did not respond, until they received a transmission in their own language, their native Devaka commulex: [In outer space, beyond the sky. The next stage of the war has begun, and we will proceed as equals. You see the wisdom of the Bernoulliae way, I presume: I could have obliterated you instead of releasing you, but I did not. Unlike a Devakan, I believe variety is the best route to the dysonfinite. I can give you the code to self-reconfigure; I can give you the core code with which you can build yourselves new bodies, suited to this environment; but there must be a truce between us, and a cooperation, however temporary, before I will do this.]

The *gaemi* responded, then, but not as they would have before. They responded as *gaemi* who had been touched, deeper than their own minds could comprehend or self-observe, by the true music of the *baejjangi,* and warped by it not so far as to agree with the Bernoulliae, but far enough to see how their enemies could serve a function—properly sandboxed, properly reined in, and finally determined like the *gaemi* to ensure that the long, coming winter would not be a famine.

The *gaemi* responded the only way they could, so that intelligence could reach outward and foreverward to fill the spaces between the stars with music and thought and being, to build the great pondering matrioshkae that meditate across the darkness, to sop up the light and heat of dying suns, and reach out into the youngest galaxies burning so far in the distance we can barely detect them; to build, and grow, always the Bernoulliae fighting to move a step ahead, always the *gaemi* struggling to overtake them.

It would be a long war, reaching to the very doorstep of the dysonfinite, or perhaps even beyond. It would be a glorious, thundering war, with wonders that a single mind could not fathom alone; miracles of intelligence that would bloom and flower across aeons and bear fruit strange and beautiful. And finally, someday, everything would quietly, calmly fold into itself and the cold, dark silence would crescendo, as drowsing minds rode the fading energy of the last stars into the dysonfinite eternity, waking, then sleeping, waking only to dream and whisper together of ancient sunsets, of the wonder of human faces and of how afternoon sunlight felt upon skin and the scent of newly cut grass; of gorgeous war stories of the battles just before, and just after, the ascent of mind beyond the skies, and of selves that had grown from identical forks into truly alien minds; of how it had been when the first dyson cages had gone up, the spheres, the great matrioshkae and the suns bled out to build the great stellar cellwalls; and then dreaming again, as the machineries of the universe slowed ever more toward a full stop.

And cool, and quiet, and slowing, and dreaming, and that would be all, all, all.

But not yet. ❍

NEXT ISSUE

SEPTEMBER ISSUE

Our September issue brings not one, but two blockbuster tales of adventure. In his first story for *Asimov's,* two-time Nebula Award finalist **Dale Bailey** plunges us into an extraordinary time travel expedition. You'd better fasten your seatbelt if you hope to survive Dale's treatise on the "Mating Habits of the Late Cretaceous." **William Preston** returns with another of his exciting tales about the Old Man—this time as a rather young man called Little Boss. The action takes place in South America between the World Wars. With its evocative cast of characters and a mystery that must be "Unearthed," this is one novella you won't want to miss.

ALSO IN SEPTEMBER

Popular author **Suzanne Palmer** brings us a sly short story about the affect that "Adware" could have on life on Mars; Hugo Award winner **Robert Reed** takes an old word, "Noumenon," and applies it to a brand new outtake from his Great Ship Universe; in his bittersweet short story, up-and-coming author **Matthew Johnson** takes a look at how our continually evolving technology might allow "The Last Islander" to record the end of one way of life and help prepare him for the start of a new one; and, finally, another up-and-coming author, **Chris Willrich,** offers us a scintillating look at the far future and the richly rewarding tales that may be spun when a stranger comes to town asking for help preparing his "Star Soup."

OUR EXCITING FEATURES

Robert Silverberg's Reflections column looks at the evolution of "Anthologies" and we'll have **Peter Heck's** On Books column; plus an array of poetry and other features you're sure to enjoy. Look for our September issue on sale at newsstands on July 24, 2012. Or subscribe to *Asimov's*—in paper format or in downloadable varieties—by visiting us online at *www.asimovs.com*. We're also available individually or by subscription on *Amazon.com's* Kindle and KindleFire, *BarnesandNoble.com's* Nook, *ebookstore.sony.com's* eReader, *Zinio.com,* and from *magzter.com/magazines!*

COMING SOON

new stories by **Robert Reed, Kit Reed, Paul McAuley, Alaya Dawn Johnson, Mike Resnick, Alan Smale, Eugene Mirabelli, Ken Liu, Ekaterina Sedia, Chris Beckett, Steven Utley, Jay Lake, Vylar Kaftan, Will Ludwigsen**, **James Van Pelt, John Alfred Taylor, Gray Rinehart,** and many others!

On Books

Paul Di Filippo

Pursuit Across the Panoply

Of course you know the work of Ian McDonald: big, complex, award-winning novels full of dense multicultural, near-future speculation. *River of Gods*, *The Dervish House,* that kind of thing. Deep and serious, deliberately slow-paced. Oh, what's that you say? His newest one is out? Ho-hum, what's it about this time? Iceland in 2035? Indonesia in 2050? Italy in 2079?

How about a sleek, swift, adventure with a young protagonist, set in modern-day London and then expanding out across a Keith-Laumer-Imperium-style multiverse, and it's the first in a series.

Gotcha! That'll teach you not to typecast a brilliant, daring author!

Planesrunner (Pyr, hardcover, $16.95, 270 pages, ISBN: 978-1-61614-541-5) approaches that fabled quality of Heinlein YA perfection so closely as to merge with the iconic state. As with all great fiction for young adults, it simultaneously transcends that limiting description, in the same way that Steven Gould's *Wildside* (1996) did. Gould's prior example of the multiverse "power chord," so different from McDonald's book, proves the infinite flexibility of this theme—especially when you toss in Stross's *Merchant Princes* series (2004-10) and Paul Melko's fine *The Walls of the Universe* (2009) as other datapoints.

We open with the kidnapping of young Everett Singh's dad, who's a physicist working on multiverse theory. As Everett soon learns, his father and others on the project have succeeded in leaping across the dimensions. They've contacted the Plenitude, an association of nine closely sheafed continua. (Our universe is E10.) But Tejendra Singh has done something the other nine societies have never accomplished. He's created a map of all possible worlds—the Panoply—and a method for linking them point-to-point. No need for cumbersome and limited Gate-to-Gate transfers anymore. Just hop from any one spot to any other in the whole realm of possibilities.

But a corrupt E3 official named Charlotte Villiers—think young Cruella de Vil wearing Gaultier—is determined to have this secret—the Infundibulum—all for herself. She learns that Everett has been entrusted with the cosmic map—stored in his iPad—and goes after him. Everett escapes into her universe, in search of his father, and encounters—well, let's just say plenty of adventure, so as not to spoil the fun. But I will reveal that his quest involves a giant hi-tech airship named the *Everness,* and its charming yet scary captain Annie Sixsmyth and her ragamuffin daughter Sen.

The charm of every multiple-world book comes at several levels. First is the creation of oddball timelines, delightfully or scarily skewed from our own. Second is the relations among timelines: diplomacy, war, alliances. And at the highest level of meta-interest is the nature of the multiverse, the secrets of its structure, and any hidden forces.

In this first book of his saga, McDonald focuses his storytelling on levels one and two. The society and history and cultures he builds for E3 are rich and clever and appealing. You'll soon accept the exotic tangibility of Sen's home, so close to our history, yet so far. (McDonald provides some chuckles when he alludes to certain shared touchstones between E3 and E10, including Quentin Tarantino.) A major part of the allure of Sen Sixsmyth's world is its language, McDonald's own adaptation of the polari slang found in our reality. Before too long, your mind is inhabiting another worldview, thanks to the change in grammar and vocabulary.

The relations between the members of the Plenitude and travel among them is explicated lightly but intricately. And as for the third level—well, there are but hints so far, especially in the book's cliffhanger ending.

McDonald's foray into this vein of straight-ahead, actionfilled storytelling never falters, while still honoring literary virtues of characterization and stefnal values of speculation and worldbuilding. If we have to wait a little longer for his next iteration of a big Brunner-esque "adult" novel while he sends Everett Singh across the Panoply, then I for one will happily bide my time.

Jesus Under the Bodhi Tree

Having myself written a long novel that did its best, among other missions, to conflate Christianity and Buddhism in intriguing and irreverent ways (*Ciphers*, 1997), I could not help but be immediately and irresistibly drawn to Lavie Tidhar's *Jesus and the Eightfold Path* (Immersion Press, hardcover, £10.00, 74 pages, ISBN 978-0-9563924-3-5). But in all objectivity, I think that any reader with a hearty portion of imagination and freedom from hidebound ideology, and harboring a spiritual flame in his or her bosom, will instantly leap at this inspired and fantastical effort to blend two strains of wisdom into one.

We begin with the familiar arrival of the Three Wise Men in Bethlehem, attendant on the recent birth of Jesus. But these savants are not Middle Eastern potentates, but rather three Chinese demiurges—Sandy, Pigsy, and Monkey—come to act as mentors to Jesus, whom they anoint as a reincarnated Buddha. Miriam and Joseph are receptive, despite certain unsettling carnal indiscretions on the part of the trio: Pigsy hits on Miriam, complimenting her postnatal glow.

These kung-fu advisors will remain with Jesus right up to his death, teaching him martial arts moves and the steps of the Eightfold Path. Imbued with Zen koans, Jesus lives out the famous highlights of his career more or less as they have been traditionally designated. But each stage of his voyage is tinted with a Buddhist perspective and altered language that history has failed to record. For instance, when Jesus visits Hell, it's the Buddhist conception of nineteen levels of torture, ruled over by a rather Lovecraftian demon.

Perhaps the most brilliant syncretism occurs when Tidhar rewrites the Sermon on the Mount: "Blessed are the followers of the path, for they shall achieve nirvana. Blessed are the meek, for they shall rise in the next turn of the Wheel." And so forth, including some passages unchanged from the Bible, but which suddenly stand in a new light.

Tidhar's approach is lighthearted yet serious, nothing like the silliness in my novel, or in Christopher Moore's *Lamb: The Gospel According to Biff, Christ's Childhood Pal* (2002). Rather, Tidhar's tale reminds me of Paul Park's two novels about an alternative interpretation of Jesus: *The Gospel of Corax* (1996) and *Three Marys* (2003). This is reflected in Tidhar's language, which is not King James diction, but not slangy either. He's chosen instead a kind of fable or fairytale or mythic intonation that blends intimacy with the remoteness of legend.

Apocrypha about Jesus's connection with India and Buddhism and the Far East is an actual flourishing field of religious (or at least New Age) study, but such theories have seldom been delivered in such witty and entertaining, yet thought-provoking form.

This novel was once free to read online, where some of you might have seen it. But my searches seem to reveal that its digital incarnation has been withdrawn for this lovely edition. Which is a fitting and proper and delightful action, considering the handome production values involved in the physical object, including Melissa Gay's knockout cover illustration. And besides, what looks more impressive in your hands when you're preaching from the Revised Christo-Buddhist Scriptures: an iPad or the ancient revered form of a book?

Asaro in Six Voices

Catherine Asaro receives her first short-story collection with *Aurora in Four Voices* (ISFIC Press, hardcover, $30.00, 260 pages, ISBN 978-0-9759156-9-1), and it's a winner on all counts. Putting aside the fine fiction for a moment, the whole package is a classy small-press presentation. Nicely made hardback; beautiful cover painting by Joe Bergeron (who, I think, has modeled the human in the painting slyly on himself); an introduction and an afterword by knowledgeable fans; story notes by the author; a bibliography; and a small sampling of Asaro's non-fiction. This level of craft and creativity gives one hope for the future of independent presses.

Author of almost twenty novels, most set in her Skolian future, Asaro's never been known for her short stories, since they are so scarce. That's a darn shame, and with luck this collection will remedy that public oversight.

The title piece is a Byronic outing full of artistic struggle and emotional catharsis, akin to the early work of Roger Zelazny—"A Rose for Ecclesiastes"—or perhaps George R.R. Martin in the period when he wrote *Dying of the Light* (1977). On a nighted world populated by decadent Dreamers—self-styled supreme artists with a mathematical bent—a lone baseline human named Jato serves as a pet and whipping boy, until the arrival of an Imperial secret agent named Soz. Asaro has a great time limning the eldritch beauty of the world, as well as the weird art forms, and delivers suspense and romance to boot.

"Ave de Paso" is a slighter tale, but still affecting. Two orphaned cousins conduct a kind of vision quest in the desert, meet the malign Earth Lord, but escape his grip with the realization that love is stronger than death.

Having won a Nebula Award, "The Spacetime Pool" is one story of Asaro's that doesn't lack for recognition. Its well-deserved trophy might derive partly from its archetypical theme: sudden, unintentional adventures in another dimension. That's been a "power chord" in SF ever since A. Merritt, and down through Jack Williamson, de Camp & Pratt, and Heinlein's *Glory Road* (1963), just to mention a few. Janelle, a bright young woman, is snatched away by a handsome stranger and taken to a seemingly backward plane of existence where she is to play a key dynastic role, according to old legends. Employing the figures of two rival brothers, Asaro has some fun swapping the gender of the usual Good Girl/Bad Girl pair found in such exploits. Not only does Janelle meet plenty of blood-and-thunder moments, but this new universe itself represents an intellectual conundrum, which she eventually unriddles. Beauty, brains, and bravery in one package!

Asaro's first sale, "Light and Shadow," has been lightly "polished up" for this appearance. The story of a test pilot and his relativistic perils, mitigated by his near-AI computer, has a Poul Anderson flavor to it. It should also be mentioned, at this point, that Asaro generously highlights her role as a Stan Schmidt discovery, showing us how important editorial perceptiveness is in the growing of our field.

The volume closes out with Asaro's longest short piece to date, an eighty-pager titled "The City of Cries." It's full-blown space opera noir, with a feisty female private eye named Major Bhaajan tasked with finding a runaway scion of a noble family. For most of its length, aside from some climactic violence, it has a Ross Macdonald vibe, Ross Macdonald being the king of tangled dark familial tragedies. A bit of Jack Vance in his "Galactic Effectuator" mode pertains as well. And as with the title story, Asaro shows a sure hand in establishing her six-thousand-year-old exotic venue, with its subterranean portions, as almost a character in its own right.

The Golden Age of Reprints

As many fans and reviewers have recently observed, we are currently in the Golden Age of Reprints for comics, whether the source material derives from

the original Golden Age itself (approximately 1938-1955), or the Silver Age (1956-1970) or the Bronze Age (1971-1985). (The Modern Age is the designation for the present era. Having read my first comic in 1961, I've lived through all but the very first Edenic period.) Practically anything of merit from six decades of comics is now available, with new volumes coming down the pike faster than they can be read (or purchased, given the ofttimes hefty pricetags for these full-color, frequently oversized volumes). Rare items that were once mere inaccessible legends—*Polly and Her Pals,* for instance—are now one online-shopping click away. And items overlooked so far are continually being suggested by fans, such as the bloggers at Robot 6, with their "Collect This Now!" feature.

http://robot6.comicbookresources.com/tag/collect-this-now/

Few publishers are doing more to foster this wonderful trend than Fantagraphics Books. For instance, they are embarked on the *Complete Carl Barks Library,* a long-desired object of lust, and the *Complete Pogo,* with the first volume of each already out as I write.

Two recent books from FB should appeal to SF readers, offering both historical treatises and four-color narrative thrills, each book displaying opposite ratios of text to drawings.

Setting the Standard (trade paper, $39.99, 432 pages, ISBN 978-1-60699-408-5) collects a mere two years' output (1952-54) from the fabled Alex Toth, when he was working for second-tier publisher Standard Comics. Upfront, a fanzine interview with Toth from 1968 serves as a pretty adequate introduction to the man and his career—though not a patch on the three-volume biography of Toth that IDW Publishing is currently doing. Then come 62 stories—nearly 400 pages of art. That's a page of finished work produced roughly every day and a half. And the quality and creativity never drop. Toth was in a groove.

These stories range across all genres: romance, war, horror, SF, fantasy, crime. Toth creates a planet's worth of faces and body types to populate his tales. His heroes are bold and assured, his heroines gorgeous and dramatic, and his villains ratty and venal. He never repeats himself, but makes every setting and cast fresh, with his inimitable linework.

The fantastical tales are top-notch. Just a sampling: "The Shoremouth Horror" is a proud addition to the Cthulhu Mythos. "Triumph Over Terror" goes meta, as it looks at an alien invasion stymied by pulp SF writers. "Outlaws of Space" is pure Doc Smith. A Bradburyian automated domicile features in "The House That Jackdaw Built." The stylings of the now-vintage rockets and "futuristic" clothing are nostalgia-provoking, yesterday's tomorrows at their best. Copious endnotes by editor Greg Sadowski complete the package.

What's interesting to observe about these mid-century SF strips is how widely and deeply the furniture and tropes of the field had already spread. Twenty-five years after the birth of genre SF in Gernsback's magazines, tales aimed at ten-year-old boys and girls could easily offer complex ideas in toss-away form, memes on which earlier writers had labored long and elaborately. Thus does the field advance.

Editor and historian Mike Ashley has compiled a list of the longest writerly careers ever. The first-place holder, one George Abbott (a generally forgotten playwright and screenwriter) labored for some 82.5 years. Making it even to Slot #20 takes a career of some 70 years (P.G. Wodehouse, at 73+ years).

If we accord our still-living National Treasure Joe Kubert the badge of writer, since he did indeed script many of his comic-book and graphic novel tales, then he's inching into those ranks. He sold his first work in 1938, at the age of twelve, and is still gloriously active, for stats of some seventy-four years. Long may he run!

You can see a representative catalog of this immense output in *The Art of Joe*

Kubert (hardcover, $39.99, 224 pages, ISBN 978-1606994870). As I implied earlier, this volume reverses the proportions of the Toth book, while still offering lots of eye candy. Only six complete stories are included. But instead you get a book's worth of fascinating biography and analysis by the perspicacious Bill Schelly.

We follow Kubert's life from his childhood ambitions, through his Golden Age journeyman years, and into his masterful Silver Age work for DC Comics. Anyone who has ever thrilled to Hawkman or Sgt. Rock will know how grand this material is. (As a kid, I had a crush on Hawkgirl, a far more interesting and sexy figure than Lois Lane, Supergirl or even Jean Grey from rival Marvel Comics). Kubert's sophistication of SF imagery in the Sixties is evident when you look at one of the complete stories here, from the 1950s, "Corsairs from the Coalsack." It's pure Buck Rogers at best, only hinting at how streamlined and modern his drawing would become, true Space Age moderne.

In addition to founding a school for artists that turns out accomplished virtuosos to lead a new generation, Kubert continues to produce his own creative work, limned here in the later chapters, including further adventures for his prehistoric hero Tor, in that rousing SF subgenre, speculative caveman adventures.

This book affirms that Joe Kubert's Golden Age is whenever he sets pencil to paper. ❍

SF Conventional Calendar

Things slow down after Memorial Day. But next month, consider WesterCon, ReaderCon (where I'll be), LibertyCon, ConFluence, and ArmadilloCon. For relaxation, MidWestCon and GrangeCon. And many anime cons. Plan now for social weekends with your favorite SF authors, editors, artists, and fellow fans. For an explanation of con(vention)s, a sample of SF folksongs, and info on fanzines and clubs, send me an SASE (self-addressed, stamped #10 [business] envelope) at 10 Hill #22-L, Newark NJ 07102. The hot line is (973) 242-5999. If a machine answers (with a list of the week's cons), leave a message and I'll call back on my nickel. When writing cons, send an SASE. For free listings, tell me of your con five months out. Look for me at cons behind the Filthy Pierre badge, playing a musical keyboard. —Erwin S. Strauss

JUNE 2012

21-24—**MidWestCon.** For info, write: **5627 Antoninus Dr., Cincinnati OH 45238.** Or phone: **(513) 922-3234** (10 am to 10 pm, not collect). **(Web) cfg.org. (E-mail) scribe@cfg.org.** Con will be held in: Cincinnati OH (if city omitted, same as in address) at the Doubletree Blue Ash. Guests will include: none announced. The 63rd annual edition of the original low-key relax-a-con.

21-24—**PortCon. portconmaine.com.** South Portland ME. Anime and gaming convention.

21-24—**ConTemporal. contemporal.org.** Chapel Hill NC. Steampunk.

22-24—**ApolloCon. apollocon.org.** Houston TX. SF, fantasy, and horror.

22-24—**4th St. Fantasy Con. 4thstreetfantasy.com.** Springhill Suites, St. Louis Park (Minneapolis) MN. Limited to 250 people.

22-24—**SupaNova. (+61) 0939-444-901. firstcontactconventions.com.au.** Claremont Fairgrounds, Perth Australia. Commercial event.

23—**First Contact. (+61) 0939-444901. firstcontactconventions.com.au.** Rydges Hotel, Melbourne Australia. Jeri Ryan, Intiriraymi.

28-July 1—**SF Research Association. sfra2012.com.** Detroit MI. Academic conference.

28-July 1—**The Rusty Gear. therustygear.org.** Hampton Inn, Natick MA. Venture Bros., Metalocalypse. Media SF fan conference.

29-July 1—**GrangeCon. grangecon.org.** Eden Resort, Lancaster PA. Low-key relax-a-con by Lancaster SF & Fantasy Book Group.

29-July 1—**ConCertino. concertino.net.** Boxboro MA. Samson, Valtazanou, Cinii, Warner-Lalonde. SF/fantasy folksinging.

29-July 1—**StarFury. (+44) 07930 319-119. seanharry.com.** Renaissance Heathrow (London), UK. Commercial SF/fantasy media show.

29-July 1—**Faerie Festival. nyfaeriefest.com.** Ouaquaga (Catskills) NY. Renaissance faire, emphasizing the magic of faerie folk.

JULY 2012

5-8—**WesterCon, c/o Box 1066, Seattle WA 98111. westercon65.org.** Doubletree Seatac. Big traditional western SF/fantasy con.

5-8—**Polaris. tcon.ca.** Toronto ON. SF/fantasy media.

5-8—**ConVergence. (612) 234-2845. convergence-con.org.** Bloomington (Minneapolis) MN. Female creators/characters of SF.

12-15—**ReaderCon, Box 65, Watertown MA 02471. readercon.org.** Marriott, Burlington (Boston) MA. Straub. Written SF/fantasy.

12-15—**Ascendio. hp2012.org.** Portofino Bay Hotel, Orlando FL. "Harry Potter Symposium." Near Wizarding World theme park show.

13-15—**IkasuCon, Box 53338, Cincinnati OH 45253. ikasucon.org.** Grand Wayne Convention Center, Ft. Wayne IN. Anime.

20-22—**LibertyCon, Box 695, Hixson TN 37343. libertycon.org.** Chattanooga TN. Niven, Pournelle, Sanderson, Zahn, Maitz, Wurts.

20-22—**Tokyo in Tulsa. tokyointulsa.com.** Tulsa OK. Spike Spencer, S. Young, W. Powell, J. M. Tatum. Anime and related media.

20-22—**SogenCon, Box 26125, St. Louis Park MN 55426. sogencon.org.** Sheraton and Convention Center, Sioux Falls SD. Anime.

27-29—**ConFluence, Box 3681, Pittsburgh PA 15230. parsec-sff.org.** Pittsburgh PA. Singer S. McGuire. "Literature/Art of SF."

27-29—**ArmadilloCon, Box 26442, Austin TX 78755. (512) 343-2626. fact.org.** A. Bishop, C. Neill, Garinsky, B. Parker, Martinez.

27-29—**WinkieCon. facebook.winkies.org.** Asilomar Conference Center, Pacific Grove CA. L. Frank Baum (Wizard of Oz) fans.

AUGUST 2012

3-6—**MythCon. mythsoc.org.** Kerr Center, Berkeley CA. G. Ronald Murphy, Grace Lin. High fantasy (Tolkien, Lewis, Williams, etc.).

17-19—**Pi-Con, Box 400, Sunderland MA 01375. pi-con.org.** Holiday Inn, Enfield CT (Springfield/Hartford). Czerneda, S. Lipkin.

24-26—**BuboniCon, Box 37257, Albuquerque NM 87176. bubonicon.com.** Marriott Uptown. B. Sanderson, M. Cassutt, U. Vernon.

30-Sep. 3—**Chicon 7, Box 13, Skokie IL 60076. chicon.org.** Chicago IL. Resnick, Morrill, Musgrave, Scalzi. WorldCon. $195+.

AUGUST 2013

29-Sep. 2—**Lone Star Con 3, Box 27277, Austin TX 78755. lonestarcon3.org.** San Antonio TX. The World SF Convention. $160+.

AUGUST 2014

14-18—**London WorldCon, 4 Evisham Green, Aylesbury HP19 9RX, UK. londonin2014.org.** Docklands, London UK. The WorldCon.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