

Double Issue

Asimov's

SCIENCE FICTION®

**The Stars
Do Not Lie**

Jay Lake

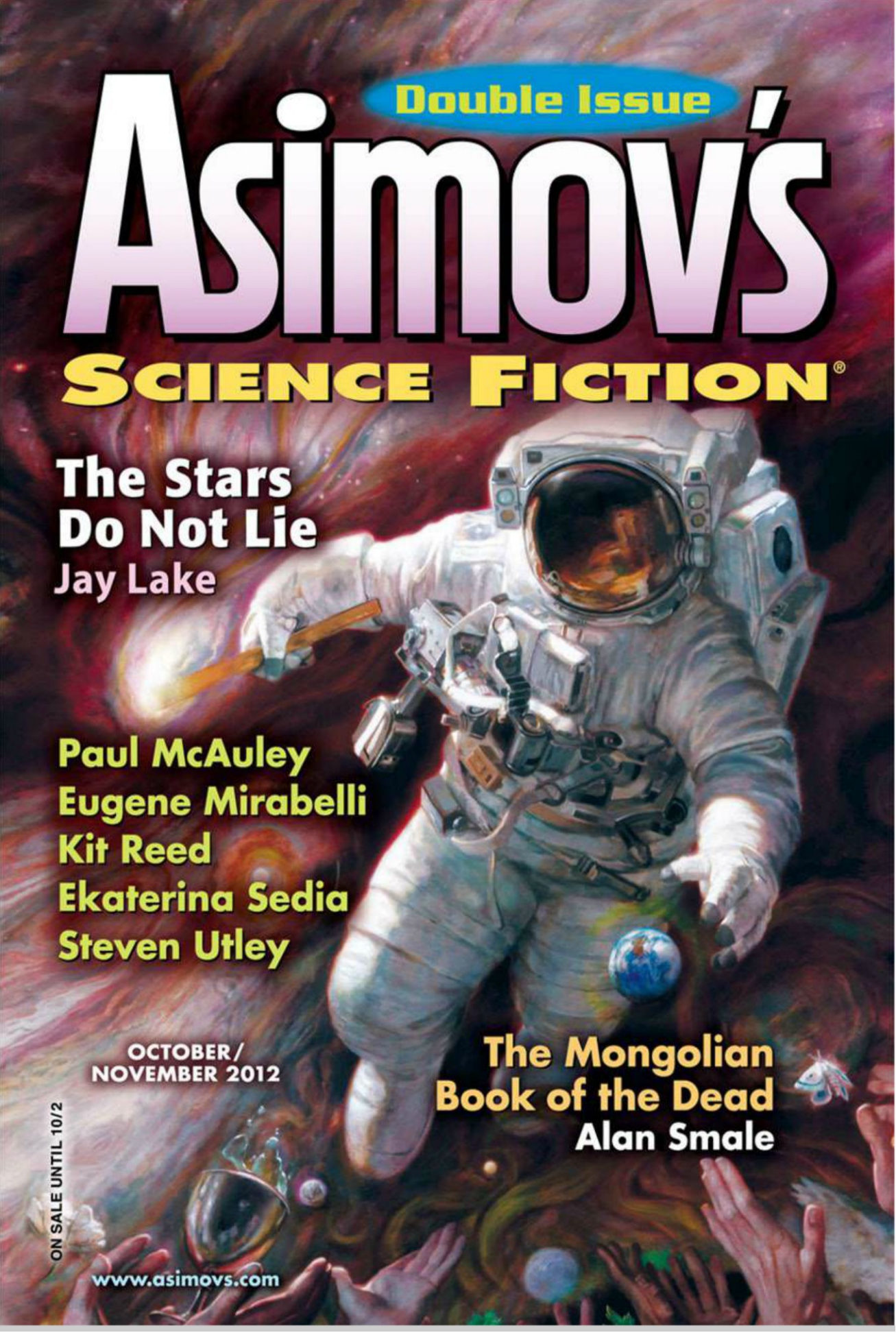
**Paul McAuley
Eugene Mirabelli
Kit Reed
Ekaterina Sedia
Steven Utley**

OCTOBER/
NOVEMBER 2012

**The Mongolian
Book of the Dead**
Alan Smale

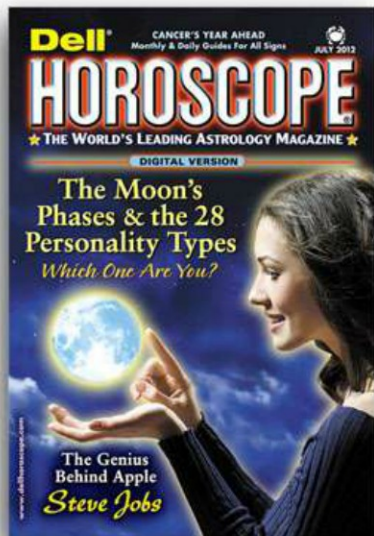
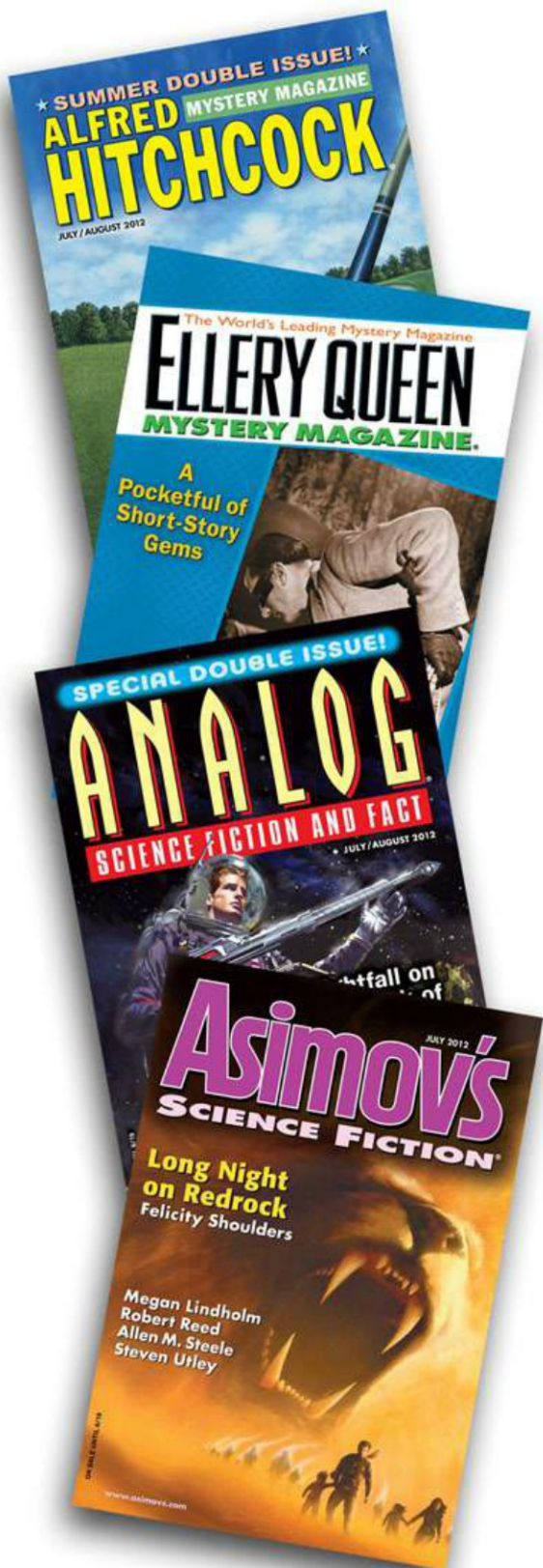
ON SALE UNTIL 10/2

www.asimovs.com



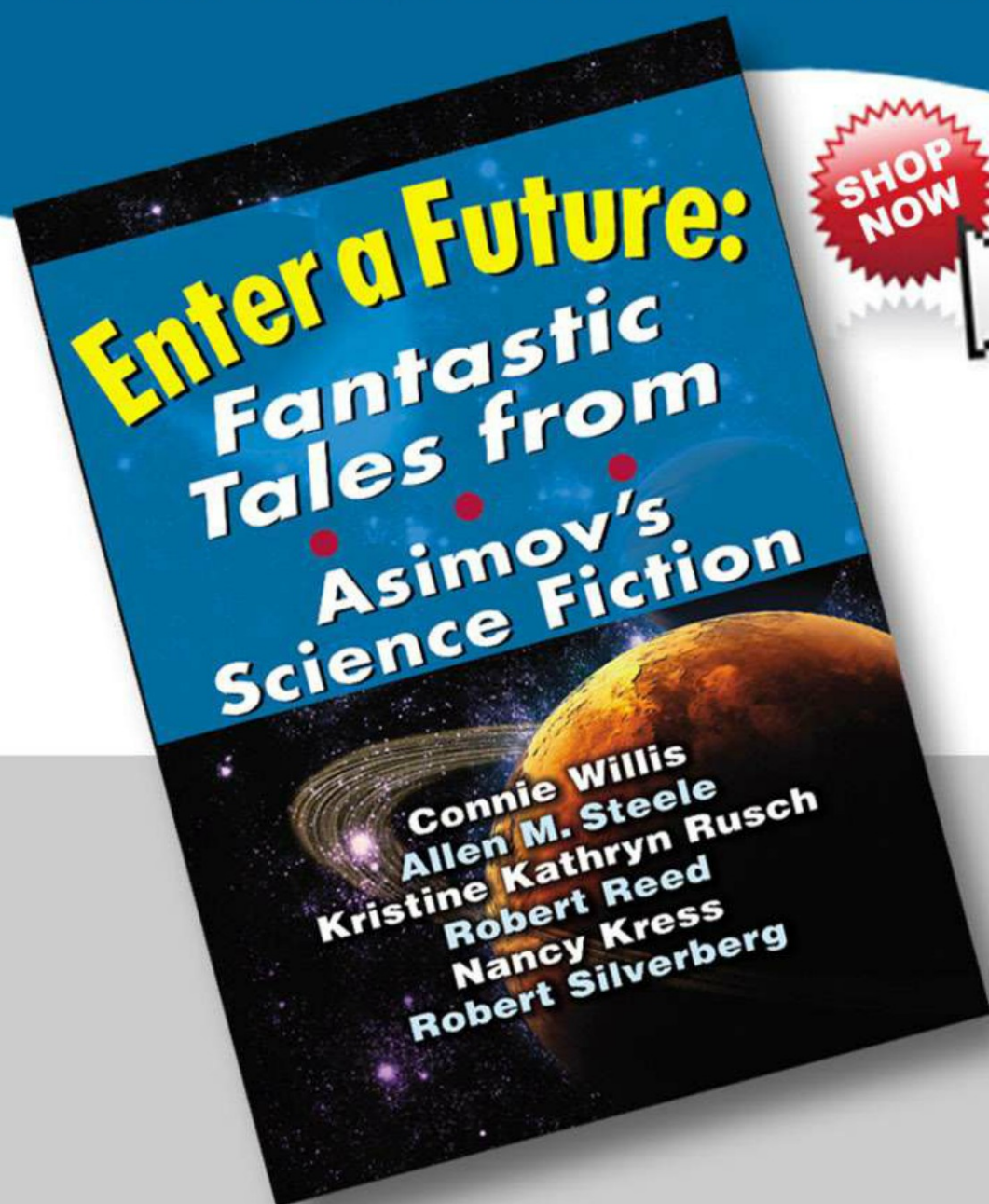
Advertise in our digital magazines on iPad!

Penny Publications, LLC, the parent company of Dell Magazines, offers digital advertisers a desirable, highly-responsive audience. We publish 5 nationally recognized, award-winning digital magazines.



For more information on advertising with us, contact:
Advertising Sales Manager via email at printadvertising@dellmagazines.com,
or call 203.866.6688 x442.

GET YOURS TODAY!



Available Now!

Asimov's is famous for captivating stories and richly rewarding tales by some of today's *best-known SF writers*. Whether they're a jazz musician on a starship, the spirit of H.L. Mencken tangling with a twenty-first century medium, or the new personality of a wayward teenager trying to stake a claim on a body that is and sort of isn't hers, they must all find their way in uncharted territory. Join them on their journey. Turn the electronic page and enter a future!

Asimov's

SCIENCE FICTION

NOVELLAS

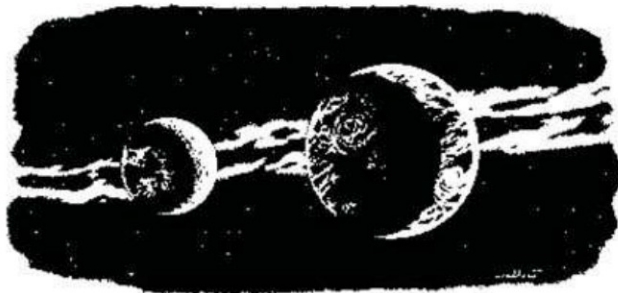
- 14** THE MONGOLIAN BOOK
OF THE DEAD ALAN SMALE
- 147** THE STARS DO NOT LIE JAY LAKE

NOVELETTES

- 66** THE SECOND ENGINEER GRAY RINEHART
- 124** THE GHOST FACTORY WILL LUDWIGSEN

SHORT STORIES

- 48** ANTARCTICA STARTS HERE PAUL MCAULEY
- 57** RESULTS GUARANTEED KIT REED
- 87** LION DANCE VYLAR KAFTAN
- 96** THIS HOLOGRAM WORLD EUGENE MIRABELLI
- 106** A HANDSOME FELLOW EKATERINA SEDIA
- 116** CHROMATOPHORES JOHN ALFRED TAYLOR
- 139** SHATTERING STEVEN UTLEY



POETRY

- 65 THREE SUMERIAN MUMMIES PETER SIMONS
- 95 GHOSTS GEOFFREY A. LANDIS
- 105 THE SEASON KEN POYNER
- 146 VARIATIONS ON TWINKLE TWINKLE
LITTLE STAR
(OR SOMETHING LIKE THAT) LOLA HASKINS

DEPARTMENTS

- 4 EDITORIAL: SCIENCE FICTION THAT
SCARS CHILDREN SHEILA WILLIAMS
- 6 REFLECTIONS: DECLINE AND FALL . . . ROBERT SILVERBERG
- 10 ON THE NET: UNREAL LIFE JAMES PATRICK KELLY
- 138 NEXT ISSUE
- 185 ON BOOKS: MEETING THE OTHER NORMAN SPINRAD
- 194 THE SF CONVENTIONAL CALENDAR . . . ERWIN S. STRAUSS



Asimov's Science Fiction. ISSN 1065-2698. Vol. 36, Nos. 10 & 11. Whole Nos. 441 & 442, October/November 2012. Published monthly except for two combined double issues in April/May and October/November by Dell Magazines, a division of Crosstown Publications. One year subscription \$55.90 in the United States and U.S. possessions. In all other countries \$65.90 (GST included in Canada), payable in advance in U.S. funds. Address for subscription and all other correspondence about them, 6 Prowitt Street, Norwalk, CT 06855. Allow 6 to 8 weeks for change of address. Address for all editorial matters: *Asimov's Science Fiction*, 267 Broadway, 4th Floor, New York, N.Y. 10007. *Asimov's Science Fiction* is the registered trademark of Dell Magazines, a division of Crosstown Publications. © 2012 by Dell Magazines, a division of Crosstown Publications, 6 Prowitt Street, Norwalk, CT 06855. All rights reserved, printed in the U.S.A. Protection secured under the Universal and Pan American Copyright Conventions. Reproduction or use of editorial or pictorial content in any manner without express permission is prohibited. Please visit our website, www.asimovs.com, for information regarding electronic submissions. All manual submissions must include a self-addressed, stamped envelope; the publisher assumes no responsibility for unsolicited manuscripts. Periodical postage paid at Norwalk, CT and additional mailing offices. POSTMASTER, send change of address to *Asimov's Science Fiction*, 6 Prowitt Street, Norwalk, CT 06855. In Canada return to Quad/Graphics Joncas, 4380 Garand, Saint-Laurent, Quebec H4R 2A3.

Printed by Quad/Graphics, Taunton, MA USA (8/6/12)



SCIENCE FICTION THAT SCARS CHILDREN

I did not suffer from over-protective parents. One cold November weekend during my childhood, they took me to see *Konga*, a low-budget horror movie set in London about a mad scientist and a giant rampaging ape. My tiny New England town was hosting a horror film series: for 25 cents, this King Kong rip-off could be seen in the auditorium of my elementary school—the only venue large enough to hold events of any significant size. I was completely traumatized by the movie and demanded a nightlight at bedtime. My parents obliged, and I'm certain they would have kept that nightlight burning for the next two weeks if necessary. Unfortunately, a couple of evenings later we were among the thirty million people plunged into darkness by the Great Northeast Blackout of 1965. I still think of that as the longest and perhaps the most terrifying night of my life.

I'm not sure if that's why I've always been a wimp when it comes to horror, whether it's presented in movies or literature. There's a good chance I was destined for my squeamishness. I had always stayed out of the TV room when my family watched horror flicks. I was so frightened by the dinosaurs that I couldn't sit through my dad's readings of the Edgar Rice Burroughs's Pellucidar series. I left the room so often during his rendition of John W. Campbell's "Who Goes There?" that I only remember snatches of Campbell's story about a protean alien thing wreaking havoc on an intrepid band of Antarctic explorers.

One terrifying tale that I did manage to sit through was Arthur C. Clarke's "A Walk in the Dark." That story, which leaves so much to the reader's imagination, probably scarred me for life. I can still hear the rattle of those monstrous claws whenever I'm out walking alone at

night. Convinced that Clarke was a horror writer, it was ten years before I found the courage to read any of his other stories and novels.

My grandfather managed to add to my fears by retelling Richard Matheson's *The Incredible Shrinking Man*. After that, I was sure that if I went into the basement alone I was bound to encounter a black widow spider. A daunting thought even if I wasn't shrinking.

Ray Bradbury's "The Veldt"—a story about scary children and their beleaguered parents—was a classic horror tale from the Golden Age of Science Fiction that I discovered on my own. I remember reading the tale as a young girl, and then rereading it to be sure I'd gotten the ending right. I had not previously encountered such horrible children and wasn't quite certain that kids could behave so badly. It took me a couple of reads to be certain that yes, the story had played out exactly as I'd originally thought it had.

Although I managed to avoid most horror movies, I was still drawn to some terrifying works of literature like a moth to a flame. As a young woman, I must have read George R.R. Martin's Hugo and Nebula-award-winning novelette "Sandkings" five or six times. Not because I didn't get it—I did. But each subsequent reading gave me the mesmerizing frisson of fear that I'd felt the first time through the tale.

In *Danse Macabre*, Stephen King says, "I recognize terror as the finest emotion . . . and so I will try to terrorize the reader. But if I find that I cannot terrify him/her, I will try to horrify; and if I find I cannot horrify, I'll go for the gross-out. I'm not proud." I really don't like the slice and dice approach to fiction, but there are stories that render pain so exquisitely I sometimes find that I just can't turn away. Paolo Bacigalupi's tale about the depraved fu-

ture that fosters “The Fluted Girl” is one of those brutal stories that have left indelible marks on me. I let my own daughter read the tale when she was twelve, and while she now loves all of Paolo’s work, she says she’s never quite recovered from the experience.

The range of emotions discussed by King and pervasive in the stories that disrupted my childhood can be found in some of the tales published in *Asimov’s* over the years. The magazine has never been much of a home for horror, but dark stories do slip into our pages from time to time. Mike Resnick, Lucius Shepard, Suzy McKee Charnas, and Kit Reed have given us monsters. S.P. Somtow has twisted the scalpel far more skillfully than any manic with a chainsaw. S.N. Dyer, Connie Willis, Esther M. Friesner, and Cherry Wilder have all found ways to disturb my dreams with haunting tales of stolen lives and restless spirits. We’ve had enough supernatural stories to fill anthologies about vampires, werewolves, and ghosts.

I still read horror sparingly and I usually pass on tales of the occult submitted here. *Asimov’s* is primarily a science fiction magazine, after all. My favorite tales of terror are psychological SF stories like Chris Beckett’s “Day 29,” where both the reader and the main character aren’t exactly sure about what he’s done and what he will do next, but we have a pretty bad idea. Yet there has always been a little leeway for fantasy and the outré in *Asimov’s*. Our annual slightly spooky October/November issue leaves the door cracked open just enough for ghosts and other supernatural creatures to creep in.

Another parent might have been more protective of their children’s reading and viewing encounters. Someone else might wonder at my dad’s choices for bedtime reading, but children are resilient. I may not have developed the taste for horror that my father had, but my wounds gave me some appreciation for the thrill of being frightened. Just don’t expect me to be the one who investigates the noise in the basement. ○

Copyright © 2012 Sheila Williams

Asimov’s®

SCIENCE FICTION

SHEILA WILLIAMS
Editor

TREVOR QUACHRI
Managing Editor

MARY GRANT
Editorial Assistant

EMILY HOCKADAY
Editorial Administrative Assistant

JAYNE KEISER
Typesetting Director

SUZANNE LEMKE
Assistant Typesetting Manager

KEVIN DORIS
Senior Typesetter

VICTORIA GREEN
Senior Art Director

CINDY TIBERI
Production Artist

LAURA TULLEY
Senior Production Manager

JENNIFER CONE
Production Associate

ABIGAIL BROWNING
Manager Subsidiary Rights and Marketing

TERRIE POLY
Digital Publishing Manager

SANDY MARLOWE
Circulation Services

ADVERTISING SALES DEPARTMENT

Tel: (203) 866-6688 ext.442 Fax: (203) 854-5962
printadvertising@dellmagazines.com
(Display and Classified Advertising)

Subscriber Services: 203-866-6688 Option #2

PETER KANTER
Publisher

BRUCE W. SHERBOW
Senior Vice President, Sales and Marketing

CHRISTINE BEGLEY
Vice President, Editorial and Product Development

SUSAN MANGAN
Vice President, Design and Production

ISAAC ASIMOV
Editorial Director (1977-1992)

Stories from *Asimov’s* have won 53 Hugos and 27 Nebula Awards, and our editors have received 19 Hugo Awards for Best Editor.

Please do not send us your manuscript until you’ve gotten a copy of our guidelines. Look for them online at www.asimovs.com or send us a self-addressed, stamped business-size (#10) envelope, and a note requesting this information. Write “manuscript guidelines” in the bottom left-hand corner of the outside envelope. We prefer electronic submissions, but the address for manual submissions and for all editorial correspondence is *Asimov’s Science Fiction*, 267 Broadway, Fourth Floor, New York, NY 10007-2352. While we’re always looking for new writers, please, in the interest of time-saving, find out what we’re looking for, and how to prepare it, before submitting your story.

DECLINE AND FALL

It's no secret that Isaac Asimov's classic Foundation series was a recasting of Roman history in science fictional form. The Roman Empire, by the time of Constantine the Great in the early fourth century, reached from Britain to the borders of Persia, and had become too unwieldy to govern from a single capital city in Italy. Recognizing this, Constantine founded a second capital for the Empire in Asia Minor—Constantinople, now known as Istanbul. Drawing heavily on Edward Gibbon's great eighteenth-century work *The Decline and Fall of the Roman Empire*, Isaac invented a galactic equivalent for Constantine's creation of a second capital, and built his books around the quest, in some far-off galactic future, for that distant Second Foundation.

He was not, of course, the only SF writer to mine Roman history for story ideas. A.E. van Vogt's Linn series (*Empire of the Atom* and *The Wizard of Linn*), which attracted some attention when it appeared in the 1940s and 1950s, was a retelling of the early years of the Empire, the time of Augustus and Tiberius, set in a future age that followed a devastating galactic war. The basic sources for this material were the first-century Roman historians Suetonius and Tacitus, though van Vogt seems to have drawn much of his material from Robert Graves' historical novel *I, Claudius* rather than going, as Graves had done, to the original sources.

Those are just two of many SF works derived from Roman history. (I've done one myself, *Roma Eterna*, sections of which were published in Asimov's some time back.) But lately I've been reading the book of a great and undeservedly neglected Roman historian whose account of the Empire as it was entering its final phase, late in the fourth century A.D. could well serve as the basis of a really frightening science fiction series, for it is a nightmarish portrait of a terrifying po-

lice state of Stalinist intensity, full of chilling details that give us marvelous insight into the great realm as it tottered toward its collapse.

The author was Ammianus Marcellinus, a Greek who was born in Syria about 325 A.D. and lived, so far as we know, until the final years of the fourth century. Like so many of the finest ancient historians—Thucydides, Xenophon, Tacitus—Ammianus Marcellinus was a military man, an officer who saw extensive action in Rome's wars against the Persians and against the Franks in Gaul. After his years in service he traveled widely through the eastern provinces of the Empire, and eventually settled in Rome, where in old age he wrote *Rerum Gestarum Libri*, "The Book of Deeds," the book that has established him among the great historians of the ancient world. Indeed, he ranks as the last in that glorious series, since the Roman Empire as he understood it would outlive him by little more than half a century.

He didn't know the Empire was collapsing, of course. (I wonder whether Soviet historians of the 1970s and 1980s had any inkling that their empire was on the way out, either.) He simply thought it was going through a rough patch, with its greatest years probably behind it, but nevertheless he believed that it would emerge from its current time of troubles intact, and all would be well, even as it had been in the time of Augustus and Trajan and Hadrian. (Ammianus insists that the problems of the Empire were the result of the personal moral deficiencies of cruel and incompetent Emperors and not—as proved to be the case—the consequences of fundamental structural flaws that would bring the whole system down a generation or two after his death.) We, with the benefit of hindsight, can see how wrong he was. The Persians were gobbling up great swathes of Roman territo-

ry in the east, the Huns were battering at the Empire's northern frontiers, the Visigoths were on the march along the Danube, and in the west the Franks, the Gauls, and the Saxons were ravaging the Roman settlements in Britain and what now is France. The western half of the Empire would suffer defeat after defeat—in 410 the city of Rome itself was captured by the Visigoths. By 476 the last emperor had gone into exile and a German king ruled what had been the Western Empire.

Ammianus Marcellinus did not live to see the Empire's fall. But the evidence for what was about to happen is everywhere in his book. It is a stark and ominous document.

Although Greek was his native language, he wrote *The Book of Deeds* in Latin, and obviously he was proud of his mastery of that language, for he writes in a difficult, elaborate style, exuberant and sometimes overly complex, that has been a challenge to his translators. (The translation I have, a capable and readable one, dates from 1862. Penguin Books has a more modern version available, though it is abridged by about one fifth.) His intention was to begin his history in the year 96, which is where the *Histories* of Tacitus end, and continue it up to 378, the year of the catastrophic defeat of Valens, the Eastern Emperor, at the hands of the Visigoths at the Battle of Adrianople. But thirteen of the thirty-one books of Ammianus' history are lost, so that what survives today opens abruptly in A.D. 353, when Constantius II, the second of the three sons of Constantine the Great, was on the imperial throne.

Constantine had divided the Empire among his sons, who do not seem to have been a pretty bunch. Constantine II, the eldest, was given Spain, Gaul, and Britain, but soon he quarreled with his youngest brother, Constans, the Emperor who ruled in Italy and the Balkans, and was killed in 340 while trying to invade Constans' territory. Constans was overthrown by a usurper in 350, leaving Constantius II as the sole Emperor as Ammianus' book begins.

The historian shows us Constantius as a chilly, remote figure, obsessed with his own imperial importance: "Though he was very short, yet he bowed down when entering high gates, and looking straight before him, as though he had his head in a vice, he turned his head neither to the right nor the left, as if he had been a statue: nor when the carriage shook him did he nod his hand, or spit, or rub his face or his nose; nor was he ever seen even to move a hand." Behind that glacial exterior, though, Constantius was a suspicious, even paranoid man, who had murdered his uncles and most of his cousins to assure his grip on imperial power. He maintained a network of spies everywhere and exercised a kind of Orwellian control over everyone's thoughts: "Sometimes it happened that if the head of a household, in the seclusion of his private apartments, with no confidential servant present, had whispered something in the ear of his wife, the ruler leaned about it the next day . . . and so even the walls, the only sharers of secrets, were feared."

One of the most ferocious of the Emperor's agents was Mercurius, "nicknamed Count of Dreams, because (as a dog fond of biting secretly fawns and wags his tail while full of inward spite) he wormed his way into banquets and meetings, and if anyone in his sleep (when nature roves about with an extraordinary degree of freedom) communicated to a friend that he had seen anything, Mercurius would exaggerate it, coloring it with venomous arts, and bear it to the open ears of the Emperor." Men became so reluctant to speak of their dreams, we learn, that "in the presence of a stranger they would scarcely confess that they had slept at all."

An even more sinister figure was Paulus the Chain, who earned his nickname "because in weaving knots of calumnies he was invincible, scattering around foul poisons and destroying people by various means, as some skilful wrestlers are wont in their contests to catch hold of their antagonists by the heel." We get a full account of the atrocities perpetrated in the service of Constantius by this dread fig-

ure, who was “full of deadly eagerness and rage. As accusations extended more widely, involving numbers without end in their snares, many perished, some with their bodies mangled on the rack; others were condemned to death and confiscation of their goods; while Paulus kept on inventing groundless accusations, as if he had a store of lies on which to draw, and suggesting various pretences for injuring people, so that on his nod, it may be said, the safety of everyone in the place depended.” The imperial court abounds in such monsters, men of the greatest cruelty and inhumanity; and that most of them died violently themselves does not mitigate their dark deeds.

In time the reign of grim Constantius, that man of “cruelty and morose suspicions,” came to its end, and his successor, his young and enlightened kinsman Julian, took steps to restore some measure of tranquility to the troubled realm. Many of Constantius’ officials were sent into exile; some, including “Paulus, surnamed ‘the Chain,’ men who are never spoken of without general horror, were now sentenced to be burnt alive.”

But Julian perished in battle against the Persians after only three years on the throne. The army named Jovian, the captain of the imperial guards, as the new Emperor: he concluded a disastrous treaty with the Persians, surrendering five provinces as the price of peace, and died soon after under mysterious circumstances. The next Emperor was Valentinian, a military officer of high rank, who, recognizing as Constantine the Great had that the Empire was too big for one man to govern, appointed his younger brother, Valens, to rule its eastern half.

They do not seem to have been a lovable pair. Of Valentinian we are told that “he kept two ferocious she-bears, who enjoyed eating men; and they had names, Golden Camel and Innocence, and these beasts he took such care of that he had their dens close to his bedchamber, and appointed over them trusty keepers who were bound to take especial care that the odious fury of these monsters should nev-

er be checked. At last he had Innocence set free, after he had seen the burial of many corpses which she had torn to pieces, giving her the range of the forests as a reward for her services.” As for his brother Valens, “He was immoderately desirous of great wealth, and impatient of toil . . . and somewhat inclined to cruelty. . . . He willingly sought profit and advantage in the miseries of others, and was more than ever intolerable in straining ordinary offences into sedition or treason; he cruelly encompassed the death or ruin of wealthy nobles. . . . He was also insulting, hot-tempered, and always willing to listen to all informers, without the least distinction as to whether the charges which they advanced were true or false.”

The catalog of atrocities goes on and on. I’ve barely hinted at the multitude of horrors—the feverish tone of the book, the sense that the whole vast Empire was a place of fear and foreboding, where those in power routinely carried out the most dire deeds, where the terrors of life within the realm were as threatening as the various barbarian menaces that assailed the Empire’s borders. The tale that Ammianus tells—my edition of it has 623 pages of small type—is one long nightmare. We are given a vivid picture of a crumbling realm ruled by dark-souled, troubled men. Some of it is too much even for Ammianus, for, as he approaches the end of his story, he enters a period in which many of his protagonists are still alive, and he tactfully refrains from going into details of their deeds: obviously he regarded that as being too risky, as he makes abundantly clear in a reference to “the dangers which are often connected with the truth.”

There is plenty here, and here it all sits, awaiting the skill of some valiant science fiction writer to turn it into a spectacular saga of the end of a great galactic empire. Three volumes at a minimum, I’d say, and I’m not going to write them: the days of my writing long sagas are behind me. But someone should dip into Ammianus Marcellinus and bring forth the treasures he offers. ○

Copyright © 2012 Robert Silverberg

The book cover features a central image of a woman's face, looking directly at the viewer. The face is partially obscured by horizontal bands of color: a purple band at the top, a green band across the eyes, and a white band across the mouth. The background of the cover is a dramatic sky with dark clouds and bright, glowing light sources, possibly representing a storm or a celestial event. The title 'A WOMAN'S LIBERATION' is printed in large, white, serif capital letters across the top purple band. Below the face, the subtitle 'A CHOICE OF FUTURES BY AND ABOUT WOMEN' is printed in smaller, black, serif capital letters. At the bottom, the editors' names 'EDITED BY CONNIE WILLIS AND SHEILA WILLIAMS' are printed in black, serif capital letters. In the bottom left corner, there is a small logo for 'ASPECT' and a 'W' logo for 'WARNER BOOKS', followed by the ISBN number '0-446-57740-8'.

A WOMAN'S LIBERATION

A CHOICE OF FUTURES BY AND ABOUT WOMEN

EDITED BY CONNIE WILLIS AND SHEILA WILLIAMS



WARNER BOOKS 0-446-57740-8

Order your copy!

[CLICK HERE](#)

UNREAL LIFE

virtuality

In the previous installment we surveyed the varieties of virtual experience. I proposed an admittedly arbitrary distinction between artificial and virtual reality, the difference being that in AR the user doesn't realize that she's in a simulation—as in, say, **The Matrix** <thematrix101.com>—whereas in VR, she does—as in, say, **Final Fantasy** <finalfantasyxiv.com>. We touched on augmented reality, a kind of VR that enhances your five senses with computer-generated information in real time. While the verisimilitude of VR may range from crude to persuasive, the idea of AR would seem to imply a simulation more thorough and robust. This is not necessarily the case; it is possible to imagine a relatively incomplete AR that nonetheless compels the user to regard it as real. In any event, AR belongs, for the present, to the realm of science fiction.

What we did not look at last time is how these technologies might be used. You can discover some current applications by clicking over to the **Virtual Reality Society** <vrs.org.uk> website. Or check out **this survey and video** <technologyreview.com/computing/24872> from MIT's Technology Review. As an example, amusement is certainly a driving force in VR development, since video games are a huge part of the entertainment industry. **Education** <http://aim.cast.org/learn/historyarchive/backgroundpapers/virtual_simulations> and training VRs are also coming into their own. Today professionals like **doctors** <nextmed.com/index.html>, **pilots** <cae.com/en/sim.products/sim.products.asp>, and **architects** <archiform3d.com/3d-gallery/index.php> make regular

use of VR. **Our armed forces** <howstuffworks.com/virtual-military.htm> have developed some amazing VR <innovationnewsdaily.com/350-army-virtual-reality-training-games.html>. And while the Department of Defense keeps its most advanced simulations to itself, thank you very much, you can get a government-sponsored glimpse of combat by virtually enlisting in **America's Army** <americasarmy.com>.

But as useful and fascinating as some of these applications are, they fall far short of the potential of this technology to change . . . well, everything. This has led some to scoff, for example this blog post, **Whatever Happened to . . . Virtual Reality?** <technologyreview.com/blog/mimssbits/25917>, which claims that VR just isn't happening. I'm reminded of the pundits who piped up during the **Dot Com Bust** <historyoftheinternet.net/dot_com_bust.html> to say that the internet was just a fad like **CB Radio** <super70s.com/super70s/Culture/Fads/CBs.asp>. Or all the hardcore bibliophiles who were dead certain that **nobody wanted to read books off a screen** <computerworld.com/s/article/9017934/Why_e_books_are_bound_to_fail>. Of course such skepticism is partly our fault; we science fiction writers just wave our hands to create imaginary stuff on the page while engineers must spend decades building the actual high tech. But just because the gadgets you see on the screen at your local tenplex aren't for sale at Walmart doesn't mean that they won't show up on the shelves someday.

Take, for example, the kind of **heads up display** <mashable.com/2012/02/26/heads-up-displays> favored by such SF stalwarts as the Terminator, Robocop, and Iron Man. As widely reported, it

seems likely that by the time you read this, Google will be close to bringing to market **augmented reality eyewear** <gizmodo.com/5887152/googles-mystery-hud-glasses-could-be-on-sale-by-the-holidays>. Said to look something like Oakley sunglasses, these wearable Google Goggles will supposedly connect to 3G/4G networks and will augment your personal reality using a camera, GPS and other sensors, all supported by Google's suite of information retrieval services. With a cost somewhere between \$200 and \$600, they appear to be aimed at the high end consumer market. Too pricey to succeed? Recall that Amazon's first Kindle cost \$399. It sold out in five hours on the day it debuted and was out of stock for four months.

my Matrix rant

While this gadget speaks to the inner geek in some of us, the real potential of VR isn't to guide us to the nearest pizza joint or murmur of dentist appointments. Potentially it opens new frontiers to replace ones we've lost as the promise of the space program sputters and fades. Few if any of us will ever get to Mars, but some of us may someday choose to vacation or even live in an artificial Barsoom with **John Carter** <disney.go.com/johncarter>. Those who believe in the **singularity** <asimovs.com/_issue_0206/onthenet.shtml> point to VR or AR as potential homes for our uploaded consciousnesses. To some (let's call them reality snobs) this is anathema. They view any future that is dominated by either artificial or virtual reality as the very model of dystopia.

One of my biggest problems with the *Matrix* franchise isn't the way the Wachowskis undercut the achievement of the first film with two redundant and imaginatively impoverished sequels. Rather it was that they let their story default to the standard Evil Computer plot. Agent Smith asks Neo in the first movie, "Did you know that the first *Matrix* was designed to be a perfect human world? Where none suffered, where

everyone would be happy. It was a disaster. No one would accept the program."

Really? *Really?* When I peer through my computer screen, I see a world in which the video game industry made twice as much money as the recorded music industry last year and threatens to out-earn the film industry in the not too distant future. Some have seriously proposed video game addiction for the **Diagnostic and Statistical Manual of Mental Disorders DSM** <psychiatry.org/practice/dsm>, although the **American Psychiatric Association** <psych.org> has decided against inclusion, for now. **World of Warcraft** <us.battle.net/wow> ended 2011 with 10.2 million subscribers. On January 2, 2012, there were 5,012,468 users logged into **Elder Scrolls V: Skyrim** <elderscrolls.com/skyrim>. In 2009, the internal economy of the virtual world **Second Life** <secondlife.com> grew to \$567 million *real dollars*, about 25 percent of the entire U.S. virtual goods market.

Extrapolating from this, I believe that if someone managed to build a virtual world "where none suffered, where everyone would be happy," that buyers would be busting down the doors of unreal estate agents. In fact, emigration might well depopulate the real world. Reality snobs might say that wouldn't be the same, and they would be right. Neither was it the same for all the immigrants who came to America from other countries. But, the snobs might argue, any simulation would be just a shadow of reality—like *The Matrix* with its cheapjack 1999 simulation. *No!* That was just the Wachowskis putting their thumbs on the scale. Why would you furnish a simulated reality from the Dollar Store? Remember the scene where we watched viscous black fluid pump into a growing fetus? **Laurence Fishburne** <laurence-fishburne.com> intoned an explanation: it turns out the dead are being liquefied and fed to the living. *Ewww*. But this is just an Evil Computer plot with the volume dialed up to eleven.

Okay, okay! Calm down, Jim. This is

just a movie—a *thirteen-year-old movie*. But it is also the culture beginning to think about its future, which is why it's worth interrogating the assumptions here. What if the snoozing population in *The Matrix* was fed a nice nutritionally complete vegan broth? What if virtuality made them happy, in the same way that interacting with today's intricate video games gives so many millions pleasure? What if they *chose* to forsake memories of the real world as part of the adjustment to virtuality? And would it really be so terrible if they never smelled a real rose again?

Yes, that last would be a loss, no question. But how many people in the real world have access to gardens and the leisure to sniff flowers? In the imaginary world of the Matrix, dysfunctional as it was, nobody was starving and everybody was reasonably healthy. Can we make the same claim for all of our brothers and sisters in this enlightened year of 2012?

ancestors

As it turns out, reality snobs may already have lost the high ground. According to maverick philosopher **Nick Bostrom** <nickbostrom.com>, it is conceivable that we are already living in the Matrix or something like it. He has proposed what has come to be called the **simulation hypothesis** <simulation-argument.com>, which argues that what we perceive as reality might be a kind of AR created by our very advanced descendants. The idea that reality isn't all that real is not new. Greek philosophers, notably **Plato** <iep.utm.edu/plato>, argued that beneath the world of appearances that our senses apprehend lies the true reality of eternal forms, which we can't know. Some schools of Buddhism, notably **Dzogchen** <wikipedia.org/wiki/Reality_in_Buddhism> teach that what we perceive as the world is actually a kind of dream. Modern philosophers from René Descartes to Bertrand Russell have expressed varying levels of misgiving with that which our senses report.

Bostrom puts a new spin on the ancient idea, based on AR technology and probability theory. He asks that you imagine that it is possible to build a computer powerful enough to implement a human mind in an artificial reality. This is one of the ideas behind singularity theory, and if you have already decided that it's nonsense then you aren't going to like the rest of Bostrom's argument. But as long as we're making extravagant claims for our great-great-great¹⁰ grandchildren, assume they can implement not just one but lots and lots of minds in this hypothetical AR, which Bostrom calls an ancestor simulation. Say enough to populate an entire world. **Bostrom** <simulation-argument.com/computer.pdf> then claims that at least one of the following statements must be true:

- (1) Almost all civilizations at our level of development become extinct before becoming technologically mature.
- (2) The fraction of technologically mature civilizations that are interested in creating ancestor simulations is almost zero.
- (3) You are almost certainly living in a computer simulation.

If 1 and 2 are false, then technological civilizations will ultimately have the power and inclination to create billions and billions of simulated minds like yours and mine. Bostrom continues, "Therefore, by a very weak principle of indifference, you would have to assume that you are probably one of those simulated minds, rather than one of the ones that are not simulated." Note that Bostrom does not claim that we *are* in a simulation, only that at least one of the three statements must be true.

exit

As you can imagine, this idea has received some serious attention. If you google "simulation hypothesis criticism" you'll find many spirited attacks. Read them. Then perhaps come back to Bostrom's **The Simulation Argument FAQ** <simulation-argument.com/faq>.

html> before you make up your mind. For myself, I must say that I'm still trying to figure out what I think about this idea. I do acknowledge that it makes my brain,

real or virtual, throb—but in a good way. Just like the very best science fiction. ○

Copyright © 2012 James Patrick Kelly

Alan Smale grew up in Leeds, England, and has a BA in Physics and a DPhil in Astrophysics from Oxford University. He serves as director of an astrophysics archive and performs research on black holes at NASA's Goddard Space Flight Center. Alan also sings bass with vocal band The Chromatics, and is co-creator of their educational AstroCappella project, in use in schools across the country. The author's novella, "A Clash of Eagles," won the 2010 Sidewise Award for Alternate History (short form), and he is currently marketing two novels set in the same universe. His short work has sold to *Realms of Fantasy*, *Abyss & Apex*, *Paradox*, *Weird Tales*, and many other venues. More information about Alan and these stories can be found at www.alansmale.com. While reading his first story for *Asimov's* be prepared for a thrilling ride through dangerous terrain and a haunting glimpse of the secrets of . . .

THE MONGOLIAN BOOK OF THE DEAD

Alan Smale

The Chinese army rolled into Ulaanbaatar at dawn on June 19th. A column of PLA Type 104 battle tanks swept along the broad and ironically named Peace Avenue, blowing the now-empty Russian Embassy to fragments. Simultaneously, a wave of older Type 99 tanks and Mengshi troop carriers came in from the east, even-handedly lobbing shells into both the Mongolian People's Republican Party and Mongolian Democratic Party buildings as they passed. Joining up in Sukhbaatar Square, they blasted the Government House to rubble, practically vaporizing the bronze statue of Chinggis Khaan.

In the cool and clear of the morning, an anonymous Chinese sharpshooter destroyed the Zaisan Memorial commemorating the history of Mongolian-USSR collaboration with a single shell from a distance of well over a mile. Another shell, intended merely to smash the old statue of Lenin in the park outside the five-star Ulaanbaatar Hotel,

was not so well aimed. Instead it flew past the statue and exploded in the hotel lobby, starting a firestorm that gutted the hotel and caused 180 civilian deaths.

Tanner could not afford the Ulaanbaatar Hotel, but from his room in the cheaper Khongor Guesthouse the rumble of tanks was unmistakable, and the obliteration of the Russian Embassy shattered all the Guesthouse's east-facing windows. Cowering naked under his bed, Tanner eventually realized he might be better equipped to face the crisis if he got dressed. He crawled across the threadbare carpet to his discarded clothes from the day before and began to pull them on. At the same time he took a swig of warm Diet Coke from an almost empty can, and stuck a cookie in his mouth.

Thus, when four men and a woman kicked in the door of his room, they caught Tanner with his pants only partway on and his mouth too full to cry out.

He might have expected Chinese PLA uniforms, green with red stars, but the men wore plain clothes, and even in the half-light he could tell their features were Khalkh Mongolian rather than Han Chinese. Incongruously, the woman wore jeans and a Dolce & Gabbana T-shirt, with a scarf bundled tightly around her face. They picked him up and carried him out of the Guesthouse just as he was, bundled him into the trunk of a Toyota Land Cruiser, and drove him out of the Mongolian capital at speed.

Beyond the city limits, the roads degenerated into an unpaved hell. Crammed in the stinking trunk and bashed around like a pinball, Tanner threw up twice, as much from terror as from nausea. When the car finally stopped and they hauled him out, he fell to his knees on the gravel desert and retched again.

He held his breath, expecting a bullet to the back of his head at any moment. His heart fluttered, and the desert seemed to tremble. The sun seared his neck. But nothing happened, and he summoned the courage to look up. Above him was only the bowl of the sacred Eternal Blue Sky and the disgusted faces of four unarmed strangers.

The woman had pulled the scarf off her head and draped it about her neck. She was also Mongolian, and quite young. He did not recognize any of them.

Tanner struggled up onto his feet. They were out in the middle of nowhere. A giant featureless desert surrounded him, emptiness stretching away to the horizons.

"I'm American," he said. "I demand you take me to the US Embassy."

"That not happen," said the woman in a lilting, broken English that at any other time might have been endearing.

He frowned. "Am I supposed to know you?"

"No," she said.

"I don't know who you think I am. I'm nobody important. My name's John Tanner."

"I am Khulan," she said.

"What's all this about?"

"I have no idea," she said, with an edge of petulance to her voice. "Enough question. You can ride in back seat from here."

"You don't know?" he said, baffled, but Khulan had already turned away, and the men were pulling at his arms, ushering him back toward the car.

The car radio was on, and the news reporting was mostly in a rather precise English, from a station that Tanner assumed was the BBC World Service.

Two giants had inhaled, and trapped Mongolia between their bellies. After weeks of international tension the Chinese had apparently stormed across the Gobi in a wave of metal and fury, simultaneously occupying the strategic high ground in the Altai mountains and claiming the eastern steppes of what used to be the Dornod and Sukhbataar *aimags*. The Russian bear, less muscular and more cautious, had annexed Lake Hovsgol and the pine-covered taiga forest down to the Selenge river, captured the mountainous western corner of Mongolia for its ally Kazakhstan, and politely indicated its disinclination to advance further.

Tanner was only half listening. His own problems seemed more immediate. Bumping around in the back seat of the Toyota was almost as uncomfortable as being in the trunk; he was crammed between two of the Mongolian men, with nothing to hold onto, while being driven over terrain so uneven that his bones felt jolted out of their sockets and his head frequently smacked into the roof of the car. His attempts to demand more of Khulan went unanswered. Her attention was solely on the radio and in translating what she heard for the men, who apparently spoke no English at all.

For a man with nothing much to live for, Tanner was surprised to find how little he wanted to die. What did these people want from him? Not money; they'd left his passport, credit cards, and traveler's checks back in his hotel room. Ransom? The idea was laughable. Nobody would chip in even five bucks to get Tanner back. His steadily dysfunctional family talked past each other most of the time, his father permanently remote and half-embarrassed, his mother forever urging him to "shake off" the disasters of his teen years as if they were dandruff. Moving to college hadn't done the trick either; Tanner had felt constantly out of step, isolated from the hopes and fears of his classmates and alienated from his professors. When he spoke from his heart, people rarely understood him. Women sensed something dead in him, and stayed away.

He'd known that he needed something more out of life. He just hadn't been able to figure out what that might be. So when he'd qualified for a semester's exchange-transfer to St. Petersburg State University—a move that, conspicuously, nobody around him had opposed—he had jumped at the chance and then, almost immediately on arrival, dropped out.

Travel had become an end to itself, a life filled with small but critical decisions—where to go, how to get there, what to eat. Every day came with a new set of small, easy-to-manage goals, protecting him from having to face up to any tough truths. Then, it had been easy enough to claim to be searching for something; now, in the sudden searchlight glare afforded by his kidnapping, Tanner at last understood the immense difference between *searching* and merely *looking around*.

After exhausting the charms of St. Petersburg and then Moscow, Tanner had been surprised to learn that the glamorous sounding Trans-Siberian Railway was not prohibitively expensive if he traveled *kupé* class, a.k.a. second or "hard" class. The even cheaper trans-Mongolian route left the main line at Zaudinsky, east of Ulan Ude, and finished up in Beijing. Tanner had broken his journey voluntarily at Novosibirsk and Irkutsk, before the steadily deteriorating relations between the Asian superpowers had grounded the train in Ulaanbaatar.

Too late, Tanner had realized why his ticket had been so cheap. Ironically for a history major, he had failed to stay current with world news.

He'd planned to go to China. Now China had come to him.

The Gobi was a bleak, bone-dry expanse; a desert not of sand but of hard, fine gravel. At this time of year tiny sprouts of scrub grass poked their way out of the rough soil beneath, sparse enough to be almost invisible. In the distance the sun-baked plain shimmered with an almost mirage-like glint of green, the grass only visible at an angle, with massive foreshortening. Low, jagged mountains lined the far horizon.

Tanner's captors had changed into the traditional Mongolian boots and *deels*, long caftans in olive and green that reached down to their knees, and had given Tanner a shirt. They made no further attempt to restrain Tanner, nor did they need to; after their mid-afternoon arrival at the isolated felt-lined *ger*, or yurt, he saw no other signs of humanity between himself and the horizon.

Khulan had cleaned out the back of the Land Cruiser and driven off again without saying another word to him. The men listened amiably when Tanner tried to

speak to them, nodding with polite incomprehension. They owned a single clunky-looking semi-automatic pistol between them, and took turns sitting with it on a small painted stool outside the *ger* and keeping watch on the desert horizon. During a changing of the guard in late afternoon one of the men offered Tanner the gun and grinned a dentist's nightmare of a grin, perhaps joking that it was his turn to stand sentry over the featureless wasteland. Tanner stared blankly back at him. Tit for tat.

The temperature soared over a hundred degrees. Tanner's world quickly became bounded by the small area of shade beside the *ger*; the jerry-can of brackish water, and the open pit a hundred yards away with low boards propped up around it for minimal privacy. At dusk his stomach finally settled from his ordeal in the Land Cruiser, just in time for the men to serve him a dinner of greasy boiled mutton, hard bread, yoghurt, and lumps of the sour cheese curd that Tanner had thought the Mongolians created just to torment the tourists, but apparently ate themselves after all.

A mere fifteen minutes elapsed between the end of this meal and Tanner's next hasty trip to the stinking boarded pit in the middle of no man's land. Mercifully, night soon fell.

Late in the evening Khulan returned in the Land Cruiser and unloaded, of all things, a small satellite dish. Their hosts produced a battered-looking Russian television from a hand painted cupboard in the *ger*, and they ran a lead out to the car battery to power it.

On the TV screen, Chinese battle tanks paraded past the photogenic Winter Palace of the Bogd Khan in Ulaanbaatar. Crowds of Mongolians greeted their saviors, smiling happily. The camera panned down to a little four-year-old girl in traditional dress waving a red flag. Even with the satellite dish the TV reception was flaky; the picture came and went but the commentator remained, alternating Mongolian and Mandarin. Khulan and the four men watched the screen in silence, their expressions unreadable.

"Tell me," said Tanner.

Khulan looked at him coolly. "Everyone has joyful to greet Chinese liberators," she said, and the oldest of the men spat with precision into a brass cup at his feet.

"So I see."

"Also, Chinese have outlaw Russian writing."

"They've banned Cyrillic?" said Tanner.

"Yah," said Khulan sardonically. "No great loss, that one." Every shop in Ulaanbaatar displayed signs in a crazy mixture of Cyrillic, Mongolian, and English. Yet the Cyrillic was a holdover from the three generations of Soviet influence that had ended with the collapse of Communism in 1990. Khulan's generation favored their own Mongolian script.

"And why am I here?" said Tanner.

A sudden uproar in the *ger* greeted the next pronouncement by the unseen TV commentator. The pictures showed students throwing books and small statues onto a bonfire outside the National University of Mongolia. Tanner jumped. "What now?"

Khulan was on her feet, shouting and gesturing at the TV in Mongolian. She switched to English to say, "Chinese have outlaw *hingis-han*."

"What?"

"Fuck them all, the Chinese," she said, and walked out of the *ger*.

"Genghis Khan," he said. "Your national hero. They're banning any mention of him. I understand."

She stared out into the desert with her back to him, smoking a cigarette. He walked up to stand beside her, but not too close.

It had grown surprisingly cold. Tanner was shivering. Khulan was not. The cigarette tip glowed in the darkness every time she took a long drag. He waited, gazing at the faint outline of the distant hills against the stars, until eventually she said, "Chinggis. They can outlaw his name. But that will just make everyone mad."

"Look, I need to know why you've . . . kidnapped me," said Tanner. "What am I doing here? I don't even know you. I—"

He ground to a halt. Khulan smoked quietly, showing no signs of wanting to answer.

"I'm sorry your country got invaded," he said.

"We need help," she said. "Army is disband. They not strong enough to resist an invasion anyway. We thought that other countries, United Nations . . ." She shrugged. "But just words so far. No help likely for us."

"Nobody is going to start World War Three over Mongolia," said Tanner, then kicked himself for his lack of tact.

Khulan looked at him bitterly. "So, up to just us, then. Mongols helping Mongols." She took another drag. "Great."

"Take me back to Ulaanbaatar," he said. "Maybe I can help you. Claim some kind of diplomatic immunity. . . ."

"Oh, so you are diplomat now?"

"No, but—"

She sighed. "You go back to UB now, they kill you. Foreigners not in embassies given till noon to report. All not reporting, they execute as spies. Russians, Koreans, Americans, British. There is no immunity for you."

"Noon?" His mouth was suddenly dry. "Noon *today*? Jesus Christ, Khulan. You've killed me. I'm dead."

She looked at him oddly. "Maybe you dead anyway."

In Moscow Tanner had amused himself pretending to be a spy, disguised as a tourist. Here in Mongolia he really *was* a tourist, and he'd managed—quite against his will—to masquerade as a spy.

"Fine. Terrific. Thanks a lot."

Khulan turned on him. "Shut up! I risk myself for you! My friends risk themselves! It is not fine!"

Her sudden intensity made Tanner step back; too late he realized that Khulan was close to panic, right on the edge of losing control. And she was the one with the gun and the four henchmen.

He attempted to be calm. Conciliatory. "I didn't ask you to risk anything. So, why? I'm not even—"

"Because my sister!" she snapped, with incomprehensible finality. She took a last ruthless pull at the cigarette, burning it into the filter, then stomped the butt viciously under her heel and strode away.

"What sister?" he shouted, but she disappeared back inside the *ger*, slamming the wooden door.

Tanner looked around. He was completely alone. He walked another thirty feet away from the *ger*. Nobody called him back.

Why would they? He was stranded in the night, deep in desolate and unforgiving terrain, in the most sparsely populated country on Earth, thousands of miles from anyone else who might be willing or able to help him survive. He was obviously free to go wherever he wanted. Then, after he'd walked all night, they'd just drive up, point the gun at him, and load him back into the Toyota.

"*Damn it*," he said to the distant hills.

By the time Tanner awoke bleary-eyed the next morning, Khulan had gone again. He could have overpowered her the previous night, he now realized: wrestled her

to the ground, confiscated the car keys, and driven away, his tires spitting gravel over the damned *ger*. He had not. Hand to hand combat wasn't exactly his forte. And he still wouldn't have known which direction to go in, in this trackless waste. He could run out of gas even closer to the middle of nowhere than he was now, and die of thirst. Or run into the Chinese.

Some spy.

Okay. For now, he would have to kowtow to Mongolian logic. He was completely at their mercy.

So Tanner got up and helped with breakfast as best he could. Mostly he got in the way, but he hoped he was sending the right message: he was willing to cooperate.

In the process, he almost learned their names. The youngest and most openly friendly was Batjargal. The one who gave most of the orders was Chagatai; the oldest, with whom he'd uneasily shared a sleeping pallet last night, appeared to be Chagatai's father and was named Gerel-Huu. The fourth and least friendly of the men grunted his name so abruptly that Tanner had no chance of catching it.

After breakfast the four men went back to their routine of sitting around in the desert, taking it in turns to hold the gun. The air grew hotter and hotter around them. Tanner sat in the shade, gnawing at the inside of his cheek and feeling lost in time.

Midmorning, Chagatai shouted and pointed to a puff of dust on the horizon. The others studied it with care, standing alert and motionless, until with some relief Batjargal said the only word that Tanner was likely to understand: "Khulan."

Springing into action, the men dismantled the *ger* in under ten minutes. First the outer fabric and the felt lining came down, then the wooden latticework inner wall and the door, and finally a complicated substructure of linked poles around a central wooden crown-piece. They piled the pieces neatly and packed up the cooking gear, bedrolls, and other meager effects beside it. A separate pile of the cot-frames and cupboards had been set off to one side, apparently to be abandoned. Tanner did not see the TV or the satellite dish; they must have already left with Khulan.

Then they sat in the desert and waited again, for rather longer than Tanner had anticipated. He had expected the Toyota, or perhaps one of the rugged Russian-made vans that were *de rigueur* in the Gobi, but the distant speck resolved itself into a procession of seven camels, led by a young boy, an old man, and nobody else. Tanner frowned, shook his head and said "Khulan?" to Batjargal, who nodded and repeated "Khulan!" in a tone of great satisfaction before walking off to help load the rolls of felt and bundles of wooden spars onto two of the camels.

The skin was already peeling off Tanner's neck, and the full heat of the day was still ahead of them. "This is a goddamned disaster," he said to nobody in particular.

The camels were stately but aloof. Hitting one of the beasts' forelegs with a stick, they got it to kneel so they could install Tanner on a blanket between its two humps. Then they hit it again. The camel stood with an alarming lurch.

The ground was surprisingly far away. "Water?" said Tanner hopefully.

"Wadder!" said the old man agreeably, and mounted his camel.

The caravan moved off into the heat of the day.

The smooth rocking motion of the camel was comfortable for the first twenty minutes. By then Tanner already hated everything about the beast; its brainless chewing and snorting, the loose, fatty feel of its humps, even the blue scarf around its neck and the wooden spar through its nostrils that the reins attached to. Tugging at the reins had no effect, of course; he was being led in a caravan with Chagatai riding in front of him and the *ger* and the pots and pans and supplies jangling on the two camels immediately behind.

They stopped briefly for a lunch of bread and curd, which Tanner was too dizzy to

swallow, and all too soon they mounted up again and went on. The sun blazed down out of the cloudless Eternal Blue Sky. They had given Tanner a hat but there were no spare sunglasses, and his afternoon blurred into a bright, scorching, semi-waking, bilious, undulating nightmare.

He came out of his trance at dusk to find himself on the ground, with someone pouring water into his throat. It was the boy, solemn and dark-eyed. Batjargal, Chagatai, Gerel-Huu, and Grunt were reconstructing the *ger* while the older camel-driver lit up the stove and broke out the supplies. Tanner's dizziness endured until he closed his eyes to sleep in the cool smoky *ger*; the low voices of the Mongolians murmuring around him.

And so it went for six more interminable days, as they trekked eastward across the barren expanse of the Gobi.

If Mongolia were laid over the United States it would cover a breadth from New York to Denver. Its sheer size was staggering, and Tanner could never have imagined that he'd be crossing it at a rate of eight miles per day.

Never once did his captors pull out a map, or even scrutinize the sun by day or the stars by night. Occasionally they would stare at the ground, then look thoughtfully around them. As far as navigation was concerned, that seemed to be about it.

The endless, dry sea of the Gobi stretched away from them in all directions. The sun-baked mountains in the distance changed almost imperceptibly. Accustomed to the rapid pace of twenty-first century life, the sheer lack of mental stimulation weighed heavily on Tanner. His mind went on standby for long indefinite periods as the gravel plain passed under the padded and almost silent two-toed feet of his camel. In the relentless desert sun his brain began to fry.

From the depths of his stupor, Tanner was vaguely aware of the buzzing sound for several minutes before he troubled to raise his head. A motorbike was bumping across the desert toward them, an ancient clunker with rusted chrome that moved barely faster than his camel. Riding it was a woman who after a moment of mental dislocation he realized must be Khulan, now with shorter hair and wearing more appropriate desert clothes, a baggy fawn tunic and hat. Several large pouches and a pack were lashed behind her on the seat of the bike. She intercepted the caravan and rode ahead of it for a few moments before the motorbike coughed and gave up the ghost; apparently it had run out of gas then and there. Khulan got off it and kicked it where it lay, and tugged her baggage free. The men did not seem surprised to see her.

Tanner could easily see the faint vehicle track she'd ridden in on. His sensitivity to the desert environment had grown; he was now aware of the criss-crossing thoroughfares and markers that had been invisible to him at the outset. By now, he marveled that he had ever thought the Gobi was featureless.

Tanner's mouth was dry, his voice ragged. "Hey," he said. "Good to see you again." Khulan skewered him with a glare that cut through his chest to his very soul. The caravan continued on, not missing a beat, as she tossed her pouches and what looked like a drum onto one of the spare camels and then pulled herself up onto the other. Her head nodded forward, asleep before they'd gone a dozen yards.

That evening Khulan curled up on her bedding almost as soon as they pitched camp. Angry at being ignored, Tanner advanced upon her, but Grunt blocked his path.

Tanner remonstrated, waving his hands. He was dazed, and his words slurred. Grunt pushed at Tanner's chest, squaring up for a fight, but when Chagatai snapped out a few words in Mongolian, he desisted.

It was an uncomfortable standoff. Tanner turned away in a huff, and sulked till it was time to sleep.

* * *

The camel rocked beneath him. Tanner had made great theological strides during the days of his captivity: he now understood that Hell was not only insanely hot, but constantly in motion. Sisyphus rolling a rock up a hillside through eternity had an easier time of it, because at least Sisyphus was allowed to stand on his own two feet, and there was actually a hill and a rock to make the view tolerable.

Talking of the view . . . Tanner peered forward into the bright Gobi daylight. It had to be a mirage. He put his head on one side and squinted, but the slight figure walking across the desert refused to evaporate.

As he watched, the tall mirage telescoped down into a woman, wearing baggy khaki pants and an "I Heart NY" spangled T-shirt. A big floppy sun hat and giant sunglasses completed the ensemble and obscured her face. Another tourist? An American, even?

As their paths converged, she took off the sunglasses and became Khulan. "Get down," she said curtly to Tanner, as the camels reached her.

Tanner twisted around to stare at the first Khulan, the one who rode a camel further back in the caravan. He straightened again to study the woman standing in the desert before him. "Eh?"

"Get off camel."

Comprehension dawned in his sun-soaked brain. "Ah. That other one, she's your sister."

"Of course," she said impatiently.

"Christ." He felt really dumb. "Well, in that case, good to see *you* again."

Khulan made no reply. Instead she drew a machine pistol out of one of the deep pockets of her khakis and aimed it at him. "Hey!" Tanner shouted, his heart cannoning, soul suddenly icy even in the blistering Gobi heat.

A single terse command in Mongolian brought the men in close around them. "Get down!" she said to Tanner. "Quick, now."

"Damn you, and her too," he said. "Why the hell should I do what any of you tell me?"

She gestured eastward. Plumes of dust rose from four different places near the horizon. "Chinese army patrol. They find you with us, we all die."

"Shit," he said. "Then . . . ?"

Khulan pointed at the cargo-camels. "Get into *ger*. Climb up and hide all quiet, or I shoot you myself, hand you over."

Tanner looked helplessly at the camels. "Hide? How?" Nonetheless he quickly slid to the ground.

One camel carried the crown-piece of the *ger*; its poles and slats and fabric covering, and all their food. The other bore piles of felt topped with the painted wooden door and surrounded by pots and pans and the Mongolians' small packs. Batjargal boosted Tanner up into the latter of these, and he clambered and wormed and wriggled his way into the heart of the felt.

The other men held up the door and the packs while he made a nest. When they let go, the weight almost crushed the breath out of him. Huge felt pads closed around his face. For a long panicky moment Tanner thought it was all over, he'd traveled all this way just to suffocate in the heart of a dismantled yurt, but bracing himself on his elbows he managed to create enough space to suck in a lungful of musty air.

Even through the mass of matted fiber he could hear the roar of engines as the Chinese arrived. The camel lurched, and the sudden stress yanked at Tanner's shoulders. His body heat was rising, and it grew ever harder to push back against the mass of *ger*-wall that oppressed him.

His heart began skipping beats. Dimly, he heard shouts. His camel banged forward onto its knees and someone shoved at the load, almost grabbing Tanner's ankle.

After that, it went quiet. Tanner grew woozy as he pulled in ever-shallower breaths, and couldn't have said how much time elapsed before the Mongolians pulled the door off, and the other wood, and unwrapped him from his felt shroud.

Daylight exploded around him. They poured water between his lips, and that roused him fully, wide-eyed and spitting.

The column of dust that marked the Chinese armored vehicles raced away toward the north. Tanner stared after them. Even from behind, the trucks' profile seemed familiar and out of place. "Hum-Vees?"

Khulan shook her head. "*Mengshi*. Utility vehicle, all-terrain. Made like your Hummer, but all Chinese."

"Shit. Why can't we travel in one of those?"

She snorted. "Get on camel."

"Khulan . . ." Tanner was all set to dig in his heels, go on strike, demand that she answer at least some of the hundred questions he had stored up for days against the time he might speak with her again, but the tone of her voice and the sight of her hands stopped him in his tracks.

Khulan was shaking like a leaf. The encounter with the Chinese soldiers had terrified her.

Against his will, he felt a burst of sympathy. This woman was hardly a professional criminal. What the hell was going on?

That night they stopped at a campsite that had clearly been previously occupied. Beneath their feet was a circular outline where another *ger* had stood, and in the middle distance was a low stone enclosure, partially covered with a dark wooden roof.

Also nearby was an *ovoo*, a small cairn of rocks and tree branches, though it was days since Tanner had seen a tree. Forming the center of the conical mound was a tent-post wrapped in the blue scarves that denoted the Eternal Blue Sky. The Mongolians circled the *ovoo* reverently, three times clockwise, and Khulan's sister dedicated the campsite by flicking *airag*, fermented mare's milk, to the four cardinal points using a carved milk spoon.

"My twin sister is shaman." Khulan mimed her sister's ceremonial gestures. "You understand *shaman*?"

"Yes, obviously," said Tanner.

"Her name is Dzoldzaya. Later, she dance."

"Well, that's all right," he said dubiously. "I don't care for—"

"Is not for you."

"Oh."

Next came the more pragmatic business of setting up camp, the four men assembling the *ger* while the young boy settled the camels and the older man laid out a blanket and prepared food. By now, Tanner knew the routine. He picked up the spade and went to dig out a latrine at a healthy distance from the camp, as he had the previous nights.

To his surprise, Khulan followed him. "You are all right?"

"What do you care?" he said bitterly, pounding his spade into the tight desert crust.

"I am sorry about the gun. We had to hurry."

"Yeah. Where did you go all this time, anyway?"

"Ulaanbaatar," she said.

"Then how come you were just standing out there in the desert?"

"I flew there. I tell you, my sister is shaman."

She peered at him sidelong and he realized with some surprise that she was trying to joke with him. "Aha. Right."

"No, not really. I was drop-off, ahead of you. The man who owns truck, he not want you to see him, be able identify him. He is not happy with what I'm doing."

"Well, that makes two of us."

"Shut up," she said, but with no heat in it. "We argue, he and I. We choose different. Maybe his choice is not wrong. I don't know."

Collaborating with the Chinese invaders, perhaps? She seemed unusually doleful about it. "Your boyfriend?"

"Ex-boyfriend. I not see him again."

"Okay," he said, suddenly aware that she was relatively clean and spruced up, while he was filthy and crusted in sweat. He'd been wearing the same clothes for a week. "His loss, I guess."

"Yah," said Khulan.

Tanner rested a moment, drank some water, pointed. "Is that for livestock?"

She glanced at the low roofed wall of the enclosure. "Winter quarters. Man from further north moves his goats down here in the autumn."

"Because of the shelter and better grazing here," said Tanner, half-humorously.

"Yes."

He shook his head. "That Chinese patrol. It was following you?"

"I don't know. Maybe coincidence."

"How old are you anyway, Khulan?"

"Mind your own business," she said.

"All right. My own business, then. Why am I here?"

"You wouldn't understand."

"Try me."

"Not yet," she said. "Ask me something else."

"Okay. Dig my trench?"

He handed her the spade. To his surprise she took it without comment and dug the latrine a little deeper, piling up the soil so it became the screen. He looked at her tight T-shirt and khakis and wondered if she still had the gun, wondered if he could knock her down, grab it, and figure out the safety catch before she whacked him with the shovel or her shaman sister turned him into a lizard.

And once the deed was done, and he was armed and dangerous? There his cunning plan petered out.

He took another swig of water. "What's happening in Ulaanbaatar? Or anywhere else in the world, for that matter?"

"Bad," she said. "Even before this, Mongolians not like Chinese. Chinese companies would come into Mongolia, bring their own workers in, push us out of our jobs by working cheaper. Now Chinese take over our country and industries, bring in their own bosses and managers and politicians. We make disturbance, but we are peaceful people, not so good at rioting. When the Russians left in 1990, we just ask them politely and away they go. Mongolians don't have experience as fighters, as . . . ?"

"Terrorists," he said, too forcefully, and the word thumped onto the ground and lay between them.

"No," she said. "We are not that."

"Less obvious, from where I'm standing."

She waved the spade and Tanner took a prudent step back. "*They* are the terrorists! What starts now, in UB? I tell you: Mongolian Reeducation! Chinese language, Chinese way is now law. Blaring loudspeakers tell people what to do, how to think. Restaurants renamed, no more Grand Khaan, now all People's Way, Long March Café, bullshit. They put their puppets in charge, go into schools telling our teachers what they can teach. People argue, they disappear."

"Can't your Russian buddies help you?"

She shrugged. "Broke."

"America? Europe?"

"Big-deal U.N. resolution," she said sourly. "Condemning Chinese aggression and hedge . . . *Heged?*"

"Hegemony."

"Rest of the world busy with own problems." She dug ever more determinedly. "Tanner, listen. They massacred the Koreans, their UB diplomatic staff and workers, students, everyone. The ones who surrender by noon as ordered, who they say they fly home to Korea? They did not fly them home. They marched them into the desert and shot them."

Despite the warmth of the low evening sun, Tanner suddenly felt chilled.

"I'm not lying."

He looked into her eyes, and believed her. He swallowed. "Christ. What about the Americans? British?"

"I don't know," she said. "Fewer of those. Smaller story, maybe."

"... Okay."

She handed him back the spade. "Unless you have really bad stomach problem, this is deep enough. Now we should drink *airag*."

"Yes," he said. "Yes, we should."

The *ger* was up, looking as fine and solid as it did every night. Outside the front door a fire blazed in their small stove, warming the perennial fare of thick mutton stew.

Airag smelled bad and tasted sour, but there was no mistaking the low-pitched alcoholic buzz that permeated Tanner's skull once he'd managed to swallow two glasses of it. Tonight, the first one went down fast.

Seeing the sisters side by side, even Tanner could tell them apart. Both had almond eyes and big cheekbones, but Khulan's complexion was lighter, her sister's skin more weathered and her expression more severe. Khulan was elfin, Dzaya muscular by comparison. Khulan kept her hair in a long braid, held back by a headband; Dzaya's was shoulder-length, in a bowl cut. The shaman looked five years older.

After dinner, Dzaya went into the *ger* and closed the door, and the conversation in Mongolian lapsed. Tanner said to Khulan, "Not close, then."

She looked around. "What isn't?"

"I mean, you and your sister. You've hardly spoken to each other since you arrived."

Khulan grimaced and popped another piece of the rocklike cheese curd into her mouth. "Is difficult. I am angry with her."

"Why?"

"For this." She gestured all around her, then lit a cigarette and looked off at the horizon with that familiar expression that Tanner knew meant she'd said all she intended to.

Night fell. They clustered around the stove as the temperature dropped, now feeding it with wood casually pulled out of the sacred *ovoo*. Tanner took another glass of *airag* and gave up any prospect of figuring out what was holy and what was not, in Mongolian culture.

Chagatai pulled out a drum and began to lay down a low, throbbing pulse. The *morin khuur* was a small boxlike fiddle with just two strings of plaited horsehair, which Gerel-Huu played with its base to the ground like a cello, creating a moody violin sound with the soul of the steppe woven into it. Batjargal sang, his voice a wailing atonal cry. Minutes into the first song he somehow shifted registers and began to sing two notes at once, a bass grating moan from his throat superimposed with a high whistling overtone that seemed to trace the outline of the distant mountains against the sky. It was *hoomei*, Mongolian throat-singing, and the combination was an alien yet hypnotic din that tugged at Tanner's heartstrings.

And then Dzaya flung wide the door of the *ger* and leaped out at them, a black crow of a woman with tassels awhirl, her face obscured behind a headdress fringed with black knotted cords. Bells and the skins of small animals hung from her shoulders, metal pendants and rounded mirror fragments from her waist.

Her banshee screeches sliced the air. Chagatai stepped up his drumming, speeding his pace to match the ascending fervor of the shaman's dance. The air grew thick with juniper smoke from the fire. Dzaya jumped higher, whirled ever faster.

Tanner lost his grip on time, forgot everything except the hypnotic spectacle of the dance. His predicament, their destination, the enigma of Khulan: briefly none of them mattered, as the past put its arms around him and locked him in its embrace. Civilization seemed pale and remote. The *airag* buzz became a low thudding in his head, painfully out of rhythm with the drumbeat.

All at once, the dance ended. At the final titanic slam of the drum, the shaman tumbled to the ground in front of Tanner, kicking fine gravel over his knees. As she did so, Tanner felt an invisible blow in his chest as if a hammer had struck him from the inside, and he collapsed forward onto the hard ground.

Khulan was there instantly, turning him over onto his back. He felt her fists strike his breast, and then an interminable pause that seemed to stretch into infinity. The night was silent, the men agog, the cold hard stars shining down on him from the deep velvet of the sky. The world waited.

Then his heart began to beat again, once painfully, and then more normally.

As Tanner breathed again, he heard Khulan screaming at her sister in Mongolian. The shaman stood and stalked off into the desert, Khulan's furious words pursuing her into the night.

The fire in the stove had died down and the men had withdrawn into the *ger*, leaving Tanner and Khulan alone. Bitter memories from Tanner's childhood oppressed him, grey and bleak.

"What are you and your crazy sister trying to do? Kill me?"

Khulan blew cigarette smoke into the sky. "She touch your soul. She say she try to strengthen you."

He snorted. "Even you don't believe that."

"I believe it. But it is not right."

Something moved in the desert. They both looked up, and Khulan made a noise in her throat. The shaman was approaching.

"Tell her to get lost," said Tanner. "Really. I don't need any more of her *strengthening*."

Dzaya stopped ten paces away, said something. Khulan sighed. "She want to look at you."

"She can see me just fine from there."

"That's not what she means."

Dzaya advanced. Kneeling before Tanner she touched his forehead and temples, looked under his eyelids, placed her hands gently against his chest. She muttered something in Mongolian.

Khulan cleared her throat. "She say you die once before."

Tanner looked at her open-mouthed. "What?"

"My sister. She say when you were young boy, you died. Yes?"

"I wasn't a *boy*," said Tanner. "I was thirteen. And she has no right to know that. . . ."

"So, it true?"

Small bells jingled as the shaman stood and went into the *ger*. No lights marked the horizon. Uncharacteristically, the night had become overcast; Tanner couldn't quite shake the irrational conviction that the cacophony and terror of the ritual had summoned up the clouds above them.

He got to his feet and stretched cautiously. His entire body felt like it had been run over by a steamroller, but his chest and heart seemed to be okay now.

"Tanner?" she prompted. "Is it true?"

He looked down at her. Khulan was very pretty, with those broad, fine Asian cheekbones, her slim body and smooth skin, her eyes full of concern. But she was almost certainly playing him. The shaman was, very obviously, the bad cop here. He had to be careful. Whatever was going on with these rituals and tricks, he could never forget he was their prisoner. If this made no sense to him, perhaps it wasn't supposed to.

Equally obviously, Tanner was not completely powerless. He had something they needed.

"It's true," he said. "When I was younger, I died for a while on the operating table. You can have that one for free. But you know what, Khulan? From now on, anything you want from me, you'll have to give me something back in return."

She frowned. "Like what?"

"Like who you really are. Who *she* is, this sister of yours. Where we're headed. Why it was so important to take *me*, of all people, out of Ulaanbaatar. And what this is all about."

"All right," she said, unexpectedly.

"What?"

Khulan reached out. "I promise. Shake on it."

Her hand was cool and smooth and surprisingly firm. Aside from his recent medical emergency it was the first time they'd touched, and the contact brought warmth to Tanner's cheeks.

"But not now," she said. "Tomorrow, by daylight. Now you must rest."

"Khulan—"

"By daylight," Khulan said softly, and if he had any further protest in mind, it evaporated as she squeezed his shoulder and walked away.

Their camels plodded across the desert, side by side. The midmorning sun already seared Tanner's brow. Khulan took a sip of water and said, "This is how Dzaya become *Udgan*—"

"Wait, what?" said Tanner. "*Udgan*?"

"*Udgan* mean like shaman, if woman," said Khulan.

"All right. Go on."

By now there were no mountains in sight, merely the bowl of the sky over the starkness of the land. Dzaya's camel was out half a mile ahead of the pack, then the men rode together in a cluster. The portage camels and those carrying Tanner and Khulan sauntered as slowly as they dared, till they got swatted or clucked at by the old man or the boy.

"Here is how Dzaya become *Udgan*. When we were twelve years old, our elder brother went mad. . . ."

Khulan had grown up in the *ger* suburbs of Ulaanbaatar, a single electric cable running to her family's felt tent, their water carried in by hand. Her father Banyan had a city job at a good wage, but although he could afford the better life, he was not quite prepared to relinquish the traditional dwelling he'd grown up in.

Khulan's eldest brother lost his wits a few days after his eighteenth birthday. For him, the Eternal Blue Sky was suddenly filled with brightly colored fish falling to the earth and dissolving. He would try to flee the *ger* and, restrained, would rave for hours. His mind was not big enough to encompass all he saw, and three weeks after the hallucinations began, he was dead.

Halfway through her seventeenth year, their sister Narantsetseg began to suffer the same visions.

This time her parents acted immediately. Visits to local Ulaanbaatar medical practitioners being of no avail, they prepared to take Narantsetseg north to their homeland, leaving Khulan and Dzaya behind. The twins, now fifteen, rebelled and demanded an explanation, and it was at that point they learned that their grandmother had been a famed *Udgan* of the Buryat people, up in the taiga forests near the border with Russia.

Before they could leave, Narantsetseg lapsed into a coma. She never regained consciousness.

Their twin daughters were now all the family that remained to them. Banyan and Sumiyaa admitted defeat, packed up, and headed north into the steppe, taking Khulan and Dzaya with them. They arrived in a nameless pine village in the mountains in early summer. Khulan, as the older sister by a few minutes, prepared herself as best she could for whatever might be about to befall her. But it was Dzoldzaya whom the gods touched next.

On her way to the spring to fetch water, a forest blew up out of the steppe in front of her. Multicolored fish swam before her eyes. Ghostly spirits on horseback surrounded her. Dzaya flung her water pail at the apparitions, and collapsed into rigid catatonia before she could flee.

Back in the village, Khulan fell to her knees at exactly the same moment, in reaction to the attack on the *ami*-soul the twins shared. But she had recovered by the time the men carried Dzaya back into the village, stiff as a board.

Khulan nursed her sister night and day. After four weeks, Dzaya regained awareness. The next morning she dressed and left the *ger* without a word.

No one followed her or tried to stand in her way. This was how it worked among the ancient peoples of the steppes. If a potential shaman survived the initial madness, the quest was their next compulsion.

By the time Dzaya returned to her village in mid-autumn to take up her new *Udgan* career, Khulan was long gone. She had packed up and returned to Ulaanbaatar, leaving her parents behind to live out their sunset years in the village of their birth.

Tanner wrinkled his forehead. "You just *abandoned* your sister?"

"She was fine," said Khulan, neutrally. "She had work to do. I had my own life to live."

"You were afraid," he said, slowly. "As the older sister, you'd been scared that you would be the next to suffer madness and die. You didn't want that. And when you were reprieved . . ."

"That was not a life I wanted," she said. "*Udgan*? Shaman? Telling men where to move their herds, finding lost things, helping girls with love lives, women raise children? That is no life." She took a deep breath and let it out slowly. "Sometimes these things choose you. But I was glad it was her, chosen."

"It must have been terrifying," he said. "The waiting. After seeing both your older siblings—"

"No," said Khulan. "It was fine."

"Right. And when did you next hear from Dzaya, after all that?"

"Not till the Chinese. Not until you." Khulan took out another cigarette. "Something else I did not choose."

"I didn't choose this either," he pointed out.

"No," she said softly. "I know."

They approached a camp of three *gers*, with half a dozen camels peaceably chewing their cud outside and a large satellite dish nearby. "Wadder," said Gerel-Huu.

Tanner had to wait at a distance with the boy while the rest of them went in to barter for water and other supplies; they could not risk his foreign features being

seen and later reported to the Chinese. After an hour or so the others returned from their negotiations with full waterskins, smelling of snuff, curd, and *airag*, noticeably louder and more cheerful than when they went in.

Soon after, it was lunchtime in the Gobi. Dzaya leaned over and poked Tanner playfully in the ribs, and gabbled something to Khulan. Khulan listened carefully, then turned to Tanner. "She say part of your heart, like a flapper, not work right."

Tanner blanched. "That's her idea of a joke?" He had no idea what a heart valve looked like, but "flapper" was too close for a casual guess. "How does she know that? You hacked into my medical records now?"

"There was no *hack*. She is *Udgan*. Distance and time mean little to *Udgan*. All is one." She paused. "Tanner?"

"I was in Children's Hospital, in Washington DC," he said quietly. "For a month and four operations, two of which I barely squeaked through. The second time, the doctors told me that technically I'd died, and they'd had to revive me with those electric paddles. The crash cart. They restarted my heart."

"Dzaya say, well then, now you die twice, and the second time we didn't need any paddles."

"That's enough," he said, afraid.

Khulan saw his expression, and sobered immediately. "Sorry. *Udgan* humor."

"So, what now?" he said. "Am I healthy, or not healthy? Am I on my last legs?"

Dzaya made a sound that was suspiciously like a raspberry. Tanner looked at Khulan, who said, "You were sick, and it leaves marks on your soul, marks that Dzaya can read. She say that now your heart is healthy like horse. But your souls are in three places."

"My souls what?"

She sighed. "This will take while to explain."

They packed up and got back on the camels. The afternoon sun lacerated Tanner's neck as he listened and tried to keep it all straight.

According to the traditional Mongolian view of the universe, Tanner (along with everyone else) had three souls. His *suld* soul resided in nature, and was connected to Father Heaven through the top of his head, while his *ami* and *suns* souls oscillated up and down the line of his chest, constantly out of phase with each other. The *ami* contained his current-incarnation and ancestral memories, and was connected upward to the World Tree. The *suns* was his collected experience of past lives and extended downward into the World River.

Two of these souls—the ones in his chest—would be reincarnated, waiting respectively in the Tree and River between lifetimes. His *suld* soul, however, would not; once he died it would become an ancestral spirit, living on in the natural world.

Children's souls, Tanner learned, were particularly prone to becoming dislodged. A near-death experience could definitely do it. And in Tanner's case, his souls had never recovered.

"So my *ami* soul was left half in the world above, up the World Tree; my *suns* soul is suspended between this world and the World River below, and my *suld* soul . . . ?"

"That one attached to you only loosely, but still intact."

"Well, thank heaven for small mercies."

As Tanner now understood it, his near-death as an early teenager had left his souls hopelessly tangled. Instead of oscillating, his *ami* and *suns* souls rested immobile in his chest, in permanent contact with the worlds above and below.

Shamans like Dzaya were capable of spirit journeys; they could leave their bodies and fly up the World Tree or down through the River. And Tanner could help her with this. Due to the traumas of his adolescence he was now a permanent gateway, a walking conduit.

"A gateway," he said. "Half of each soul inside me, and the other half in each location. A foot in each door. Wow." It sounded deep.

"And that's why you have trouble connecting with *this* world," said Khulan.

It was all beginning to make a horrible kind of sense.

Tanner pulled himself together. *Remember, this one's the good cop.* How much of this were they just making up on the fly?

But the more Tanner thought about it, the less he could figure out what they'd have to gain from weaving such a bizarre and elaborate tale out of whole cloth.

"Shamans live outside space and time. Dzaya can travel in either direction, forward and back, wherever she want, but to reach out into *both* planes at the same time, up into the World Tree and down into the World River . . . she needs a stick in the door."

"A stick," he said.

"You're the stick," she said helpfully.

"Yes, yes," said Tanner. "I'm still following this. . . ."

"When invasion of Mongolia began, Dzaya realized she need someone like you. She found you, steered me to you."

"And you . . . acquired me, for her."

"Yah. Something she needs to use you for."

"How did she know where I was?"

Khulan sighed.

"Oh, right, she lives outside of space and time, I forgot."

"Astral travel," said Khulan. "She come and look for someone near me who has what she need. She sense you; you transmit what you are. And she tell me and the boys where to find you."

"How did she communicate this to you?" he said. "Telepathy, through your *ami-soul*?"

"No. She call me on cellphone."

"Oh. You couldn't find someone who has what she needs among your own people?"

"Hospitals here not so good. If you were Mongolian, you probably die as teenager." She let that sink in for a moment. "And anyway, better you not Mongolian. No prior knowledge, no *miscon*?"

"Misconceptions," he said. "And no guilt. On your part, I mean. And no inkling on mine, about what's going to happen."

Khulan looked unhappy.

"Because I might not survive this," he said, and felt his heart skip a beat. Just one.

"You might," Khulan muttered. "It not clear."

Finally, he realized it. She wasn't playing good cop. And she wasn't falling in love with him, a possibility he had briefly entertained. Rather, she pitied him.

Well. She could cut that out.

Tanner forced a laugh. "Okay, then. So if regular people have three souls, but the two of you as twins share one, and two of mine are halved . . . then between us we have seven."

"Um," she said.

"And this is either all crap, or the best thing that's ever happened to me."

"What?" she said, startled.

And to his own surprise, Tanner realized he'd meant it. The excited, wonderstruck child he'd once been had become an unhappy man, blighted by his ailment even once he had recovered from it. Tanner had lost something during those dark days in the hospital, and nothing had ever replaced it.

Losing half his soul seemed as good an analogy as anything.

"Even if it's just a metaphor or whatever, it's how I feel. Not all here. Very finite. And that's why I started traveling in the first place; I was looking for something. Maybe it found me."

Khulan looked alarmed. "Don't buy in. I mean, this all true, everything I say, but . . ."
"What? 'Don't buy in'? Whose side are you on?"

"The side where I wake up in the morning okay with myself," she said. "I told you why you are here. I not say I liked it. I want lesser of two evils. But I don't know which is lesser, yet."

Never a straight answer. But, oddly, Tanner was getting used to it. "Hey. If your sister is outside time, can't she read the future and tell you what's going to happen?"

"Shamans are not fortune tellers," said Khulan unhappily. "The past is easier."

"Well, it would be."

She looked at him queerly. Somehow they'd reached another impasse, as if they'd been talking about two different things without realizing it.

"I will survive this," he said firmly. "Whatever it is. I promise you."

"Fine," said Khulan. "Do that."

They rode silently for most of the afternoon, Tanner lost inside his thoughts. As the sun approached the horizon Khulan stood up in the saddle, stretching her muscles. "Welcome to Dornogov."

"Eh?"

"We crossed into the next *aimag* now. Next Mongolian province. This morning we were in Dundgov. Now, Dornogov."

The flat plains around Tanner looked identical to those he'd been seeing for . . . how long? "Ah, of course. I should definitely have noticed."

"Smart alec," she said.

"At least this means we're closer to where we're going."

"Nope," said Khulan. "Actually, we're no closer at all."

The *ger* was up. Food was cooking. A brisk wind was kicking up the dust, and the men had installed the stove inside the *ger* instead of outside its door; smoke spilled out of the central hole in the roof.

Once dinner was over, Dzaya began pulling on her ceremonial garb. Tanner eyed the *Udgan*. "She's planning to dance again? Because if she is, I'll be waiting five miles away."

"It's safe. Don't worry."

"Yeah?"

"Yah. And you have to be here."

"I thought you said the rituals weren't for me?"

"I meant, not for your entertainment."

"Well, you just tell her to be careful this time."

They were sitting cross-legged on the floor. Khulan leaned forward and touched his knee. "I will."

Captured within the confines of the *ger* the scent of juniper was even more overwhelming. The drumming got inside Tanner's ears and echoed down through his spine. But Batjargal's singing was quieter, more beautiful, less alien, and Gerel-Huu's *morin khuur* playing was calmer and more delicate. If the previous night had been rock and roll, tonight was a ballad.

And so Tanner was lulled into a half-sleep by the time the shaman's dance tugged at his souls.

Visions spattered before his eyes: a crow, a fir tree. A thing like a broom with black bristles, mounted over a large *ger*, glistening in the dawn.

An army on horseback, galloping across the desert, ready for war.

Tanner toppled onto his side, saliva on his chin, his heart twisting painfully with every drumbeat. Redness flooded his vision and drowned out the complex images.

An arrow of pain pierced him, and he blacked out.

"You promised me. You bitch, you promised. . . ."

"It was not me broke promise! Wait here!"

Khulan strode away. Tanner heard the smash of breaking pots, two female voices raised, almost barking at each other in the still of the night. Men's voices raised too, obviously trying to calm the sisters. But Tanner felt no interest in their fight. For all he knew they could just be playacting. And, besides, these could be his last moments on Earth.

He was outside the *ger*, flat on his back in the desert gazing up at the stars. Was this how it would all end? His heart exploding in the space between drumbeats as a crazy nomad shaman leaped above him in a trance, throat-singing and a horsehair fiddle the last sounds he would ever hear?

And after that, the splitting up of his already insubstantial personality into three different souls. Or, perhaps, an eternity of night, with not even the stars for company.

It would take the men an hour to dig Tanner's grave, and no one would ever find it. Nobody back in the real world would ever know what had become of him.

Few would even think to ask. In some very real ways, Tanner really was dead already.

He heard footsteps. Khulan was back. Tanner sat up painfully. His heart still beat twice a second, and too heavily for comfort. But at least it was beating.

"Can you stand?" she said. "Come back inside."

"No."

She draped a blanket over his shoulders, sat down beside him. She held his hand. He felt nothing.

Every day, every night was taking him further and further from the world he knew. Further from reality. Closer to death.

There was a nugget of truth here, if he could only grasp it. Sitting here, with an *Udgan*'s sister's hand in his, he gave it a try.

He reached out, cautiously, with his mind. Reality expanded around him. He could almost feel the wetness of the World River, its water thick as blood. Where was he going, which of his souls led this way? He couldn't recall. The name didn't matter anyway, not when he could *feel* it.

No. *Don't buy in*, he thought, and let go of Khulan's hand.

"You guys are killing me," he said. "Deny it."

She lowered her head and said nothing. Tanner felt the world contracting again, confining him. Trapping him.

"All right, then. I'm done with Dzaya. And I'm done with you too. Whatever game this is, you'll have to play it without me."

Khulan reached for a cigarette.

"And for Christ's sake, stop smoking. You reek."

She halted, shocked. "You are unkind man."

"Yeah. But at least I never kidnapped anyone."

She dropped the cigarette onto the ground. "Fuck you, Tanner," she said, very quietly, and left him out there alone.

That was better. Now a man could hear himself think.

Tanner felt dampness on his face, tree bark at his fingertips. He curled in upon himself and was gone.

When the men came outside the next morning, Tanner would not wake up. They dribbled water between his lips and carried him bodily to his camel.

He regained consciousness in the middle of the afternoon, clutching his chest, pain

written all over his face. Although Khulan rode by his side, he did not really see her. By the time they made camp Tanner was comatose again. They performed no ritual that night.

The next day was the same. In the evening Khulan dragged Dzaya away into the desert, though the sound of their argument echoed clearly back to the men who smoked cigarettes and drank *airag* by the stove.

That night they placed Tanner in the privileged south side of the *ger*. Dzaya arranged herbs around him, and said words over him. Then she went outside and spoke more words to the Eternal Blue Sky, now black and bejeweled with stars.

Tanner finally awoke on the morning of the third day. He stumbled out of the *ger* to find it surrounded by tall slender stone pillars, carved and painted in fanciful swirling patterns of red and ochre. Even more alarming, the camels had disappeared. "Hey," he said. "Hey! Khulan! Batjargal!"

Dzaya appeared in the doorway of the *ger*, blinking owlishly. Tanner gestured at the stones and the otherwise empty desert. She smiled, took up her wooden milk spoon, and went off to drone her morning incantation blessing the four cardinal directions.

"Deer stones," said Khulan, a blanket over her shoulders against the morning cool. "Very old. *Neo-lee* . . . ?"

"Neolithic," he said.

"Yah. Older than old. Nobody know what for." She placed her palm flat against the face of the nearest monument. "Beautiful. Many in Mongolia, in groups like this. Famous."

Tanner saw now that the regular geometric flourishes on the marble monolith were actually a series of twelve stylized deer, leaping into the sky toward a carved sun. But he was more concerned at their sudden lack of transportation. "What about the camels?"

"The men take them away. Horses arrive later."

"The men?" He hurried back to the *ger* door. Sure enough, Batjargal, Chagatai, and the others were gone too. He was stranded in one of the world's most inhospitable landscapes with two women of questionable sanity.

The terrain about them was subtly changed; hillier with sparse grasses underfoot, a herd of goats in the distance tended by a solitary Mongolian. Tanner checked the horizons carefully. What if the Chinese had come upon them in the night? If they showed up now, where could he hide?

"Tanner." Khulan pulled at his elbow until he was facing her. "How you feel? Your heart okay?"

"Sure. What do you mean by 'later,' exactly?"

She shook her head. "Later."

"Great."

The sun was overhead when dust smudged the skyline once more. By then Tanner had stared at the deer stones for so long that their ancient patterns were ingrained on his brain.

Three men arrived, with eight horses between them. They wore longer tunics than he was used to, patterned in brown with bright yellow belts and wide sleeves, held together with clasps rather than buttons. Hard-eyed and craggy-faced, these new guys were the real deal: Buryat horse nomads, Mongolian old-school. His first four captors had been city slickers by contrast.

They dismounted and bowed low to Dzaya, sparing only curious glances for Tanner and Khulan. Khulan nodded to them but made no attempt to speak. Clearly she did not know these new men. Fetching her water bottle and her tiny pack, she chose a piebald horse for herself and waved Tanner toward another with a deep chestnut

coat and bushy black tail. One of the men picked up their bedrolls and Dzaya's drum and shaman bag, and stowed them on a spare horse without a word.

The horses were small but alarmingly spunky. Tanner eyed the steed intended for him. The horse stared him down effortlessly. "What about the *ger*?" he said, stalling.

"We leave it behind," said Khulan. "Travel light, for speed. This is turning point. We head north. From now on, we get closer."

After spending weeks covering a couple of hundred miles, they were suddenly in a hurry? "Closer to what? What about food?"

"The men handle all that. Get on horse."

Tanner tried. It went poorly. Dzaya summoned one of the nomads to lengthen the stirrups and hold the animal steady while Tanner gave it a second shot, this time with more success.

Tanner patted the creature's mane, relieved to be aboard. "What's he called?"

"Our horses, we don't give them names," said Khulan. "Not camels either. Only dogs."

They set off, trotting north. Even though Tanner was lower to the ground than he'd been on the camel, he felt much more precarious, as if he was riding a stick of dynamite. His horse had pegged him as a novice, and it was all Tanner could do to keep it from either enthusiastically cantering into the lead or wandering aside in search of scrub grass to snack on. He was saddle-sore within the hour.

Dzaya rode at the head of the group, and the men continued to treat her with almost obsequious deference. Khulan they ogled openly, and perhaps because of that she rode close by Tanner. He couldn't exactly blame them—Khulan made a nice enough shape, sitting up straight in the saddle—but he sympathized with her obvious unease. After their camel trek, the lack of conversation in the group was striking.

Toward noon they were buzzed by a brace of ROCAF fighter jets, the red stars bright on their fuselages. When the planes swung around again for a second look, the Mongolians cheered and waved red Chinese flags up at them with passably faked enthusiasm. The planes wobbled their wings in salute and continued westward.

Over lunch, the men relayed news from the wider world. Khulan translated for Tanner.

The formerly free nation of Mongolia had been absorbed into the Mongol Autonomous Region, which had previously consisted only of the provinces of Chinese Inner Mongolia. All internal news media were strictly controlled and the internet carefully censored by the Beijing Communications Administration. To all intents and purposes Mongolia was under a military lockdown, and had vanished behind the Great Firewall of China.

Not that anyone was having much difficulty following developments within the new Chinese territory. At least twenty thousand Mongolians had died under Chinese tanks in street protests. Estimates of the numbers of political prisoners in custody varied from a few hundred to several thousand. News was leaking out of torture with electric shock batons, beatings, sleep deprivation, solitary confinement. Two schoolchildren, aged twelve and thirteen, caught daubing "Free Mongolia" slogans on a police station wall had been beaten till hospitalized.

Most Western countries had backed the U.N. resolution condemning the violence and human rights abuses in Mongolia, but no one was proposing diplomatic sanctions, let alone military action. Without continued Chinese investment, the American and Japanese economies would collapse; without America or Japan to lead the charge, no one else was about to stand up to the Chinese dragon. The annexation of Mongolia was a *fait accompli*.

Meanwhile, China was moving quickly in its takeover of Mongolia's mineral wealth. Mongolia had substantial resources—copper, coal, molybdenum, tin—and the Mongol Autonomous Region was already on a fast track to highly developed in-

dustrial squalor. Western Chinese were being resettled into Mongolia, while entire Mongolian towns were being forced to move into Western China, as part of a regional homogenization program. It was an ugly picture.

Tanner stirred. "Enough. I get it. Tell me what I can do to help."

"You're helping already," said Khulan. "My sister's dances. Your energy."

He paused. "Something else."

"There is no other way you can help, Tanner."

"Because I died once or twice? You're going to have to explain it better than that. I mean, World Tree, and, what . . . ?"

"Is not for your head to understand," said Khulan. "Is for your heart."

"Oh, my heart," he said. "Sure."

Under open skies, Dzaya danced. There was no drumming now, no music or *airag*. This was serious business. Tanner's skin felt hot, accompanied by a coolness in his chest that he couldn't fathom, as if his head and his heart were not quite on speaking terms. But at least tonight there were no mule-kicks to his chest.

The evening was almost anticlimactic. As they arranged the sleeping rolls around the dying fire, Tanner touched Khulan's arm. "Hey."

"What?"

"Tomorrow morning you're going to tell me where we're headed."

"All right," she said. "No problem. Go to sleep."

"We go here," said Khulan, pointing. "Mount Burkhan Khaldun."

Around them the men were eating breakfast. Neither Khulan nor Tanner were hungry. The map crinkled and flapped in Tanner's hands. "And that's what, exactly?"

"Mountain," she said with infinite patience. "Large hill."

"Yes, yes, of course," he said. "But, significance of mountain?"

"Land of Chinggis Khaan. His birthplace, sacred place."

Tanner studied the map more closely. Mount Burkhan Khaldun was not even marked; there was an empty expanse where Khulan was indicating. All he saw was a dotted line delineating the extent of the Khan Khentii Strictly Protected Area, apparently a wildlife protection zone.

"That's east of Ulaanbaatar. I spent weeks baking in the desert just to end up there?"

Khulan nodded. "The Chinese blockaded it for a while. Burkhan Khaldun is holy for Mongolian peoples. Many would try to reach it from Ulaanbaatar. This was best way; come south and then move east, wait for UB to calm down, then head north."

"Do the Chinese still guard the mountain?"

"We not sure."

He paused. "All right. And *why* do we go there?"

"I told you. Chinggis Khaan was born there, went back there often. Buried there. And Chinggis Khaan is heart of Mongolia."

"So what? I mean, with all due respect and everything, it's not like he still lives there."

"To Dzaya, he does. To her all times are one, all distances are one."

"Khulan . . . if all distances were one, it wouldn't matter where we went."

She sighed. "Our mother tell us that Dzaya and me, we're descended from Borte. The Khaan's queen, first queen of Mongolia. And powerful *Udgan*."

"Many Mongolians must be in that line. That's simple arithmetic."

"But for us is direct through the female line, through our mother Sumiyaa and back. For Dzaya, the power comes down that path. It's a connection we can use."

"The power to . . . ?" He raised his eyebrows.

She pulled out a cigarette, put it away again, then rather rebelliously pulled it out once more and lit it. "The power to move between spaces."

"Khulan, I already said I want to help. But what you tell me has to make sense."

"All right. You hold open the gates for Dzaya. Dzaya then free to use all her own energy for the direction and for the power." She fidgeted. "It is unusual path that she follows. But the only way she can get the help Mongolia needs."

"You mean, help from Genghis Khan?" Tanner laughed. "Sure. And in England, King Arthur will ride again."

"Be quiet," she said levelly. "This is not your land, not your understanding."

"And yet, still you need me."

She looked away, and Tanner had to lean in and strain to hear her next words. "Desperate times call desperate measures."

"But you're not happy about it."

"It may be dangerous. May cause a split in the world. Is not the way we should go. Is not the right path."

"Even in desperate times?"

"Not at that cost," she said.

Khulan had turned away from him, uncomfortable under his stare, but it wasn't her profile he was studying. He was watching her cigarette burn down ever more quickly, as she sucked the essence of it into her lungs.

"I'm not just the stick in the door, am I? I'm the fuel."

She blew smoke away from him.

"Use me," he said. "What you meant was, *use me up*."

Khulan did not even blink.

"Use me up," he said. "Well, that's very nice. Just terrific."

He stood and paced back and forth. The dry grass crackled as he turned. He wondered how much longer his shoes would last under these circumstances. Before he got a hole in his sole. Ha.

Father Heaven stretched above him. Why pick a World Tree as your symbol, when there were no trees to be seen? A World River where there was no running water? Of course, Dzaya came from further north, and much of the Mongolian tradition originated there too.

Tanner felt strangely calm. Was it because, deep down, he just didn't believe it? Or because he didn't care?

But he *did* believe it. Because he believed *her*, Khulan. Either she was the best actress in the history of Asia, or she was deeply and genuinely conflicted about what might happen.

"We'll find a way through this," he said.

She glanced at him, uncomprehending.

"Tell me. Does it *have* to be like that, with me getting 'used up'? Surely there must be some other way?"

"I don't know."

"Let's find one. Tell Dzaya I'll help her."

From where she sat with the men, Dzaya looked sharply across at Khulan. Tanner grinned. "Yeah, I always figured the old witch understood more than she let on. Well, go ahead: ask her what I have to do. Complete cooperation. I mean it."

"Don't mean it," said Khulan, unhappily. "You start this, it will be hard to turn back."

Tanner laughed, a raw and abrasive sound. "Christ, Khulan. Where the hell do you think *back* is, for me? And how would I ever get there? There's more to life, is what you're telling me. Something more important than just me. And it's happening *here*, with you and Dzaya. I want to help. What the hell?"

"I only try to protect you, Tanner," she said quietly.

"We're beyond that," he said. "Stop trying."

Not that Tanner had great intuition where women were concerned, but suddenly the pieces were falling together in his mind. "Because it's *you* who can't turn back. You're not afraid for *me*. You're afraid for yourself."

"I am afraid for both of us. But, right; if I help, I cannot turn back either. I'm trapped in her world."

"It's the world we're in," he said, practically.

"But is not your brother and sisters who went mad." She blew out air in frustration. "This is not right! Riding about in wild places with my sister and her crazy Buryats? Is not my dream for my life! I want the *real* world, modern world. I am town girl! I had good job there, with telecom company. I want the future. Mongolian future, not Chinese future! Past should stay past!"

"Well, I want a lot of things too," he said. "But it looks like we have very few choices left."

He looked at Khulan, who was looking worriedly at Dzaya. "Right?"

Khulan stood abruptly. "Shut up. Now, time to ride."

Their horses were carrying them north much more quickly than the camels had brought them east. They traveled through true Mongolian steppe country now, grasslands that rolled right over the hills and undulations in their path, never flat, never steep. And as the hills grew more substantial, suddenly there were trees as well, but in a peculiar pattern: the south-facing slopes of the hills were grassy, while the north-facing slopes were forested. It was an addictively odd-looking landscape, but when Tanner asked Khulan, she just shrugged and said "Soil dryness," as if that explained it all.

The land was still almost empty. Mile after mile passed under their horses' hooves without a single indication of a dwelling, let alone a village. After the visual deprivation of the Gobi, Tanner found himself almost dazzled by the terrain and its startling green. It was a landscape out of a dream; remove the Chinese invaders, his saddle-soreness, and the terrible uncertainty about his future, and Tanner could grow content in a countryside like this.

The day went by more easily and comfortably than any he could remember in his strange new life, and then it was evening and they rode over the crest of a hill and down into a valley.

Two *gers* awaited them. From one came a thin trail of smoke out of the central hole. Tanner didn't see anyone, but the site hardly looked unoccupied.

Khulan half smiled, her mouth a thin line. "Famous Mongolian hospitality."

"Do I have to wait out here again?"

"Nope. These are here for us to stay in."

Someone had left a camp for them? "Dzaya and her boys have friends," he observed.

"Yah," said Khulan. "Very many."

And Dzaya's friends must be pretty well-to-do, because the *ger* they ushered Tanner into was easily the most luxurious he'd seen. It was a full twenty feet in diameter, and tall; even when he stood by the wall, Tanner did not have to stoop. And the walls, rather than the plain and undecorated wooden lattice-work that he was accustomed to, were adorned with a variety of items. In the center across from the doorway he saw a small altar with Tengu paintings, blue scarves, and framed photographs of a good-looking Mongolian family. On the right-hand, man's side of the *ger* hung a saddle, a bow and arrows, a *morin khuur* and, rather incongruously to Tan-

ner's eyes, a bright blue and red wrestler's suit. The left-hand, woman's side had fine copper pots and pans, an *airag* bag, a coil of rope and a branding iron, blue scarves, and children's colorful ceremonial *deels* on hangers, a two-sided jacket lined in sheepskin for a boy and one-sided silken jacket for a girl.

The *ger* was so clean and tidy that it felt like a museum. Tanner was afraid to sit his dirty self down on the bed for fear of desecrating it. The others, however, plopped down with sighs of relief, dust rising from their clothing, and one of them pulled some wood from a basket and applied it to the stove in the center, directly under the crown of the *ger*.

Their anonymous benefactors had left them good food: chicken, canned vegetables, things Tanner hadn't seen for weeks. There were many drums and plenty of vodka as well as *airag*. Here, even Khulan sang.

The chants, the drumming, the smoke from the incense and the burning juniper branches and cigarettes, and the vodka in Tanner's system; all conspired to confuse him. The air thickened around him, while at the same time the roof of the *ger* seemed further above his head and the walls receded before his bleary eyes. He was drunk, he realized; terribly drunk, very tired, and almost certainly dehydrated. He needed fresh air, but his limbs seemed soaked in molasses, his feet unaccountably heavy and anchored into the earth. The swaying figure of the *Udgan* shimmered, and Tanner closed his dizzy eyes and waited to swoon.

It didn't happen. A gout of new fire-smoke wafted into his face and displaced the incense. Once it abated, the smell of unwashed bodies around him seemed heavier and even more laden with the aromas of horse sweat and leather. The sounds of singing faded. Cool air flowed across Tanner's chest. Someone must finally have opened the door of the *ger* to get a breeze through.

Tanner's nausea took a step back, and the alcoholic pulse in his temples relented. If the ritual was over, maybe he could persuade someone to pour him a cup of water. He opened an eye.

The *ger* walls no longer surrounded him. Above him was only an Eternal Sky of the deepest blue-black. Obviously he had passed out after all, and they'd dumped him outside. Probably afraid he'd throw up on the fancy rugs in the borrowed *ger*.

He sat up, ready to find Khulan smoking a cigarette in the cool night a few paces away, and instead found himself surrounded by a sea of sleeping men in armor.

Tanner froze. Only his eyes moved. The hand he had pushed himself upright with rested just a few inches from the shoulder of a stocky, impressively muscled Mongol in leather-slatted armor. The warrior's moustache quivered as he exhaled. Behind Tanner sprawled two more soldiers within easy reach, similarly attired, both fast asleep.

Hundreds of campfires dotted the plains around him. Dark figures stretched out on the ground, some lying down, others sleeping hunched over with their heads on their knees. Many clutched their bows even in slumber. Just fifteen feet away a horse lifted its head to look at him. The Mongol warriors and their steeds slept side by side, thousands upon thousands of them.

Tanner must be hallucinating, just as Dzaya had once imagined herself strafed by fish from the skies. He could hear nothing at all, he realized; a sleeping army lay all about him yet he heard not a single snore or whinny, not even a breeze across his ear.

Should he stand and try to tiptoe his way out of here? But the men and horses were so close-packed that he surely wouldn't get far before he accidentally trod on someone, or until one of these terrible warriors awoke of their own accord.

Tanner felt a gentle pressure on his right shoulder. Before he could lose his balance, another weight pressed onto his left. He reached up with his free hand and felt a foot, small toes, but he saw nothing but the night and the army.

Bare feet upon his shoulders, and now Tanner felt invisible hands tugging at his arm, and an alarming sense of dislocation as his feet seemed to be pulled *into* the earth beneath him. His heart began alternately skipping beats and thumping painfully hard, fighting for release as his whole body stretched and attenuated and the weight pushed down on his shoulders ever harder, the disembodied hands still shoving and pulling at him, and all around him the terrifying silence of the sleeping, heavily armed horde.

Tanner couldn't fathom it. None of these sensations made any *sense*, and his terror turned into panic. He swung his arm and his fist smacked into flesh; he twisted and rolled, mindless of the warriors around him. For they must be an illusion, the herbs of the shaman disarraying his senses for her own purposes, even as the hands and feet that assaulted him were real.

And he surely wasn't wrong, for in the next moment Dzaya fell and sprawled across him. He kicked at something, but it was a stool and not an armored shoulder. The air he breathed was laden with rank female sweat rather than the reek of leather and horse. Sound returned with a screech of curse-laden Mongolian. The sky of his dream had gone, replaced by the ceiling of the *ger* with its sun-like array of poles spreading from the central circular crown.

Furious, Tanner lashed out again and heard a howl as his blow connected. Then one of the Buryats was dragging Dzaya away, while another held Tanner down and Khulan scrambled backward across the floor away from him, sobbing and holding her head, the smoke from the fire swirling around them as she fled out of the *ger*, into the night.

Cigarette smoke spiraled into the sky. Tanner sat down beside Khulan. "What happened? What did you do?"

"I not speak to you."

"Khulan . . ."

"No. No. No. This all wrong."

He hesitated. "Khulan, did your sister and I fight? What did you see?"

"You in a trance," she said. "Dzaya, her hands on your shoulders, trying to lift you up. Then, you hit her."

"That's not what happened."

"Vodka, smoke. You see things."

Tanner breathed deep. The empty steppe stretched away around him in the darkness. How far had he come, that this bleak terrain now defined his normality? "And you don't want to know what *I* saw? Where *I* thought I was?"

"No."

He gave it up. "Fine."

"Is not fine," said Khulan automatically.

"Whatever."

He looked back toward the glow of the *gers*. Khulan had run almost a hundred yards away and then collapsed onto the grass; if she hadn't immediately lit a cigarette, it might have taken Tanner some time to locate her. He had thought that Dzaya might follow them out here, or one of the men, but the doors were closed now, the *gers* misleadingly tranquil.

"You stopped it," he said. "It was all happening. Dzaya was using me to move between worlds." Suddenly he laughed. "I always thought astral travel would feel more like flying. Less like a human pyramid."

"It's all bullshit," she said.

"No, it isn't. It's all real."

She turned on him furiously, crawling on hands and knees toward him with her cigarette jutting in front of her like a weapon. "To you this is exciting! To you this is,

your life means something, adventure now!" Khulan's English was deserting her in her anger, yet her meaning was clear enough.

He leaned toward her, careless of the smoldering cigarette inches from his face. "And to you, what? Let me tell you about *death*, Khulan. *Death*. Being a kid and thinking—knowing!—you're about to die. It's a huge sadness, a desperation . . . I was just a kid, I hadn't done *anything* yet, and it was all slipping away like water going down a plughole. I hadn't *lived*. I guess I shouldn't even have known what I was about to lose. But I did."

"So keep your damned life!" she shouted. "Get away from my sister!"

"We're the same, Khulan. For me it was hospital lights and sad faces, and it broke me. After that, I could never be happy again. For you it was your brother and sister, and madness and the Eternal Blue Sky. That's why you hate all this, because for you *this* is death, and your fear is all you can think about."

"Bullshit!" she said.

For the first time in his adult life, not everything was out of Tanner's control. Quite the reverse, he felt an assurance that bordered on the manic; at last, he was *gaining* command of this crazy situation. He had been forced away from the small daily choices into the larger, more cosmic decisions: Life. Death. Eternity. Loss. Sacrifice.

"There are other worlds!" he shouted. Khulan was sitting upright now, and he had grabbed her hand. She squeezed it almost painfully, still glaring into his eyes. "Other . . . I don't know. Dimensions! There *is* a meaning to all this somewhere!"

He had to help Dzaya. And Khulan had to accept that. For her the spirit path was a leap backward into the limited world of the past, into superstition and fear. It was a dreaded family obligation, a millstone around her neck to be evaded at all costs. But Tanner welcomed those things. They made him feel truly alive.

Khulan wanted to live in the modern world. Tanner already knew he couldn't.

"You don't know anything," she hissed. "So shut up!"

"I know everything I need to," he said, simply.

"You are just rat," she said. "What? *Ration*—?"

"Rationalizing, yes! And you're in denial!"

As a young teenager, Tanner's skin had seemed so soft and fragile against the blazing lights of the ER. Memories of death had haunted him ever since. Now his skin had hardened in the sun. He had bathed in the light from Father Heaven. It was a big sky, and even bigger than he could yet fathom.

"Admit it," he said. "We traveled. *Something happened*."

"You imagined it!" she shouted in his face. "You're crazy!"

She was merely strengthening his conviction. Power surged through him.

Her burning eyes focused upon him, her face only inches away. Perhaps she was the first person who had ever really *seen* him.

And in return, Tanner knew Khulan now; her smiles, her rages, the smell of her sweat. They were no longer merely captor and hostage; they were companions in this, and more than companions.

Khulan cared for *him*. She was afraid for *him*. He knew she did.

He touched her cheek. He almost expected to strike sparks off her but he did not; he could feel the softness of her skin, the firmness of her cheekbone under his thumb. He put his hand behind her head to draw her lips closer.

She dropped the cigarette. In the darkness, he did not see the slap coming. He felt it though, bitter and hard as one of the sour cheese curds the nomads served with dinner. It knocked his head to the right and he lost his balance, sprawling in the grass.

As Khulan stomped away, Tanner bowed his head, and tried not to listen to the blood rushing in his ears.

* * *

That night Khulan slept with Dzaya in the second *ger*. The next morning she refused to speak to Tanner, refused to even acknowledge his existence.

In contrast, the incident was the making of Tanner as far as the Mongol men were concerned. When he sat down at their early-morning fire, shrugging ruefully and making the signs universally recognized between men the world around, they welcomed him with companionable grins and poured him coffee. When it was time to ride, the youngest of the men spent a little time adjusting Tanner's saddle and stirrups, and even—rather alarmingly—half-slapped the face of Tanner's horse, perhaps admonishing it to behave better in future. When his nameless horse inevitably veered off in search of a snack, the oldest of the men galloped over and forced it back into line with the others. Greatly daring, Tanner dug in his heels and challenged the man to a race over the next few hundred yards. He lost tidily, but once again the sound of cheerful laughter echoed across the steppe.

Soon after, Tanner had the men's names memorized; from youngest to oldest, he was riding with Chudruk, Bauga, and Ivaandjav. Tanner rode alongside Bauga, mimicking his position in the saddle and casual way of holding the reins. Before long, the nomad had taken personal responsibility for improving Tanner's horsemanship, teaching him entirely by example, sign language, and amiable mockery. Tanner's riding skills improved noticeably over the next two days, and despite the additional efforts he was now nowhere near as sore when they dismounted for the evening.

Dzaya and Khulan rode some distance behind and some distance apart, talking rarely, never smiling. It was clear that neither had anticipated this sudden shift in the group's internal politics.

Dzaya's presence increased as the terrain evolved. In the Gobi she had seemed unremarkable. Here, she was essential. Returning to the steppes and forests of northern Mongolia, she was returning to her power. Here, her dances made sense; here she was truly *Udgan*.

Their rituals took place under the stars now. They had left the *morin khuur* behind; now it was just the remorseless beating of the drums and the gravelly *hoomei* wail as Chudruk sang down the hills and the flames from the fire leapt up toward the Eternal Sky. As the shaman capered Tanner felt his heartbeat synchronize with the drumbeat, the twin throbs deafening in his ears. Out in the dark he saw shapes moving just beyond the reach of the flames' light. Creatures with two legs, and creatures with four.

His dreams came faster now, and more vividly; images of a dark army whirling across the steppe under a black spirit banner, lightning fast and incredibly maneuverable. He felt the weight of years, the power of history.

Khulan did not speak to him, and thus nobody else could either, except in the most primitive of sign language. Tanner barely cared. His brief infatuation with her had washed away as speedily as it had grown. He knew the part that adrenaline and hormones had played in his embarrassment, realized how he had misread the situation and failed Khulan and himself. Yet it seemed insignificant against the background of the new energy he felt and his new comfort with the men and the terrain. Tanner would wait patiently, and see where fate led them next.

As the forests around them grew larger and heartier, fate led them inexorably to a tree. And as the visions of the leather-clad horsemen grew stronger and Tanner grew ever tougher, fate led them inexorably to an army of thunder and steel.

Khentii *aimag* was as different from the Gobi as it could possibly be. The region they rode into now was mountainous, craggy, and well-watered. As the days went by and they approached the Onon-Balj confluence in the north of the *aimag*, it was

clear to Tanner that, having spent so long in the bleakest and hottest of deserts, they could now not be far away from the lakes and forests of Siberia.

The tree was scrubby and not tall; it extended a bare twenty-five feet toward the Eternal Blue Sky. Each branch stood alone, sparse of foliage. Scraps of blue scarves dangled from the lower branches. Dzaya, Khulan, and Tanner circled it three times, with varying degrees of reverence.

Dzaya spoke. Grudgingly, Khulan said, "She ask what you see."

"Sad-looking tree," said Tanner. "Presumably stunted by the winds. Blue scarves." They were on higher ground now, starker steppe with rocky outcroppings; a ridge of low mountains rose ahead of them in the middle distance.

Khulan relayed the message. The shaman looked grim. Tanner added, "Oh, and the skull and the old rattle wedged up in the high branches, of course."

Khulan gaped up at the tree, turned her head slowly to look at him. "Tell Dzaya," he said.

A babble of conversation broke out behind him as he stepped forward and placed his palm against the tree just as Khulan had done to the deer stone. The trunk felt wet to the touch, though his palm came away dry.

Dzaya joined him at the tree, placing her hand on its bark next to his. Khulan came closer. "This Dzaya's shaman tree. Where she came when she was mad. This was her quest-place. Here, she came into her power."

"And is that her skull too? So to speak."

"After becoming shaman she get horse, to ride around the villages. She say then, 'This is a good horse, when he dies I will honor him by putting him in this tree.'" Khulan paused. "I cannot see the horse skull. And not the drum either."

"It's a rattle," he said. "And, a favor? Even if I'm a good sacrifice, don't honor me by cutting my head off and putting it in a tree."

"Your humor is bad," said Khulan. "Especially here."

"I meant no disrespect to the tree. What now?"

Dzaya spoke, and Khulan translated. "She say this prove that you are the one she needs, who holds open the doors to higher plane and lower. Here she will walk on your shoulders. It's metaphor. You understand metaphor?"

"It's not a metaphor, Khulan. You know that."

"And she say . . . oh, shit."

"Hey, now. Not in front of the shaman tree." He turned to see where she was looking.

Across the steppe, halfway to the horizon, a column of troop carriers and tanks was racing toward them, their speeding wheels and tracks throwing dust into the skies.

Dzaya was already climbing the tree, trusting her weight to its thin branches. "Uh, be careful," said Tanner.

The rattle was wedged firm. Dzaya had to use both hands to free it. Dropping it down to Tanner, she quickly clambered back to ground level.

It was a gourd, painted black and red. Tanner shook it at Khulan, and it made a thin reedy sound as the seeds within it cascaded over one another. "Yes, yes, of course I see it now," she said impatiently.

The clatter of the rattle had a sudden and intense effect on Tanner, tugging his hands downward as if it were a dowser's twig. At the same time he received a vision: under the soil flowed a subterranean river, dour and relentless; the very *wateriness* of it alien and threatening to the landscapes they'd spent the past weeks traveling through.

The ground might give way and dump him into the river's chilly flow. He grabbed Khulan's arm, managing not to drop the gourd in the process. "Wow."

"Don't touch me," she snapped.

Bauga brought forward Dzaya's drum and quickly retreated from the shaman. The babble of the men's consternation rose.

"Guys, be quiet," said Tanner. "Khulan, shut them—"

Dzaya struck the drum in a heavy, thick, immediate rhythm. The earth twisted, and Tanner fell to his knees.

"No!" Khulan ran forward. "Dzaya, no, stop . . ."

With difficulty, Tanner lifted his head to meet her gaze. "It's all right." He shook the rattle, in time with the shaman's beat.

This time he helped Dzaya, instead of fighting her. This time when the *Udgan* stepped up onto Tanner's shoulders, he raised his hand to aid and steady her, and Khulan did not interfere. His *suld* flared in pain as Dzaya put her hand on the crown of his head to stabilize herself; freed from her physical being, she was naked force now, unmediated by skin and bone. Tanner himself felt ridiculously elongated and warped, like a mirage, reaching out of this landscape, this Mongolia, casting ethereal hands down through the loam to the water, up through the blue air to the flaming sun. The World River cascaded over his feet, the branches of the World Tree twined around him, as he stretched to help propel Dzaya in another direction entirely.

The shaman leaped. Her harsh, insistent drumbeat ceased.

"Dzoldzaya!"

Khulan's shriek was more terrified than anything Tanner had yet heard. He glanced up, but Dzaya was not in the tree above him.

"Get her back!" Khulan screamed. "Where is she, find her, get her *back!*"

Tanner looked all around. Dzaya was still gone. Khulan's hands were up at her temples, tearing at her hair. The men stood frozen. Without Dzaya, the group had lost its center.

He scanned the steppe. The column of Chinese armored vehicles was still heading their way, many miles distant but moving fast. Running to his horse, he swung himself up into the saddle in a single motion. He clapped his hands to get their attention. "All right, Bauga, Ivaandjav, Chudruk. We go!" He pointed. "Khulan! Come on!"

The men mounted up. Khulan put her hands on the tree trunk, searched the empty tree with her eyes. She babbled briefly in Mongolian and then switched to English. "What if Dzaya comes back? We can't leave her!"

Tanner still felt the imprint of the shaman's hand on his *suld*. Images of Mongols swirled around him, moving in and out of his view, ghostly in the bright air. Though they seemed ethereal, Tanner trusted the idea that they were truly living men, and nearer than they had been before. All times were becoming one. "Dzaya isn't coming back, Khulan."

"We can't outrun them!" She gestured wildly at the tanks, the Mengshi.

"Well, we certainly won't outrun them standing here, Khulan, let's *go!*"

When she still failed to act, Tanner turned to Bauga. "Gun?" He made a crude pistol shape with his fingers, his thumb the firing pin, and reached out to the nomad. "Come on, Bauga, I know you've got one."

Bauga looked back and forth between Tanner, Khulan, and the Chinese vehicles that bumped over the landscape toward them. Then he reached into the folds of his *deel* and brought out a machine pistol. Tanner grabbed it and pointed it at Khulan. "Get on horse. Now."

Eyes wide, moving as if she were underwater, Khulan stepped away from the tree and reached for her horse's reins.

"All right. Bauga! Burkhan Khaldun?"

"Burkhan Khaldun." The Mongolian pointed, and spurred on his steed. The other four pulled their horses' heads around and galloped after him, toward the waiting hills.

* * *

They galloped onto the rocky lower slopes of Burkhan Khaldun. *Ovoos* surrounded them, shaman mounds, piles of rocks and branches decorated with blue scarves and prayer flags. These, then, were the lower reaches of the holy place where Chinggis Khaan came to meditate and recharge his energy before going into battle; this was the pilgrimage site for modern-day Mongols, its very existence a threat to Chinese authority.

Tanner couldn't imagine how their horses could be careering so fast over such uneven terrain without a disaster. At any moment a hoof might land in a hole, snapping a horse's leg and flinging its rider through space.

His steed strained, its ears back. Violent shocks traveled up Tanner's spine. If he survived this he'd probably be several inches shorter; perhaps this explained why Mongolians were so compact. He could barely risk twisting his body in the saddle to glance back, but he knew a swath of Chinese vehicles pursued them up the first slopes of the mountain toward the sky. From behind them came the loud stutter of machine-gun fire, the roar of a shell kicking up sod and turf just thirty feet away from them. Mercifully the terrain was so vile that even sitting in the relative comfort of a tank, the Chinese gunners would have to expend some of their efforts just holding on, with little left over for aiming and firing. But the relative advantage the horses had enjoyed on the flat plain was quickly negated by the rising incline. Tanner's horse was already slowing.

Sweat stung Tanner's eyes, but he dared not reach up to wipe it away. His jaw ached from the stress of clenching it so he wouldn't bite his tongue. Another shell slammed into the sacred mountain, spraying him with soil.

"Khulan!" he shouted.

She turned her gaze toward him, her brow furrowed with concentration.

"Can the Mengshi follow us up there? The tanks? Can horses go where they can't?"

"Trucks new!" she shouted back. "Tanks old!"

"Screw their *vintage*. Can we get away from them?"

"On bad ground, horse as fast as tank."

He looked behind him. The Chinese were ever nearer. "Glad you think so!"

Khulan peered back, and her mouth twisted. "Need to find badder ground."

Tanner still held the machine pistol clenched in a white-knuckled grip. He pointed it back over his shoulder and pulled the trigger. The *brrp, brrp* of its firing nearly sent him deaf and the kickback jerked his arm painfully, but the leading Mengshi was so close now that he could hear his bullets ricochet off it. Another peek showed him it was veering off to the side, bouncing as it hit the bumps. A second Mengshi raced up the uneven terrain to his right, its front wheel careering up over the base of an *ovoo* and practically sending it airborne. The tanks were still well behind, guarding the rear with a solid wall of iron but now unable to fire for fear of hitting their own armored vehicles.

Tanner's ears recovered from the din of the machine pistol. From all around came the scream of engines, the whine of their transmissions. Tanner and Khulan's horses jumped a stream, then slowed and swerved to avoid piling straight into a rocky outcrop. The Mengshis had to diverge again to avoid the stream-bed and one of the tank crews took the opportunity to fire; the shell careened by close overhead, rocking the hillside in its detonation. An *ovoo* exploded; stones, fossilized wood, and tatters of blue scarves rained down on them.

For the briefest moment Tanner felt suspended in space, as if he had been thrown from his horse and might crash down onto the harsh ground. Then he felt the horse's flanks between his thighs again, and knew he had been touched, not thrown. And only one person could touch him invisibly, in such a way that he could forget his own body.

"Dzoldzaya?"

He saw nothing, but felt the shaman's invisible hand slip into his; the same size as Khulan's, but with rougher skin, a tauter muscle under her thumb.

With some effort, he steered his horse closer to Khulan's. "Dzaya is here!"

Panting, driving her horse to gallop even harder, Khulan speared him with a brief glare as if he had lost his mind. Tanner's heart pounded, shaking his ribcage even as the thunder of the galloping hooves jarred his spine. It skipped a beat and twisted in his chest, but the feeling no longer terrified him. "Khulan! Dzaya is holding my hand right now. I need to hold yours!"

Khulan shook her head.

"We need the soul you share with her! This is going to take all seven of us!"

She eyed him balefully. Her hands tightened on the reins and for a moment Tanner thought she might peel away from him. "It's not right!"

"It is!" he shouted back over the ever-rising surge of sound from the tanks behind. "It needs to happen! I *want* it to happen!"

"Dzaya," Khulan spat, in the same tone of voice that she might have used to say "Damn it." But she freed her right hand from her horse's reins and reached out to him.

Tanner had to trust to Khulan's horsemanship, and his own newfound riding skill. He grabbed Khulan's hand and clutched it tightly, and the three of them rode that way, two seen and one unseen, linked across time and space, bumping uphill over the sacred soil of Mount Burkhan Khaldun.

Dzaya's voice rang in Tanner's ears. Her Mongolian words were indecipherable, their tone familiar. The *Udgan* was reciting an incantation, and suddenly it was as if the horses' hooves clattered along the bark of branches, blue sky beneath them, now running over water, the eternal course of a dark river, now leaping through the air, and never coming to ground. Illusions all, but echoes of connections made, powerful links forged. Tanner's ears rang with voices. Dzaya was chanting, but her incantations seemed strangely doubled like *hoomei* until Tanner realized that, indeed, two throats were forming the words.

Khulan was chanting too, cueing off Dzaya. Through their links with Tanner, the sisters could hear each other.

At last, Khulan had rejected the modern and abandoned her fear.

By now Tanner recognized the lilt and emphasis of Mongolian speech, the soft roundness of its vowels. The words he heard now from Dzaya and Khulan were different. These were words in some more ancient Turkic precursor tongue, words of the mountain and river, forest and steppe.

Together, the sisters squeezed Tanner's hands even more tightly. A feeling of intense pain struck him on the crown of his head and at two points buried deep within his chest, at his central connections with his *suld*, *ami*, and *suns* souls. Tanner felt torn and flayed, turned inside out in a twisting convulsion almost too intense to bear. He fell across his horse's neck as anguish radiated along his limbs down into the steppe, up into the Eternal Blue Sky. Secondary shocks struck the shaman sisters riding beside him. Only the tension of their interconnectedness sustained them, that and the perfect rhythm of their Mongolian horses as they galloped further up the slope toward the sky.

The surge of energy was almost like dying again. And the convulsion was not just in Tanner and the sisters, but in the world itself.

The mountain roared. The earth shivered. Tanner's horse faltered. Khulan came to a halt by his side, her face sheened with sweat, almost toppling out of her saddle onto the hard ground. But Khulan was not Tanner's concern right now; even as the screech of gears and engines came from perilously close behind them, he was staring up toward the peak of Mount Burkhan Khaldun.

At first he thought the roiling cloud was an avalanche, the dark shapes careering down the mountain merely an array of freakishly well-aligned boulders. When the truth hit him it seemed like no truth at all, but just another bizarre vision.

On came the avalanche of warriors, as the Mongol horde swept down upon him and over him. The army of the Khaan flowed around them, armored in leather, their teeth exposed in harsh grimaces, each with a tall composite bow in his grasp and a wooden shield at his elbow. The fury of their passing stole the sky and turned the world to dust. Their war-howls rang in Tanner's ears, and the true miracle was that his unnamed, wonderful horse just stood still and panted, its head down against the dust.

Tanner felt a presence at his elbow. There stood Dzoldzaya in full shaman garb, all color and feathers and bells, and Tanner slid off his horse and caught her just as she crumpled. She smelled of dust and horses and slow time.

His arms still around her, he backed her up against his horse's flank as the army continued to pound on past. Khulan dismounted and threw her arms around both of them. A bearded Mongol warrior swerved to avoid them, his leather cheek-guards flapping around his face like a bird. The metal harness jingled. Flecks of foam from his horse's nostrils splattered across Tanner's forehead.

The din of the charging horde lasted for some time.

At last, Khulan released her hold. Tanner looked up. The pall of dust diffused the sunlight, and the ground still trembled to the unfocused rhythm of ten thousand hoofbeats. But the bulk of the Khaan's army had passed, and now only a smattering of stragglers remained, riding furiously to catch up.

Tanner released the sisters and stepped away from the horses. Scattered nearby on the slopes of Burkhan Khaldun stood four more horses similarly immobile, like boats stranded on the tide. Bauga cheered and whooped at the passage of the horde, and Ivaandjav looked as if he'd been hit by a truck, while Chudruk calmly patted his steed's neck as if the ancient army of the Grand Khaan rode over him every day.

From the plains below Tanner heard the continuing roar of battle cries and the clang of metal against metal, but saw only that immense cloud of dust.

"Holy shit," he said.

"Now can I have a cigarette?" said Khulan.

"Yeah," said Tanner. "Sure. Fine. Please do. By all means. Absolutely."

The others rode on, but Tanner walked his horse the rest of the way up Burkhan Khaldun. He felt almost snapped in two, his legs permanently bowed. His knees might never touch again.

They had bridged the gulf between past and present. The door had been opened. Help had come to Mongolia.

Tanner had thought they were trying to protect the soul-land of the Khaan. He realized now that the truth was the exact opposite. Their flight had lured this Chinese armored convoy into Dzaya's trap, a strategy as old as Chingghis Khaan himself.

And Tanner still lived. His heart beat regularly and the blood coursed in his veins, and in time with them he felt a swinging double oscillation in his chest as his two reincarnated souls freely resonated within the sphere of his body. Tanner was complete now. He was a new man, or perhaps just the man he should always have been.

Burkhan Khaldun leveled out to a wide plateau before the final rise to its rocky peaks. On this plateau they found the giant camp of the Khaan.

In the Mongol camp were women young and old, and men old and injured; all wore the *deels* and boots and peaked fur hats they had worn through time immemorial. Round-faced children in colorful woolen tunics with fur collars scampered back and forth between their mothers' cooking pots and the low tables. Amid the *gers* and the

tents and the wooden carts, Tanner saw no signs of the modern world. Was he in the thirteenth century, or the twenty-first? Perhaps the question was meaningless, the collision between the worlds so intense and complete that either could be true.

Ivaandjav and Chudruk sat shivering by a campfire, their heads in their hands. Bauga stared at a corral of Mongolian horses, their reins and wooden saddles archaic.

Khulan walked over to Tanner. She looked tired and resentful, and much older. "It is broken," she said. "All across Asia, breaks in reality. Lines of force . . ." She trailed off.

"How d'you know?" he said, trying to make light of it. "Your cellphone works here?"

"I am sister of *Udgan*. I know." Her voice was hollow, her eyes haunted.

"You didn't want this. I'm sorry."

"We tore something we can't mend. I hope you're happy. You and my damned sister."

Maybe Tanner was in shock, or maybe he was just still exhilarated. Perhaps he had already accepted the magnitude of what they had done. Or perhaps he just didn't care. Tanner couldn't disentangle it.

"I'm very happy," he said.

She looked so doleful that he went to hug her. She pulled away. "Let me go. I smell bad."

"You don't."

"... all right." She came into his arms, and held him very tightly.

Over Khulan's shoulder, Tanner could see Dzaya setting up a complicated arrangement of incense, juniper twigs, and a collection of small pastel-daubed pots. A prayer of thanks, or a blessing? A shaman's work was never done. Feeling his gaze, Dzaya turned and caught sight of them, holding each other here at the roof of the world. She paused briefly, then nodded and smiled. Tanner smiled back.

"You'll be all right?" he said to Khulan, but she merely shrugged. It was Dzaya who took his arm and gave him food. Yet even as Tanner bit into the hot leg of mutton and smeared grease over his chin, the *Udgan* was pointing down toward the plains and the army of the Khaan, then toward the west, then at the spare horses in the paddock.

"Yeah, I know," said Tanner. "Give me a moment."

He stuffed more mutton into his cheeks, and some bread and curds into his pockets for later. Bauga was waiting for him at the corral grinning like a crazy man. Good; of all the men, Tanner liked Bauga the best.

He pulled himself onto a fresh horse, took the bow and arrows that Bauga handed up to him.

Khulan had followed him. "So you think you are Mongol now?"

"I just want to help," he said.

The wooden saddle was painful between his thighs. Mongols really rode on these things? Tanner tried not to think of the rawness in his legs, not just now but in his future, when they reached Ulaanbaatar. Perhaps he could forgo the saddle and just use the blanket.

"Wait," said Khulan. "You going to need me." Mounting up, she said something in Mongolian to Bauga, who half-bowed and smiled. To Tanner she added, "Still don't like it."

This was war. Liking it wasn't the point. "It's fine," he said, and with his eyes he challenged her to disagree.

Wordless but jangling, Dzaya the shaman walked past them and chose a horse.

Tanner looked at Dzaya, then at Khulan. Beside him rode Mongolia ancient and modern, past and future. Traditional and hip. Twins under the Eternal Blue Sky.

"Well, off we go then," he said.

They cantered down the hill toward the battlefield.

* * *

Now, all times were one.

In the foothills of Burkhan Khaldun they would come upon a scene of devastation. The past had found its way of dealing with the present.

The Chinese tanks had scattered like cockroaches in the face of the Mongol charge. The horses of the horde had whirled around them, moving too fast for the heavy artillery to draw a bead on. Chinese soldiers had appeared out of the tank turrets, their heads up and out to spray the Mongols with machine-gun fire, their best hope. But the Mongols had explosives, which they had—ironically enough—inherited just recently from the thirteenth century Chinese. The Khaan's soldiers had spiked the guns, jammed the tracks, ripped the PLA apart, taken no prisoners, showed no mercy.

Modern Chinese armaments were intended to fight other armored vehicles and control cities, not warriors on horseback. Tanner would recall that the horse-riding Mujahedin had scored spectacular victories against tanks in Soviet Afghanistan, and also that the ancient Mongol horse archers had made a habit of annihilating armies much larger and better equipped than themselves.

And so Tanner and the others would ride through a field of battle that was empty but for the dead and ruined: the burnt-out tanks, the wrecked Mengshi, and score upon score of massacred Chinese.

Even before the Khaan's army swept into Ulaanbaatar like a divine storm, the Chinese would flee for the borders. Chinggis Khaan's reputation would precede him. The Chinese were smart enough to know when the forces of history were against them.

Banning his name, it turned out, had not been enough. It had only made him mad.

The horde of the Khaan would ride past the *ger* suburbs into Ulaanbaatar. Townspeople would line the streets, cheering. "Everyone has joyful to meet Mongolian liberators," Tanner would say to Khulan, and she would smile wryly.

The twin sisters would ride by his side, flanking and guiding him; almost identical, and yet so different. One, all flesh and blood, wearing sunglasses and incongruous T-shirts that sparkled, the other in full black shaman garb with ribbons and mirrors dangling from her clothes, yet seeming ethereal and almost translucent from her great spirit journey.

Eventually, in the fullness of Time, the new Mongol Empire would spread from Dornod *aimag* in the east to Lake Zaysan in Khazakhstan, and from the shores of Lake Baikal to the far southern reaches of the formerly Chinese Inner Mongolia. The Khaan would rebuild Karakorum, his ancient capital, and consolidate his new Mongolian heartland under a white spirit banner of peace.

And through it all an American would travel with him, serving as envoy and translator, one of the Khaan's chief links with the modern world. He would be a stranger without a past, or at least not a past that anybody claimed.

"Nonetheless, he seems wise," the people would say.

"He has a strong soul," they would murmur.

"And a good heart."

"A Mongolian heart." ○

Copyright © 2012 Alan Smale

ANTARCTICA STARTS HERE

Paul McAuley

Before becoming a full-time writer, Paul McAuley worked as a research biologist in various universities, and was a lecturer in botany at St. Andrews University, Scotland. He has published eighty short stories and eighteen novels, including *Fairyland* (winner of the Arthur C. Clarke and John W. Campbell Awards), *The Quiet War*, *Gardens of the Sun*, and *In the Mouth of the Whale*. Paul lives in North London, but his latest story takes us to the ends of the earth and a future where desperate times demand desperate measures.

We were coming back from a hiking trip in the Rouen Mountains with five Hyundai executives and their gear in the back of the tilt-wing when I glimpsed a flash of reflected sunlight in the landscape. An ice-blink where there was no ice. Dan had spotted it, too. Before I could say anything, the tilt-wing was banking sharply and Dan was saying over the internal comms, “A momentary diversion to check out a place of interest, ladies and gentlemen.”

I switched off my microphone and said, “We have to get them back for their connection to the mainland.”

“Don’t be boring, Krish. I just want a quick look-see.”

“It’s a science camp. Or some prospecting outfit.”

“I don’t think so.”

We were flying down a broad valley with a U-shaped profile, typical of glacial erosion. The glacier that had once occupied it was retreating toward the upper elevations of the peninsula’s mountainous spine. On either side raw cliffs stood up from cones of talus, and rocky slopes ran down to a broad shallow river that flowed swiftly around and over wet black rocks. As we passed over a small lake dammed with boulders and till, I glimpsed three small geodesic domes perched on a low hill beyond, and then the tilt-rotor made a sharp, dipping turn, slowing to hover about fifty meters above the camp.

Dan said, “See what I see?”

I leaned forward against my harness and followed the line of his gloved forefinger. I saw green plants growing inside the domes, saw a blue figure moving away from one of them, saw more figures trekking up a path through a boulder field, and felt as if the tilt-rotor had hit an air-pocket.

“Tell me those aren’t avatars,” Dan said.

“So it’s a tourist camp.”

We were shouting at each other over the clatter of the rotors.

"With gardens in those domes?"

"A tourist camp with a spa."

I was trying to keep things light.

Dan was staring out of the bubble canopy and making small movements on the yoke and pedals to keep the tilt-rotor in place.

He said, "Maybe I should land and ask those fuckers."

Two people had stepped out of a kind of airlock attached to the side of one of the domes. They were framing their eyes with their hands as they stared up at the tilt-rotor.

I said, "This isn't our business."

"Can't a man scratch an itch?"

"We have to get our clients back to town."

"I know."

"Their flight leaves in three hours."

"I know."

The nose of the tilt-rotor dipped for a moment, then began to rise. A clear measure of relief welled up inside me.

Dan said over the comms, "A top-secret installation run by robots, ladies and gentlemen. Definite proof that we're living in the future."

One of the executives wanted to know what the avatars were doing out here.

"Your guess is as good as mine," Dan said.

Sunlight flashed on his sunglasses as he glanced sideways at me. I knew that this would not be the end of it.

I had hooked up with Dan Grainger soon after I started to work for a tour company on the mainland, my first summer in Antarctica. Both of us had run away from the circumstance of our birth, and both of us had served in the armed forces of our respective countries. Dan had been born in some miserable post-industrial town in the English Midlands, was the first in his family to go to university, on an RAF scholarship. He'd wanted to be a fighter-jet pilot, but had ended up flying transport planes in one of the oil wars in Greenland. I'd skipped out of a career in the family data-mining business and had flown a medivac helicopter in and out of hot spots along the border between Kashmir and Pakistan before being wounded and invalided out, and after I had recovered I had cashed in my small army pension to buy a one-way ticket to Antarctica.

Dan, an old Antarctic hand, had taught me a great deal as we took parties of tourists on routine hikes up the Byrd and Beardmore Glaciers and through the Dry Valleys, and escorted a party of climbers in the Organ Pipe Peaks. He was cheerful and patient with the clients, but he worked only so he could take off on expeditions of his own once the season had ended. He'd spent six winters on the ice. He had no desire to go back to the world.

Like many English people who'd hauled themselves up from humble backgrounds, he had what they call a chip on his shoulder. A class thing, I believe, compounded by resentment toward those who had been born into better circumstances and a defensive hostility unsheathed whenever he felt uncomfortable. A sarcastic bluster that hid his true feelings, which could be surprisingly tender. On our second trip together, we came across an Adélie penguin heading south, more than a hundred kilometers from the sea. It was happening more and more, Dan explained to our little flock of tourists; the birds were confused by finding cliffs and cobbled beaches where once there had been ice shelves. A couple of the tourists wanted to rescue it, but he told them that it was doing what it wanted to do. We all watched it for a long time as it ploughed onward with that comical gait, diminishing into the vast whiteness.

At bottom, Dan was an old-fashioned romantic. The kind of Englishman who believed that the deaths of Scott and his party, their calm acceptance of their fate, was the ultimate affirmation of values that Amundsen, with his skis and dogs, his Arctic experience and single-minded ambition, had conspicuously lacked. The plucky stoicism of Scott's party was more important than the trivial matter of reaching the South Pole first, their deaths a claim stronger than any first footprint or flag. Dan had a deep admiration for those early explorers, who'd set out on punishing routes with primitive equipment and little idea about what they might encounter. One of his party tricks was to quote passages from the journal of William Lashly, a Navy stoker who had proved his worth amongst Scott's gentleman explorers.

In the heroic age of Antarctic exploration Dan would have been man-hauling sledges over crevasse-filled glaciers into new territory; in the scientific age he'd have been flying geologists in and out of remote camps, dropping them on to mountain-top ledges next to fossil-bearing strata. His tragedy was that he'd been born too late to be a part of that. Too late to serve in some remote part of the Empire. Too late to see the Antarctic as it had been before the big melt had begun, before people had begun to live there permanently, the oil and mining companies had moved in, and the tourists had started coming in earnest, hundreds of them in person, thousands more riding avatars.

At the end of that first season, Dan and I flew out to Cape Royds. We planned to hike up Mount Erebus, a three-day ascent, through ice- and rock-fields and the alien ice-sculptures chimneyed up around fumaroles, to the volcano's steaming crater. But things went wrong before we'd even unpacked our equipment.

There was a small settlement at Cape Royds: a scattering of prefab cabins, an ice-cat garage, an airfield, and a hotel catering to the tourists who wanted to explore Mount Erebus and the shoreline of the Ross Sea, or follow the route of Scott and his companions up the Ferrar Glacier.

Dan told me that he had done that route at the end of his first summer in Antarctica.

"Not as easy as you'd think," he said, with the nonchalance he affected when talking about something really dangerous. "The front end of the glacier is bloody rough. Rotten ice, big blocks heaved up, boulders sitting on pedestals of ice waiting to fall on your head, you name it. And when you do get on top, there are crevasses everywhere. I fell in one, did I tell you about that?"

"Yes, you did."

"We were roped together, and I nearly pulled the next bloke in. One minute you're slogging along, the next you're plunged into this beautiful blue light. It was a trip. Like being directly translated to Heaven."

There was an Adélie penguin colony at Cape Royds, much reduced from its original size but still popular with tourists, and the hut where Shackleton's expedition had overwintered in 1908. Dan wanted me to see it. As soon as we landed at Cape Royds, he borrowed a jeep from a mechanic he knew at the airfield, and we drove straight through the town and up a steep, winding road.

The interior of Antarctica was still a deep freeze, but its edges were thawing. The Ross ice shelf was reduced to a thin fringe every summer; moss and grass had colonized rocks revealed by the ice's retreat. The lake next to Shackleton's hut melted to its bottom in summer and had more than doubled in size, and the hut had been moved to higher ground, and covered with a weather-proof tent. When we arrived, a small gaggle of avatars were stalking about. Skinny figures with ball-jointed limbs and stereo cameras mounted above blue plastic torsos emblazoned with the iceberg logo of a rival tour company, operated by virtual tourists out there in the world. I thought they were mostly harmless, but Dan actively loathed them. As far as he was concerned, they epitomized everything that had been lost. Moving graffiti on the

blank white page of the continent. Electric cockroaches. Worse even than the cruise-ship parties who came ashore at McMurdo and climbed Observation Hill for the splendid panorama of the Transantarctic Mountains and photographed each other in front of the replica of Scott's hut and bought souvenirs in the mall. At least their boots were on the ground, and they were breathing chill Antarctic air and feeling it pinch their faces. And the extreme tourists like those we escorted endured hardships that, even if they weren't as bad or as life-threatening as those experienced by the first explorers, were real enough. But any slob with a credit card could rent an avatar for an hour or a day and explore Antarctica from his living room. It was no better than wanking or watching TV, according to Dan.

"They're banned in most places, but not on the Ice," he'd say. "Know why?"

No use telling him that avatars were vulnerable to being turned into walking bombs by terrorists, or that they violated various religious laws, or enabled human-rights activists to poke and pry in places where they were not welcome. He had a thesis.

"They're allowed here because Big Business wants to normalize Antarctica. To turn it into a tourist destination anyone can visit. To prove that it's as accessible as everywhere else on Earth. They let people gawp at a few beauty spots, but they don't give them any idea about what the ice is really like. How it changes you. You've been out there, Krish. You've experienced the silence of the place. Standing all alone after ten days' hard hiking to somewhere no one has ever been before, hearing nothing but the wind and your heartbeat, it's the most profound thing you can do. It shows you what's really real. The muppets riding those things, they'll never know that. They think they're out on a day trip to fucking Disneyland."

Well, I did tell you he was a romantic.

Shackleton's hut, a primitive construction of packing cases and tin sheeting, the place where the first men to climb Mount Erebus and to reach the South Magnetic Pole had overwintered, was a shrine to that Platonic ideal. Dan wanted me to experience its holiness, and here was a gang of avatars clattering about it. Clumsy puppets operated by stay-at-home slobs who didn't know or care anything about the reality in which they were intruding. Several of them turned to watch us as we climbed toward the hut; when one of them wandered too close, Dan grabbed it in a bear-hug and lifted it clean off the ground and strode down the stony slope toward the lake. The avatar was beeping a steady alarm call. A woman in an orange-red jacket came around one side of the tent and shouted at Dan, but he ignored her, wading out into the shallows and dropping the avatar into the freezing water. Its beep cut off at once and Dan gave it a kick that propelled it further out.

The supervisor shouted again, and broke into a run. I ran too, caught in the moment, Dan chasing after me as I jumped into the jeep and started the motor. He vaulted into the seat beside me and I threw the jeep into reverse and swung around in a spray of gravel and accelerated past the supervisor, forcing her to jump out of the way. Dan gave her the reverse Churchillian salute used by the English to signify their extreme displeasure; both of us were whooping and laughing.

When we got back to the airfield, the settlement's policewoman was waiting for us. We were locked in a hotel room overnight and put on the next plane to McMurdo, where the supervisor of the tour company made it clear that we wouldn't work for her again, and the owners of the avatar rental business hit us with a fine that wiped out most of our savings. It didn't much matter. We made the money back that winter, flying roughnecks and engineers out of Matienzo on the Antarctic Peninsula to the big platforms in the Weddel Sea, flying in the teeth of gales that tore the sea into flying lumps, flying through whiteout snowstorms, and at the beginning of summer we pooled our earnings, leased a long-range tilt-rotor, and started our own tour company.

This was our third year as independent guides. Matienzo was a working town and

there was a big gas terminal south of it and miners and wildcatters were moving inland as the ice retreated above the two hundred meter contourline. But much of the Peninsula was still unspoiled, casual tourists didn't much bother with it, and the small number of avatars available for hire were mostly rented by executives too busy to make the trip to the bottom of the world. Our clients were serious hikers, mountaineers, and wild skiers, and like Dan wanted to spend as much time away from civilization as possible.

The sight of those avatars working in the remote camp had woken his old resentments, but he did not talk about it, and neither did I. Frankly, I was hoping that he would forget about that strange little camp, and for a little while it seemed that he had. We spent the rest of the summer guiding clients in the back country. After the last trip of the season, through the Devil's Playground and over Desolate Pass in the Eternity Range, we went our separate ways. I flew to Auckland for three weeks of R&R. The day after I returned to Matienzo, Dan called me.

I was in my favorite bar in Sastrugi Mansions. The Mansions had once been one of the biggest buildings in Matienzo, a six-story block that was dwarfed now by hotels, offices, and the Antarctic Authority building, its roomy apartments mostly subdivided into single rooms, or amalgamated into cheap guest houses used by merchants and other entrepreneurs, refugees and illegal immigrants trying to secure permanent visas, back-country miners, sex workers, scam artists, and extreme tourists who thought it was a badge of honor to stay in a tiled cubicle where the toilet was next to the bed and the shower was over the toilet. Half past ten in the evening, and people from two dozen nations crowded the little bars and food stalls in the market on the first floor, ambled past electronics emporia, shops selling fossils and polished granites and gemstones, places that sold foul-weather clothing and camping and climbing gear, Chinese wholesalers, a fab shop, the Thai supermarket, a Nigerian clothing stall that did most of its business with tourists, who probably thought they were buying Hawaiian shirts. Dry hot air that smelt of fry-grease and old sweat. The subliminal flicker of fluorescent lighting that burned 24/7/365. Piped Nepalese pop music. A babel of languages.

I'd been renting a small apartment in Sastrugi Mansions ever since we'd pitched up in Matienzo, but Dan had refused to visit me there. He said that the Mansions was everything that had gone wrong with Antarctica. No use telling him that its vivid multicultural stew was as real as his beloved mountains and glaciers. He wouldn't even visit the curry houses on the ground floor, even though he loved a good curry—his definition of "good" being the macho British version, as fiery as possible and sluiced down with liters of sugary lager.

"I suppose you're conveniently situated if you fancy a taste of home cuisine," he'd said, just after I'd moved into my apartment. "But I can't think of anything else to recommend it."

"I prefer Thai food, Dan. Or Mongolian barbeque. Come and visit, I'll treat you."

"It reminds me of the market back home. Sad, horrible little place, that was. There was a butcher's sold horse meat. You ever eaten horse meat? Horse rogan josh?"

"I've eaten zebra, in Kenya."

"Was it striped all the way through, the zebra?" But Dan wasn't interested in my reply. Saying, "We went to Wales, once, me and the lads. Ran down a sheep up in the mountains and butchered it on the spot. It was Christmas and we couldn't afford turkey and we were tired of horse meat. It's sweet, horse meat. My mother used to grind it up and make a pie topped with mashed potato. Jockey pie, we called it."

Another time, he said, "Did I ever tell you about the time I ate whale? Whale sushi. This client, very rich, Japanese. I asked him if he was Yakuza, for a joke, and he didn't

like it. Pulled off his shirt to show me he didn't have any tattoos. Anyway, we got on pretty well after that, and the last day of the trip he thawed out this meat he'd been carrying and sliced it very thin with his ceramic knife and served it with boil-in-the-bag rice and this eye-watering horseradish dip. Didn't tell me it was whale until after I'd eaten it. Thought the joke was on me, but I would have eaten it anyway. You can get serious worms from raw whale meat. Acorn worms a foot long. Imagine."

When he called, I was nursing a pint of Guinness in a tiny bar run by an old Australian woman. I was keeping an eye on the cricket match playing on the big TV and chatting to a Malaysian trader who dealt in semi-precious stones, making a small profit by flying them out to be cut in Nigeria, and shipping them back to the Ice as tourist souvenirs. I knew a few back-country miners, but it turned out he had never dealt with them. Bought his consignment from one of the Chinese traders and made a small profit as long as he got his stones through customs without having them confiscated or slapped with an unrealistically high import charge.

He was a nice guy, young and hopeful. It was his third trip to the Ice. Six or seven more, he said, and he could set up business back home in Sandakan. "I love my country," he said, "but at this moment I have to live in the world because that is where you can make money." He was explaining about how hard it was to deal with the Chinese when my phone rang, and Dan said, "Come on over. There's something you need to see."

I asked him if it could wait until morning, but he had already rung off.

At that time, Dan was renting a duplex at a place called the PenguInn, a two-story motel wrapped around a heated swimming pool. I paid the taxi driver and walked past the pool, where a dozen people were splashing and shouting under a layer of fog, and a sound system set on the diving board was playing chiming Balinese temple music and projecting smears of shimmering pastels that probably looked deep and mysterious if you were wired on the correct psychotropic. As I climbed the stairs to the first floor, a FedEx widebody passed low overhead, so low I could see the treads on its tires, filling the cold night air with the scream of its turbines and the sweet stink of spent aviation fuel.

A girl answered my knock. A twenty-something blonde English white girl wearing cut-offs and a T-shirt about two sizes too big. She shook my hand and looked me in the eye and said that she was Mara, told me Dan was in the bedroom, asked if I wanted coffee or beer.

"Tea would be nice."

She was pretty, in the anonymous kind of way of the children of wealthy people in the West. I believed her to be one of the birds of passage Dan picked up in the bars where extreme tourists and backpackers struggled to reconcile their Lonely Planet apps with reality and boasted to each other about the gear they were carrying, the hikes they were planning, and the places they'd already ticked off during their global Children's Crusade.

The living room was cluttered with coils of nylon rope, the orange tube of a Scott tent, rolled sleeping bags. Two brand-new backpacks leaned against the couch. A high-end slate sat on the kitchenette counter, cabled to a small dish aerial. And there were hard copies of maps and satellite images taped to the wall beside the counter.

Dan's voice boomed out from the bedroom. "Is that you, Krish? Come the fuck in! I'm looking at the thing you need to see!"

"I can get you tea from the vending machine. Japanese, in a can, but it's tea," Mara told me, and was gone.

Dan was sitting up on the unmade bed, his back against the headboard, wearing only black jockey shorts, a pair of spex, and those thin gloves that manipulate virtual objects. He flicked at something in the air with his left hand and threw a pair of spex at me underhand and told me to put them on.

"I'm fine, by the way," I said. "Had an excellent holiday in NZ. How about you?"

"We can shoot the shit later. This is important."

"I saw the maps," I said. "If this is to do with that research station we spotted at the beginning of summer, I don't want anything to do with it."

"Put the fucking spex on, Krish. Don't judge me until you've seen everything."

I put them on and found myself looking out at a trio of geodesic domes standing on a gravelly rise above a river.

"We got this off their web site," Dan said. "It's a little promotional thing for internal consumption. Top secret and all that."

"Whose web site?"

"A South African biotech company called Symbiogenesis. Into remediation. Did a lot of work on spoil heaps from gold mines. But that isn't what they are doing here."

"Why are you so . . . interested in them? Why do you think it's any of your business?"

I had almost said obsessed.

He took my question literally. Either he did not hear the concern in my voice or did not care.

"Check it out," he said, and the viewpoint swung around the domes, zoomed in on a small procession of avatars moving up the side of the valley, climbing past little pockets of green—moss gardens, tufts of tough wind-whipped grass. Climbing toward a defile cut into the slope under the cliffs. More greenery here. More avatars moving about.

"Trees," I said.

"Yeah. Trees. Beech trees."

They were small, the trees. Knee-high, wind-sculpted clumps standing amongst mossy boulders either side of the stream. The avatars moved amongst them. The view had the trembling granularity of an extreme long-shot, but I could see now that the avatars were carrying stacked trays of seedlings in fat plugs of soil.

I took off the spex and asked Dan where he had got the information.

In the doorway, the young woman, Mara, said, "Their security is good, but not quite good enough."

I took the can of tea from her and said, "Perhaps you two could explain how you met."

"He was giving a talk about the destruction caused by the settlements on the Peninsula," the girl said. "In the Greenpeace community cloud."

"You're with Greenpeace?"

The girl and Dan exchanged a look. Dan said, "Not exactly. The important thing is, she came here to help me out. Because what they are doing out there is seriously bad, Krish."

"A very bad precedent," Mara said.

I knew what was coming, and knew what my answer was going to be. I should have walked out of there, but Dan had been my partner as well as my friend. I guess I thought I owed him. I popped the lid of the can of tea and felt it beginning to grow warm and said, "You'd better tell me everything."

Symbiogenesis, owned by the granddaughter of an old-fashioned dot-com billionaire, was underwriting various scientific projects on the ice. This was one of them: an attempt to reintroduce Antarctic beech to the Peninsula, where it had once flourished in the last inter-glacial period. It was fully licensed, and clearly something of a success. Now there were plans to cultivate tracts of beech in twenty different sites, and that was why Mara had come out to Antarctica.

It seemed that she was a member of some radical green splinter group that was campaigning against the kind of interventions practiced by Symbiogenesis. Who believed that damage to ecosystems caused by the effects of global warming should be allowed to heal naturally. Whatever naturally meant, these days. Dan had hooked up

with her in the cloud. It was a perfect match: a chance at some action coupled with his hatred of what was being done to his beloved wilderness.

I drank my tea and listened while they took turns to justify themselves.

"She didn't want you to know about it," Dan said. "But I didn't want you to feel left out."

I ignored him and told Mara, "I will not tell anyone about your plan. But I do not want anything to do with it."

"If you're worried about being caught," Dan said, "don't be. You'll drop us two clicks away. We'll hike down into the valley. Infiltrate. Do what needs to be done, hike back out. We'll neutralize the comms and any cameras. No one will know anything about it until it's over."

"And the people working there?"

"There are only two of them. We'll tie them up, but not so tight they won't be able to wriggle free in a couple of hours."

"We aren't planning to hurt anyone," Mara said. "Just stop something that is damaging this unique wilderness."

Dan said, "I've always been straight with you, Krish. And I'm being straight with you now. It's an easy op against a soft target. Minimal risk, maximum return."

"But that is not why you're telling me this, is it?" I said. "You want me to tell you you are doing the right thing. Well, you aren't."

Things went downhill from there, until, with a dull inevitability, Mara produced a hornet-yellow taser.

Dan made a show of regret that might have been genuine. I was too angry to care. I was handcuffed to the pipes in the bathroom, and Dan fussed with pillows to try to make me comfortable and told me that the maid would fine me in the morning, and I could tell the police anything I liked, then, because the op would be over.

"I was not planning to tell the police anything," I said. I said a lot of other things, too. Telling him it was incredibly naïve to think that you could roll back the clock and make things come out the way they had once been, that we had to find a way of living with the consequences of the warming and all the other damage caused by the West's reckless adventures in global capitalism, that our little business was no better than Symbiogenesis's, that he was fooling himself if he thought he was trying to make good for helping wealthy tourists intrude on the pristine wilderness because there was no such thing as a pristine wilderness anywhere, anymore.

He squatted in the doorway, pretending to listen to me while I talked. At the end, he said, "Remember that penguin? It's like that."

A little later they were gone. When the noise from the pool party died down I made an attempt to shout for help but no one came until the early hours of the morning. It was not the maid. It was the police.

Two detectives interviewed me. An Argentinian woman and a Russian man, both wearing the grey uniforms of the Antarctic Authority, both very polite. I told them everything I knew. It was not much. They told me that there had been a problem at the Symbiogenesis research station, but it was resolved now. When I asked if Dan was all right, they said the situation was still ongoing.

"We will release a statement to the press soon," the woman said. "Meanwhile, please do not talk to anyone."

"Am I under arrest?"

"Have you done something wrong?" the Russian detective said. "If so, we could consider arresting you."

"Your friend caused some trouble, but it's under control," the woman said. "We're searching for him now."

"We hope to bring him in very soon, for his own safety," the man said. "Perhaps you can help."

They named two men, asked if I knew them. They showed me photographs. I recognized Mara, no one else. They asked me if anyone else had been involved. They wanted to know if Dan had mentioned a plan to hide somewhere in the back country afterward. And so on, and so forth, questions I could not begin to answer.

The Russian man escorted me out of the building. As I went down the stairs outside, I saw Mara coming up. She was wearing an orange boiler suit and was handcuffed to a uniformed policewoman and made a point of not looking at me as we passed.

Like everyone else, I found out what had happened on the news. Dan, Mara, and two other men had landed on the bluffs above the station in the middle of an early snowstorm, had knocked out its satellite dish and taken its two staff prisoner. They had trashed the trees planted in the valley and inside the domes, opened the servers with a hard hack, and taken control of the avatars. Most of the avatars had been marched into the lake, but one had been sent off down the valley, carrying a single tree seedling. Dan's friends had videoed everything, uploaded it to comrades scattered around the world, who had compiled short movies of the action. None of them showed the arrival of the police: it seemed that the station had a layer of security Dan and his friends had not known about. Mara and the two men had been arrested; Dan had managed to get away, and by the time the police had realized he was missing and had put their 'copter in the air to search for him he could have been anywhere.

One of the stories Dan liked to tell was how he had been caught in a storm that had blown up when he had been out alone, up in one of the valleys off the Beardsmore Glacier. He had been only a kilometer from safety, but the storm was such an absolute whiteout and the winds were so severe that he had decided to dig in rather than try to make it back. His companions had found him the next day, as the storm began to blow itself out. He had excavated a shallow trench and covered it with his tent, and snow had packed up over it to form a cozy shelter. He had been asleep when they had found him.

I spent days and weeks expecting to hear from him. He could have been dead. He could have been anywhere.

Then, one day early in spring, there was an item of local news about misbehaving avatars. Several had marched to the docks and jumped into the water. Half a dozen were found running in circles around the fountain in the square in front of the port authority building. Two were found entwined in a jackhammer parody of lovemaking on the steps of the police station. One was found six kilometers beyond the town limits, marching toward the mountains.

It could have been Dan; it could have been some of Mara's friends; it could have been ordinary pranksters. But just yesterday, I saw a news item about the disappearance of a party of avatars that had been following in the footsteps of Scott's doomed expedition, part of the one hundred and fiftieth anniversary of the death of the explorer and his companions.

I wonder when and where they will turn up. I wonder if Dan will surface, to take the credit. And I can't help thinking of that stubborn doomed penguin. ○

Copyright © 2012 Paul McAuley

RESULTS GUARANTEED

Kit Reed

Kit Reed is Resident Writer at Wesleyan University. Her novels include *Catholic Girls*, ALA Alex Award winner *Thinner Than Thou*, and *Enclave*. Her book *What Wolves Know*, from PS Publishing, was nominated for a 2011 Shirley Jackson Award as Best Single Author Collection. Her next, *The Story Until Now*, a “best-of” collection, is coming from Wesleyan University Press in March 2013. Kit tells us that “Results Guaranteed” (a story that fits perfectly into our annual slightly spooky issue), “comes from years of rubbing elbows with highly motivated parents.”

I hate the new school. Everybody in this place is weird except me, but they're like I'm the stranger from a danger planet and they'll catch it if they get too close.

The thing is, they're all special and I'm the only ordinary kid in this whole entire school, so everybody makes fun of me. I try to make friends but they're even scared to walk on my side of the hall, like being different is a *disease* and nobody talks to me.

Even Donald won't talk to me, but wait. How would anybody even know? He has to wrap Ace bandages around his head so Miss Freeman can tell if he's present or not. He's the only invisible kid at Occam Middle but nobody makes fun of him.

Just me.

At lunch I have to sit on the milk crate next to the garbage can so I won't, like, breathe on their food. Then they fake-miss the can when the bell rings and we have to go in, so I have guck all over me. Then Miss Freeman calls me a dirty boy and tells me to go down to the washroom and don't come back until I'm decent, and they all go mwah-hah-haaa, like it's my fault and I can't tell Dad because he'll only go off on me about how I brought it on myself, get back in there and try harder and you'll get along, like it's a curse on the family that I can't make friends.

It's not like I don't try. I thought I could get in with the lurchers because they look pretty much like us, except they stagger around like blind people, arghh-ing and bumping into things. Last week I stuck my arms out and went around all argh-aaargh so we could hang out, but it didn't work. The problem was, this place on my head where Wulphy Seronica hit me with the bat? Either they smelled it or they saw it from way over at the end of the field and the whole gang came after me, all groping and aaargh-aaarghing and Miss Freeman had to come with the taser wand.

I also tried with the biters, who are the nicest in spite of being pale, weird kids. They're way cool in their silky T-shirts and real ruby studs in their noses even

though we're only in fifth grade. I nicked my hand a little bit, thinking they'd like the blood, but they were all *eww*, like, who wants blood from a loser like you? After lunch they have to stay inside for safety reasons just like me, but they act like I'm not even there.

I almost got in with the hairy guys. Wulphy Seronica was so nice to me that I thought, hey, he's just like me, but I was wrong. Friday, Wulphy started getting weird. We were talking when I heard this *crack* and shiny black hairs started popping out on Wulphy's hands and parts of his face and he and the other guys started to slobber and snarl. His whole *head* changed shape and him and his posse dropped on all fours and took off after me.

If Miss Freeman hadn't come with the taser wand, Dad would be suing the school instead of threatening to sue Larry because of me ending up in Special Ed.

At least it would be over.

So. If they're so weird, how come I'm the one that kids point at and go *ewww*, like I'm the freak, and how come they're all on the Honor Roll and I have to stay after for Special Ed?

If this was a good story, *good* like in *happy*, or if I was stupid, I'd go around practicing, like kids in books and movies do, where it's hard in the beginning but the kid keeps trying until he finds his talent or superpower or whatever and it always works out in the end. I'd be, like, trying to see through walls or jumping off roofs, you know, to find out if I have a special *thing* like everybody else in this stupid school, some talent that I just now found out about, you know, breathing under water or hyperspeed like those kids on TV, but I'm not that kind of stupid.

My tutor Larry says I'm smart, but at Occam Middle, smart doesn't get you on the Honor Roll, weird does. At Occam Middle, I'm nothing—which would be fine, except Dad freaked when he got the memo from Mrs. Dratch.

You'd think I'd stabbed him in the heart. I stood there in his study and sucked up the rant. "Dirk Mangold's only son in Special Ed? Are you trying to kill me after everything I did to get you into Occam Middle? I dropped a thousand on that worthless tutor and paid for the personal trainer. I built the Razor's Edge playing field for them, I licked Mrs. Dratch's ass to turn you into an Occam product, and *this* is how you thank me?"

Like I *tried* to get stuck in Special Ed. In fact, there's nothing special about me except I'm the only ordinary person in this stupid, stupid place. Like, I'm just me, plain Billy Mangold, and every other kid in here is a *little weird*.

I'll tell you what else is weird. I got the highest-ever score on the Occam Middle placement tests, which Larry says, to do that you have to be *really smart*. So Dad, no way is this Larry's fault, and it was mean of you to take back the thousand dollars after Larry bought Briana the engagement ring, so not only am I in Special Ed, poor Larry is in debt.

So what if you can't see through me and I don't want to bite your throat and I totally can't fly? Who cares? Like Larry says, I know my limits. I get creeped out in high places, just *standing* too close to the edge, and when there's blood, I puke.

For a while I thought I actually did have some hidden talent, like seeing through walls or hearing your thoughts, and all I had to do was try. Well, I don't want to hear what other people think. I don't have to. I already know what they think. I know what every single kid at Occam thinks when I come in. It's *Loser*.

Which actually I don't mind, because some day either I'll die or else I'll make it from now until eighth grade and I can graduate. Either way it will be over, because Dad says don't even think about changing schools. I'm not allowed to tell Mom because she's a power broker and way, way too busy, as in: right now I think she's in her Learjet on the way to Bangkok or Beijing to save their bank or get more money out of it.

Today the lurchers ambushed me in front of school and Miss Freeman had to come with the taser wand but I was thinking if they got me, at least I would be dead.

Anything's better than this, but if I say so, Dad will start. "Occam is the, *the* gateway school if you want to get into blah blah blah Exeter, blah blah blah Groton, blah blah blah future assured, but you have to score at Occam and you have to *finish* Occam to get into any blah blah blah Andover blah blah and you have to shoot all those other boats out of the water blah blah blah get over your hurt feelings and *score* blah blah blah voted most popular blah blah top of the class blah blah blah if you think you're going to Harvard, blah blah blah Yale, blah blah *or anyplace decent*, you will damn well stick it out at Occam Middle."

At least at recess I get Guidance Counsel while everybody else goes postal out on the field. At least the going to the nurse for stitches has stopped, and the guidance counselor is very nice. Her name is Ms. Wong and she's on my side. She wants me to be cool about it, ordinary is a *good* thing.

I can't tell Mom, I'm not allowed to tell Dad, so last week I told Ms. Wong. "I hate it. Everybody else is on the honor roll and I'm in Special Ed."

"Bad grades?"

"Nope. I'm the only ordinary kid in this weird, weird school."

I could see her going, *wow*, so I told her the rest. At the end, she said the greatest thing. "It isn't your fault, Billy, it's Occam's fault. It's the wrong place for you."

I couldn't wait to tell Dad. Like he would get it and put me in a normal school. Mistake. Dad's a high roller with his eye on the bottom line and he exploded. "Dammit, if you want to go to Harvard, stop complaining and keep your damn eye on the bottom line."

"Ms. Wong says it's the wrong place for me."

Dad did what he does; he yelled. "Do you want to be a loser all your life? *I paid through the nose for this!*" He always gets what he pays for and what he's getting is pissed off. He grabbed me and shook hard. "*No way am I yanking you off the express to success!* You're in Special Ed because you *aren't trying*. Now, get back in there and get with the program. *Get on that express and don't get off until you're on the honor roll!*"

Back when I still had her for Guidance Counsel, Ms. Wong said, "Just be grateful for your mnemonic gift." Like I actually want to remember everything Dad says when he gets that mad. It sucks that she's gone because she's the only other person I could tell.

But that was last week.

I probably shouldn't of cried in front of Ms. Wong because instead of going all Guidance Counsel on me, she got really, really mad. "Well," she said, "We'll see about *that*." She made a whole gang of notes on her pad, like she was figuring out what to say to Miss Freeman and Mrs. Dratch. She grabbed my hands and squeezed hard. "Hang in there, Billy. I'll see what I can do, okay?"

I said, "Yes, ma'am."

"Good." She took a deep breath. "Do what you can and I'll do what I have to," she said and she sent me away. Like she knows something I don't know.

I sure as hell didn't know that she'd phone Dad.

Dad called the school and yesterday Miss Freeman came in to Guidance Counsel to have it out with Ms. Wong. She let me out early and they had a fight. When I left I heard Ms. Wong say, "I don't care who Dirk Mangold is, Billy does *not* belong in this school." Then Miss Freeman shouted, "*Billy is the problem here. Now, stand down and we'll deal with him.*" and Ms. Wong got so loud that the whole school heard, even Mrs. Dratch. "I don't *care* how much Dirk Mangold is paying for this, let the poor kid go!"

So at least one person in that school cared. But that was last week.

Now, this is bad: I had a lot to tell her today. Like, Donald crept up on me before

school, all spooky *whoooo-whoooo*, “I am Principal Occam and I’m here to take your soul.” It scared me and accidentally I climbed on top of Wulphy Seronica and screamed. Then Donald went *mwa-haaa* and put on his shirt so I’d know it was him, and everybody laughed at me.

I wanted to let loose at Guidance Counsel but Mrs. Dratch came instead, with an announcement on a purple sheet. She read it in her, like, special voice. “Children, Ms. Wong won’t be here today,” like Guidance Counsel had a batch of kids in it instead of just me. She snorted, “Insubordination,” and left. She did the same thing at Special Ed, like Special Ed was lots of people, not just me.

It was one thing too many. I ran away. Unfortunately, Mrs. Dratch ran after me.

She caught me at the corner and Dad had to leave work because it was only 3 P.M. and she was banishing me from Special Ed. He blew up as soon as we got into the car. “After all the parties we gave and all the high-end goody bags and all the favors we did to get you into the Alicia Apple preschool and the whole damn *building* we donated to the Porter Potter school to keep you there from K through Four to say nothing of the tennis courts we built to get you into this place, you’ll damn well stay here and you will damn well like it. Now, get back in there first thing tomorrow and *graduate* from Special Ed.”

Do *what*? Most days I finger paint, which is beneath me, while Miss Edgar looks out the window in between editing her vacation pictures on her phone and texting this guy Jimmy, whoever he is. Sometimes she holds up her book so I won’t see her crying and I have to act like I don’t.

And this is bad. Really bad. Instead of Guidance Counsel at recess I have to go back out on the playground. Three scrapes where they knocked me down plus tooth marks where somebody bit me on the hand, and I guess Dad had some kind of conversation with Miss Edgar who is extra bitter about breaking up with Jimmy and now I have to read a big, boring book about either the lurchers, the hairies, or the biters during Special Ed and write a report on it every single day for the rest of the year and when the bell rang today she took back the Undead Bible and said, “Go thou and do likewise,” like Occam is some kind of church.

Plus Larry isn’t speaking to me, which blows, since he’s picking me up after Special Ed to work off his debt to Dad. See, Dad has to blame somebody even though it’s not Larry’s fault, but he can’t get the money out of me. The trouble is, Larry spent it on Briana’s ring. Then Dad threatened to sue his brains out, so he had to take it back. Briana ditched him for hocking the ring, which only got him five hundred, and now he’s too bummed to talk to me.

Usually we ride along not talking because I’m too bummed to talk to him either and inside my head, Dad yells and yells.

Except when Larry drops me off at home he says more words than he’s used since Briana dumped him. “Watch out, your dad’s loaded for bear.” Larry stopped talking, but that doesn’t mean he quit liking me. It’s just that he’s so sad that talking is hard for him. His throat closes up and he does, you know, that shrug that tells you the person feels awful? “Your dad’s hiring gangs of tutors.”

If he hires Larry, maybe he can get Briana back. “When do we start?”

He groans. “It isn’t me.”

“But you went to Harvard, you know everything.”

“They’re not that kind of lessons.” Words pile up and start falling out of him. “So I guess you’d better watch out. It’s flying and fire starting and, worst case scenario . . .” He makes a face. “Morphing lessons.”

“Morphing into what?”

“Beats the hell out of me,” he says, and it’s the last thing he says until he pulls up in front of the house at which point he says like somebody reading off a card, except

it's Dad's words, coming out of him: "Lessons on fitting in, Larry. If he can't make it at Occam he'll never get into one of the gateway schools and if he doesn't get into Harvard I'll ruin you."

"Oh shit." I'm not allowed to say that.

"Yeah. Starting today."

"Come in with me? Please? I . . ." am kind of scared but he steps on the gas before I can finish. I call after him, "Larry, where are you *going!*"

Oh, this is sad. He yells, "Burger King. About my application. Night, man."

Dad snags me at the door. "Billy, come meet your new tutor."

OMG, it's an adult biter. They are nothing like the kid ones. No cape, but he's all *hel-loooh* in that fakey accent, but when he goes, "You're mine, little boy, let us make this queek," the drool on his sharp teeth glitters. His idea of a lesson is bite my neck until I die and I wake up a vampire.

I kick him in the nuts.

I used to hate going to school. Now Dad has ruined coming home.

The next day he shoves me into his study. "Okay, all right, I've had enough." He pushes me down in a chair. "You will learn *some* damn thing that gets you honors at Occam or . . ." He's so mad he can't finish. "Before Lloyd Ansible is done, you will *fuckin' well know how to fly.*"

You can guess how that goes. I hear him breathing as soon as Dad lets him in. Then I hear *wheeze shuffle shuffle shuffle* coming down the hall and this ginormous plaid suit rolls in with buttons popping off the front because nothing is big enough to hold him in.

He wheezes, "Lloyd Ansible."

"Oh."

"Mr. Ansible to you. Now." We go out back and he squelches down on a bench while I do lifting moves and flapping exercises and jumps that are never broad enough. He comes every day until he says, "Time to solo," and I break my arm taking off from the upstairs porch rail. You'd think that would be enough for Dad, but the next day the fat man's gone and it's this Twyla Therimen. I have to memorize the runes and recite charms in unearthly voices because she's convinced my dad that although it pretty much kills him to say it out loud, I'm a fairy king waiting to transform. She's nice, so I'm okay with it until the feds come in during a lesson and bust her for an unrelated scam.

The lurcher that guaranteed Dad he could turn me washes out on his first day, and when Wulphy Seronica's dad comes for the next full moon I freak and lock myself in the closet with my phone. I reach Mom in deepest Myanmar, so that's the end of that, but Mom's gone until Christmas so there's no hope until January, at least.

School's getting worse and so is Dad, especially since my first report card came, straight Cs when every other kid at Occam is on the Honor Roll, one of those things Mrs. Dratch and the trustees guarantee after you write the check. I slid it into a mess of junk he had waiting to be signed, hoping accidentally he'd sign it too. Like that would work.

Bad got even worse.

After Special Ed, Larry waits until we get to the house. Then he goes, "Warning. You're down to your last tutor."

"In what?"

"I think it's morphing."

"What's that?"

Words fall out of him, like he's reading it off a card: "Fitting in, Larry, and I hold you personally responsible for this mess. If my boy can't make it at Occam the gateway schools won't even look at him, let alone let him in, so his chance at the Ivy League is

shot to hell before he comes out of the gate. Take it from me, if the last Mangold doesn't make it to Harvard I'll ruin you," so I know for sure he's channeling Dad.

He doesn't even shush me when I go, "Oh, shit."

"Get in there, and whatever you do, don't mess up. If you can't morph or whatever, it's Marc Jacobs."

I'm like, "The designer?"

He actually turns to look at me, which is scary enough. Then he says in Dad's voice, "The last resort."

I get in the door and Dad pounces before I can put down my pack. "Okay, get in there and meet Señorita Rita Flora. I paid thousands to get you on her list; she's only doing this as a special favor to me. It took a diamond necklace and certain promises. Now get in there and get my money's worth."

I go into the study feeling neither here nor there until, *wow!* Did he not know who he was hiring? "Ms. Wong!"

"Shhh. Señorita Rita Flora," she says, but even with the big top comb and the black lace mantilla thing that partly hides her face, there's no mistaking that it's her.

"I thought you were Asian."

She shushes me, mouthing, "It depends." Then she pipes up in her señorita voice, loud enough for Dad to hear, "Now, let's get on with morphing, because if you can't change and make people believe in the change . . ." she whispers in her Ms. Wong voice, "you're kind of screwed."

Then she gives herself a little shake and turns into a gigantic Spanish bunny rabbit right in front of me, except she doesn't. She doesn't have to. She snaps her fingers and I snap to. As soon as I'm back in my right mind, I get it.

I'm like, Oh wow, Ms. Wong is a five star hypnotist.

So we practice a little and at the end of the hour she calls in Dad. It's funny, I think he's sort of in love with her.

Turns out she hypnotizes Dad so he thinks she's the world's finest shape-shifter. She does it one on one so I can see. I stand there grinning because this is the very Ms. Wong that pissed him off so much that she lost her job, and he doesn't know it. She's in his study making him think she's a waltzing kangaroo, her first demo of the week. This is Rita Wong pirouetting in front of Dad while his jaw drops in the presence of the world's greatest shape-shifter, and I have to laugh. Everybody else in that room, which means me and Bernadette, the cook, is there to tell you that Ms. Wong is as pretty as she ever was and she hasn't shifted a thing.

Then she snaps her fingers and Dad snaps to and congratulates her on a great job, how soon is she going to get results out of the kid?

It's awesome, *awesome*. Ms. Wong teaches me how to hypnotize people into thinking I've morphed before their eyes, starting with Bernadette, who quits the night she brings up a sandwich while I'm doing my homework and I turn into a giant horned owl. Good thing she left without telling on me.

Ms. Wong says, "Understand, Billy, it's not what you're doing, it's what they *think* you're doing that makes the difference," and I get so good at it that I trick Wulphy and his gang into believing I'm Donald and I have a machine gun loaded with silver bullets. Instead of attacking, they leap the fence howling blue murder which is great except when I tell Ms. Wong, she gives me a little lecture about the dangers of being overconfident.

The trouble is, although it isn't, like, *transforming*, I go from hypnotizing small gangs to the point where everybody in the multipurpose room thinks there's a sabretooth tiger in my desk—well, everybody but the lurchers. Illusions don't work with them because of them being clinically dead which, it turns out, means although they aren't very smart, you can't fool them.

So they gang up on me at lunch and beat the crap out of me and Miss Freeman has to come with the taser wand. Unfortunately, she calls in Dad. He has to pick me up instead of having this important lunch with some other mover and shaker over the next big deal because Larry's tied up at Burger King and Mrs. Dratch is sending me home in the middle of the day.

Bad gets worse. He demands the surveillcam footage for the Multipurpose Room to see if he has grounds to sue, and this is how we trip over the bottom line.

Until Dad sees it he thinks Ms. Wong's morphing lessons took and I'm all, like, fitting in, which I'm not. The videos show me not morphing. I can't morph, I can barely hypnotize, and he's tremendously pissed off at both of us for not giving him his money's worth. I haven't been morphing and neither has Ms. Wong. Nobody's morphing at all.

I call to warn her to stay away from our lesson, but it's too late. She's already left home and I don't have her cell. It was really mean of Dad, getting her fired twice, and this time he's really mean about it. I have to stand there and watch the lecture, which starts, "Now, don't try any of your tricks on me." Then he roars, "Or I'll bring you up on charges," by which time Ms. Wong, at least, has zoned out.

Yeah, right. I can see her going back and forth in her mind while he rants, she's busy texting someone and talking to them and laughing on the phone and Dad doesn't know. She's done making arrangements with somebody and is buffing her nails with a bland smile by the time he finishes, but Dad still thinks she's cowering or apologizing or whatever it is that makes him smile like he won the trifecta, all mwaha-haaa, my dear. He slides his arm around her like he won her in a bet, and starts patting her butt as he walks her out.

He comes back into his study all smug and grinning because he thinks Ms. Wong is going to make up with him or something over dinner, as in, Dad and she will get together later. Fat chance, but you'd think he'd just sealed the deal. He's dusting his hands, like, *there*.

Then he gets scary. He doesn't rant. He just drags me upstairs, *thud, thud, thud*, and shoves me into my room. "Now you're going to sit there and think about what you did." Then he slams the door.

"Dad—"

"Sit down and shut up," he says through the crack. "Play your cards right and you might get supper, but you listen to this, William Levenger Mangold, and listen hard. We're down to the bottom line here. Get your act together and do it fast. I'm coming back with Dr. Jacobs."

"But I'm not sick!"

"Psychiatrist," he says. Then he really scares me. "Results guaranteed."

"Dad!"

"Cost me a fucking mint, but it's damn well worth it. Enough whining, enough foolishness. I've had it with you." I hear him stomping away. Then he yells back over his shoulder. "If he can't fix you, we're done."

What does he mean, we're done? This is so creepy that I try calling Mom but my phone isn't working and neither is my laptop. It's late, but nothing happens when I turn on the light. It's getting dark in my room, so all I can do is sit on the floor and think until my brain squeezes, hoping that I actually do have a superpower and Mom or Ms. Wong or somebody out there is tuned in and getting my E.S.P., which basically is me thinking: *Help*.

Then Dad comes back. He's got this doctor with him, but the doctor is kind of hard to really see, because of the big thick eyeglasses and a big felt hat with the brim pulled down and a humongous tweed coat and he smells different, like the riverbank under a bridge. Dad's all, don't you want to get out of those hot things and he says no thanks, he's comfortable and by the way, before Mr. Mangold leaves him alone

with his patient would he please shut the door so we can be private and in the name of heaven, man, turn on the lights.

"All right, all right!" Dad hits the tone that cracks glass, just to make sure the doctor knows he's running out of patience.

It's not like the doctor cares. He waits until the door closes and he hears the lock click. Then he waits longer. Finally he says, "Is he gone?"

I can hear Dad breathing through the keyhole. "Not really."

It's hard to tell, but I think underneath the half-cape and tweed coat that cover the rest of him, his shoulders are beginning to twitch. I don't know if it's a shrug, or if he's secretly laughing. He looks at me. I look at him, although with the hat and the muffler and the high coat collar, it's hard to tell what I'm looking at. Hair, I think. There's lots of hair or beard or both covering the space between the shadow of the hat and the muffler wound around his chin.

He says to me, "Euston, we have a problem."

"Euston?"

"Sorry, inside joke. Now, about your situation. Details, please!"

"OK, Doctor."

"I'm not a doctor."

"Cool!" I should be scared, but the noise coming out of him sounds more and more like laughing.

"But that doesn't mean I can't help you. Spill."

"What?"

"Chapter and verse, everything they did to you."

"It's not really them."

"Everything he did to you."

I can't see his face, exactly, partly because of the muffler and the hat and partly because of the fur, but his voice is so nice that I say, "Okay," and I start. I end up telling him everything, from how Dad's grilled me every single day since my first play group through preschool and Edgemont Elementary, to all the tutors and pop quizzes with punishments and everything else I've had including today at Occam Middle School, with Dad giving me performance reviews according to what the teachers said and how well I was liked and the more I think about it the worse it gets, I mean, Dad giving orders and Dad adding on classes and lessons and tutors, and how all he cares about is me succeeding because a mover and shaker like him can't afford to have a loser for a kid. The more I tell, the more awful it is. By the end I'm groaning, "that poor kid," like these bad things happened to some other person, not me, so it's okay to feel sorry for them.

I finish with today, me standing here watching my mean dad be rotten to Ms. Wong. Then I'm done and I sit back and wait for the doctor to tell me what I'm doing wrong and how to fix it so Dad will get his money's worth and stop being pissed off at me.

Wow!

Dr. Jacobs doesn't blame me, he doesn't start telling me what to do or how to be different. He just folds his hands inside his woolly black gloves with the fingers cut out to leave room for green fingernails that are extremely sharp, and he says, "Oh good grief."

Then we are both quiet for a very long time.

I should be scared. This guy is, what did Dad call it in that cross, you-asked-for-it way? *The last resort*.

But the doctor doesn't scare me and nothing about him, that is, if you don't count the stuff I unloaded on him, makes me feel in any way at all even a little bit bad. In fact, for the first time since I can't remember, I am sitting here with this big, baggy psychiatrist or whatever he is, feeling pretty good.

Then he stands up and schlumps over to the bedroom door, he's that kind of baggy;

it's just the noise he makes, and the monster galoshes don't help. He says through the door, "I know you're out there, Mangold. I know you've been listening, and I hope you took notes. Now. Come in." His voice changes. Everything about him changes. He's standing straighter. He's at least two feet taller, the galoshes split to let out hairy feet with dark green claws. Even his voice gets bigger. "Hurry up, Mangold. It's time."

There's this uncomfortable pause that gets longer and longer. I can almost hear the cogs inside my father's brain whirring while he thinks. Finally he clears his throat, *harummm*, smashes the door open, and stomps in like it's him everybody should be afraid of, not the other way around.

Does he not know what just happened here? Dr. Jacobs isn't just taller, he's tremendous, and he's getting mad. *Dad, Dad!*

Dad doesn't even look at me. He whips out his checkbook. "Okay," he says, as if he's paid for and gotten Results Guaranteed and I am signed, sealed, and delivered, marked: Success. "I'm late for a meeting, but buy yourself something nice. You fixed my kid."

By this time the doctor is so big that when his voice comes out still and small, even Dad looks up. "I did what, Mangold?"

"Solved my problem." One look and Dad's deal-making voice falls apart. "Didn't you?"

"No. I solved *the* problem." The doctor's voice swallows the room. His arms spread and his big coat opens and swallows Dad. "Be good. Have fun," he says, clamping it shut. Then he's gone. And Dad? It's the last I ever saw of him, although the spa in Tierra del Fuego sends a note every year telling us he's improving, just not rapidly.

I don't know whether the doctor called Mom or Ms. Wong did, but I'm still in my room, trying to figure out what just left the house, when the front door opens wide and Mom is home. She's downstairs in our front hall, calling, "Billy? Billy?" and I'm like, "Mom. Mom!" and I go running down.

We're so glad to see each other that for a long time she doesn't ask and I don't tell her, I kiss her, and she kisses me and then we just hug and hug and hug.

The best part is, Mom does all her business in Los Angeles now, and since public schools let out earlier than Occam even without Special Ed, she comes home from the office after the business lunch, and telecommutes so she'll be here for me in the afternoons. Yeah, right. I'm in Normal Middle School, right down the hill from our house. The kids in my new school are ordinary, like me. Yeah, they rag on me because I run funny and I can't hit the ball, but Tuesdays and Thursdays I stay after for baseball anyway, no problem, it's kind of fun. And whatever I do or don't do in school, Mom's fine with it. I never saw the doctor or whatever he was again—if I thought about what he looked like when he solved the problem of Dad I might get weirded out, but there's nothing weird about what he did for me.

Last week I thought we passed Ms. Wong in a convertible on Santa Monica Boulevard, and she has a boyfriend—big, looks a little bit like . . . No, he doesn't. Unless he does. I couldn't tell, the car was going too fast, but whether or not it was, she looks happy, so, cool! ○

Copyright © 2012 Kit Reed

Three Sumerian Mummies

Three Sumerian mummies
Formed a nu-metal band in Seattle last month.
They call themselves Mammon
And are secretly cannibals.
I predict they'll sell a lot of albums
Before they run out of fans.

— Peter Simons

Copyright © 2012 Peter Simons

On a treacherous interstellar journey where not everything is as it appears, a young crewmember will have to rely on her own resourcefulness if she is to survive her stint as . . .

THE SECOND ENGINEER

Gray Rinehart

The Engine Room pulsed with a beat only Annalise could hear.

The room's name was an official lie no one bothered to dispute. The great engines actually surrounded the ship: globules of power that churned impassable volumes of sticky normal space into lubricated throughways, arrayed at the interstices of a reconfigurable three-dimensional matrix that gave the ship the appearance of a fat multi-axis snowflake. The Engine Room only controlled them: a glorified AI terminal interface point, with lockers.

But in the Engine Room, the ship sang to Annalise. It sang a melancholy song, a tuneless anthem, a wordless poem. It sang of cloudless days on planets with no suns. It sang of blissful despair, ecstatic depression.

Annalise hated the Engine Room.

The *Indomitable* was three weeks out from the garrison at Ice-Nine, where Annalise had signed on after two years as the third engineer on *Victory*. If the ship had sung to her when she first reported in, she might have tried to back out of the transfer. Maybe it had, and she just hadn't noticed.

Annalise crept into the wardroom a half hour before her shift started. The far table was empty, and when she had her tray she headed straight for it. All she wanted was to eat in peace, and think of home.

Isaac Collins couldn't allow that. "Hey, Anna," the skinny navigator said, "what's the ship singing now? 'Blue Christmas'? 'Rockin' Around the Christmas Tree'?"

Annalise spooned tasteless pureed nutrition into her mouth and pointedly ignored Collins and his laughing friends. It had been a mistake ever to mention the singing to her crewmates; one after another, Collins included, had presented themselves in the Engine Room, floated silent for a moment, and uttered their own version of, "I don't hear anything," before they exited and made their way back to the rotating habitat section.

Annalise had hoped that Collins would support her, since he was the only other *Indomitable* crewman from her home world, Paraclete. But he just mocked her along with the others. She'd stopped explaining after the fourth visitor that she heard the ship through conduction, not with her ears. Even that wasn't quite right, though. She felt sure the doc had recorded it in his log as a hallucination, a first symptom of space malaise.

Annalise heard/felt the Engine Room through her feet as they were hooked in the straps, through her fingertips on the keyboard when she used that interface. She once stretched out against the bulkhead, with her hands against a locker and her

feet on the opposite wall, pressing against the surface and feeling the pulse from her elbows to her knees. It was the closest she had been to a sexual encounter since the *Indomitable* had shipped out. That had been early on, when the sound-that-wasn't-sound was still a novelty to her, and exciting. Now it was something else.

"Don't let them get to you, Anna," Marcus Overbay said. He stood next to the table, his own tray of gruel in his hands.

Annalise waved him to the seat across from her. "What makes you say that?"

"The way you sit there, all huddled into yourself." He tucked into the facsimile of food as if he actually enjoyed it. He had been on *Indomitable* longer than she had, but it was only his second cruise; maybe his taste buds hadn't become sensitized to Navy chow yet.

Marcus—Ensign Overbay—was the only crewmember who said he believed her about the Engine Room. She wondered at that, since Marcus was from Oliver's World; after Commodore Li's almost-too-late counterattack in the last Muharrennen war, the Ollies generally distrusted Paracletans. She wondered if Marcus was sincere, or if he just wanted her to be grateful enough to warm his bed.

"You look like you've been punished," Marcus said around a mouthful, "like a little girl hiding from her parents."

"Not parents," she said. "More like older brothers."

He pointed to himself with his fork. "Or older sisters."

"No," she said, "brothers are worse."

Marcus shrugged. "Could be, but I only have experience with sisters. And they can be pretty practiced at the tormenting arts."

Annalise didn't have anything to add to that, so she fell back into silent reflection. She finished the slop that was supposed to be corned beef, washed it down with the citrusy water they claimed was juice, and sat until her wrist comm chimed.

"That's my cue," she said. "Bruce will start worrying where I am."

Marcus shoveled a last bite into his mouth and talked around it like the youngster he was. "Yeah, and Stephens will blow a burst disk if I'm even a minute late. See you 'round." Annalise nodded; Marcus might be a good engineer one day, but he needed to do well in this turn as a Power Officer first.

They put their trays in the hopper and left the mess, Marcus still chewing. Annalise decided that, if he had been her little brother, she would have tormented him too.

On the roll axis, at bulkhead seventeen, the hatch to the Engine Room was closed. Annalise didn't want to open it.

She touched the bulkhead opposite the hatch and pushed herself down to the deck-plates. As the pressure through her soft shoes increased, she tried to feel the vibrations. Deep breath and hold it . . . nothing. Shallow breaths, wisps of respiration . . . the same.

The lights dimmed to evening setting. Shift change.

Annalise pushed herself over to the hatch, opened it, and drifted through. She trailed her fingers along the sprung hatch, hoping to slow herself almost to null in the middle of the space.

"Right on time," said Bruce Edgerell, First Engineer.

Annalise faked a smile. "Well, I didn't have anything better to do, so I figured I'd show up."

"Huh," her boss said. "It's a good thing you did, or I'd have the Marines track you down and bring you here in irons."

"Ooh, that might be fun," Annalise said. As if they had any irons. And as if the Marines would want to get anywhere near this bulkhead. Only on-duty Navy crew

came to the center of the ship, where gravity canceled out. The Marines rarely came out of the habitation ring: they were trained in nullgee tactics, of course, but felt more secure where they knew they could use gravity to help them fight.

"I'm going to have to think about that," Bruce said. "When I picture you in irons, what else would you like to be wearing?"

Annalise hadn't bled off quite enough velocity coming through the hatch. The margins were too tight because the room was so small. She was going to touch—

—and when she touched the locker opposite the hatch, the room was alive with vibration, a rhythm built into the beams, girders, and stringers of the universe that was the *Indomitable*. It pulsed through her, swamped over her like waves on the beach, the shifting magnitudes and frequencies forming the soundtrack of her soul—

—she gasped a little as she pulled herself to one side, rotated and settled in the open air, and pulled her hand away from the locker.

She frowned as she tried to remember Bruce's last question. "I'd like to be wearing a nun's habit," she said.

"Oh, why'd you have to say that? I went to Catholic school on New Britain—now that's going to give me nightmares."

"As well it should," Annalise said. "Are you ready for changeover?"

"I am now, after that. Oh, that's atrocious."

Bruce's changeover briefing was swift and professional; he took his role as senior engineer seriously. He covered every detail that needed to be covered, and only in enough detail. He didn't rush to leave, but he didn't dawdle. And he didn't seem to notice or care that Annalise remained in position, floating in the middle of the Engine Room.

"One last thing," Bruce said, after mentioning the scheduled preventive maintenance inspection coming due on the forward weapons array gimbals. "I found something curious in your logs."

"Curious how?"

"Take a look," he said, and waved a holo into the Engine Room air on the downspin side. Annalise turned her head to look at it, correcting with small hand motions to minimize her drift. The display was an inventory list, not a copy of her log.

"You've laid in an interesting assortment of stock in this compartment," Bruce said. "Conduit, plating, fiber, a universal signal generator, a couple of patch panels, a burner with lots of PROMs, spare boards for nearby equipment, even—" he zoomed the display, "—two welders and a half dozen jigs. You building something, Anna?"

"No, sir," she said automatically, then felt compelled to add, "That's not my log."

"No, it's not, and that's what's curious."

"I don't get it," Anna said.

"All the time tags in the inventory system show that this materiel was moved at various times during your last seven shifts—"

"No, I get that, but I don't *get it*—"

"Don't interrupt," Bruce said. "The items are where they are, all gathered outboard and upspin, which is not where they should be. The materiel that should be in that compartment"—he waved another list into existence, and blanked it just as quickly—"was spread out where these items came from, and the only transfers were made during your shifts. But your log shows no record of the transfers—"

"Because I didn't make them—"

"I said, don't interrupt." He paused, as if waiting for Annalise to speak. She held her tongue, the unspoken apology a bitter taste in her mouth. "It was subtle," he said, "I'll give you that. If I hadn't needed to set up a welder for a seam repair just aft of bulkhead twenty-six, I wouldn't have noticed."

"If I could think of a valid reason for any of that materiel to be moved, I might have been pleased. But I cannot think of a reason, either to move it or to *fail* to log it."

Annalise floated silent in the center of the Engine Room, noting her senior engineer's emphasis. He was telling her that he was willing to treat the omission from her log as an error rather than a deliberate falsification. She would think about what those inventory changes meant later, but now Bruce was waiting for a response. She concentrated on choosing her words carefully.

"I cannot think of a reason either, sir," she said.

Bruce regarded Annalise for a moment. His lips pulsed as he moved his tongue around in his mouth, a sure sign that he didn't like the way she had avoided answering him directly. He dissolved the holo and pushed himself up and out of the console chair.

"Your task list is in the computer," he said. "Find some time between tasks to put everything back where it belongs . . . starting with the other welder."

"Aye, sir," Annalise said. "Very good. I relieve you, sir."

"I stand relieved. Have a good shift, Anna."

"I'll do my best," she said to Bruce's retreating back. He left the hatch open.

Annalise resisted the urge to sigh, because it would start her turning sooner than she wanted and she would touch the wall or the chair or something. The thought of it angered her: she hadn't been able to figure out what was happening with the ship making noises at her, and this complication she didn't need.

Her reaction to the ship-sounds seemed almost as crazy as the situation itself. She'd been in the Navy six years now, shipped out dozens of times on short and long cruises in everything from troop transports to scout ships, worked more hours than she could remember—the exact number surely recorded somewhere, if she really wanted to know—in rooms very similar to this one, but *Indomitable's* Engine Room was the first one that sang to her.

Devon, what's happening to me?

She closed her eyes and listened for her husband's voice in her imagination. That would be the only way she would hear from him for another month, and even then she would only receive images of what he was doing—the troop training or intramural sports or Infantry politics that were at once the same as and completely foreign to Navy politics. He wouldn't answer her question because he'd never hear it. She couldn't get a message to him to even ask a question, since every second she was receding from him or he from her, all motion being relative.

She wrote messages to him, of course, and when they met with another vessel she would upload her messages and download any from him, and they would wait more weeks or months before he could possibly offer her any comfort. And then only if his unit had not been deployed in the interim.

Annalise looked at the wall display, and knew she could postpone no longer. She was the second engineer, and had duties to perform even under circumstances that were difficult or dangerous. The latter was a remote possibility in the modern Navy: the most recent Muharrennen incursions had been a decade before Annalise entered the service; pirates and scavengers on the outer rims of each system rarely tried their luck against escorted convoys; and the ship's systems weren't just failsafe but almost neverfail. The scores of technicians an engineer might have commanded on an ocean-going vessel were, on starships, multi-taskable robots directed through the AI interface. The only dirt under Annalise's fingernails was from scratching her own head, and the closest she ever got to doing a repair job herself was to spray a squeaky hatch hinge with lubricant. And even that the robots could do.

She reached behind her and pushed off the locker. The beat came so fast it was almost an impulse; she felt it as sudden as lights coming on in a dark room, and then it was gone until she reached the workstation. With only that single beat she imagined the rhythm in her head, and when she grabbed the back of the chair the match

was exact with the ship's song. A shudder ran through her arm to her shoulder and radiated outward from there; she trembled once, almost violently, at how she could be in tune with a song she didn't understand and that always seemed to change. She suppressed the urge to retreat into the corner of the ceiling and cower there between the vent and the lights.

Annalise pulled herself into the seat, hooked her feet into the straps, and opened the interface to the task list for this shift.

The pulse hammered at her, a song of dark hope.

Directing the robot couriers on extra rounds to move the welders and other tools back to their original locations took more out of Annalise than she expected: a migraine thrashed her mind before her shift was half up. The plating and other materiel, she decided, could wait. She entered that decision very clearly on her shift log.

Her changeover with Lieutenant (J.G.) Krause was faster and less professional than Bruce's had been with her, but she didn't care. The remorseless, incessant beat was so pervasive that she barely made it through the formalities.

In the corridor, the ship was quiet.

Annalise nearly wept in bliss. She grabbed a stanchion and pulled herself close to the bulkhead, and the absence of rhythm was palpable—she felt the release, the freedom, much as a laborer feels the absence of the sun when he steps into a shadow. She wanted to melt into the plating, sink into the structure of the silent ship.

She had no crew training to attend, no physical training either, no other obligations at the moment—a true rest period. She pushed herself off the quiet bulkhead and maneuvered through the central spaces toward one of the habitation ring entry ports.

A maintenance robot rode along one curving bulkhead toward her, moving a fabricated piece from the shipwright system into place for installation. It detected her approach and slowed; she slipped into an adjacent storage locker to let it pass, and tried to remember if it was one of the robots she had been directing or if it was one Krause was running.

She turned in the dark space to watch the robot pass, and hit the back of her head on something hard.

She pulled forward instinctively and reached up to cover her head . . . but in that instant recognized that her first thought didn't make sense. She hadn't been moving that fast—hadn't she grabbed the edge of the open hatchway?

She didn't hit her head on something; something hit her head.

Her hand came away wet and sticky.

Her tuck had started her spinning, vertically, and she raised her head to look as she spun. Boots, skinsuit, helmet, and a long rod that caught her square in the temple.

The blow stunned her and spun her, and she flailed against the bulkhead to add momentum and some amount of controlled spin. If she could get to the corridor . . .

Her head throbbed as she whipped it around to find her attacker. Her field of vision was narrower than it should have been, and it seemed as if the darkness in the alcove was reaching out to her with a silver baton. She put her arm up and felt it snap against the rod. An instant before the pain hit, she catalogued the baton as metal because of the sound.

Annalise heard herself cry out before the rod hit her in the head a second time. Then she heard nothing at all.

"Think hard, Lieutenant. You have no idea who did this to you? No idea who might want to do this to you?"

Annalise couldn't think hard, and the XO didn't seem to understand that. He wasn't badgering her, but his voice had started to take on an edge that it hadn't had

at first. She understood: he was in charge of good order and discipline, and this was neither. Still, she would rather have submitted to this interview anywhere else—even standing at attention in front of the Old Man's desk—instead of here: lying down in the infirmary while the doc stitched her head.

"No, sir. It could have been anyone."

"Don't move so much," Doctor Noorani said.

"It couldn't have been anyone," the XO said. Lieutenant Commander Williston was a good officer, but a little too literal sometimes. "It wasn't me, and it wasn't Captain Mamiya, and it wasn't Doctor Noorani—"

"Thank you," said the doc.

"It wasn't anyone on duty at the time. I'll start with the off-duty personnel and go through everyone individually if I have to, while we wait for the DNA results, but it would be faster if I knew of someone who wanted to . . . attack you."

Annalise looked up at the doc, who said, "I'm done with your head—you can talk. When you're done we'll set that fracture in your hand." He turned to the XO and continued, "But I'm afraid there won't be any DNA results."

"Why not? You have a rape kit in here, I know."

"Yes, we do, and we examined her while she was still unconscious. We found no evidence of sexual contact."

Annalise's mind was a jumble of images and pain, and none of what she felt or heard was making sense. She pushed away the thought that she might have been violated . . . that she had, in a way, been violated by the doc's examination. "Sir," she said, "I don't know of anyone who wants to hurt me, not like this." She raised her left hand, encased in an air splint.

Williston nodded, more times than were necessary. "Okay. Now tell me again why you were in that area at that time."

Annalise hesitated, and stumbled a little through her explanation. She didn't want to mention the increasing effect the ship's song seemed to be having on her. The doc raised his eyebrows as he made notes on his tablet, and once caught the XO's eye and nodded slightly.

"Okay, Lieutenant," the XO said. "If you think of anything else, let me know. Meanwhile, I'm going to have engineer Edgerell re-work your section's schedule to give you an extra rest period. No—don't argue. If I didn't do it, the doc would probably order you to bed and I'd have to do it anyway."

"That's right," Doctor Noorani said. "In fact, I'm prescribing you something to help you rest. You'll take two once I'm done with your hand, then the Marine in the corridor will escort you to the wardroom. Get a bite to eat, then lights out."

A half hour later, with her left wrist encased in a light cast, Annalise worked her way to the wardroom, where she ate a piece of something posing as dry toast. The medication made her a little wobbly, but she made it to her bunk.

She stared for a long time at the painting Devon had done for her during one of his infrequent artistic moods: a fake window looking out on a pleasant garden scene in which he was picking a pear from a dwarf tree and their daughter Ori was chasing a butterfly. Annalise wondered if Ori got to chase butterflies with the other children in the nursery on New Britain . . . if she was happy . . . and if Ori missed her very much.

It might have been the pills, but the fake window looked more realistic than Annalise had remembered. Its subtle unreality had been one of its main attractions for her: she preferred it to the screenrolls others used to change the look of their bunkspaces. It was real in a way the simulations would never be, simply by virtue of its imperfections. Life was imperfect, even butterflies were imperfect. It was a window onto a world that was only for her.

It was, she reflected, the only window on the ship. Once underway, sliding through the void the engines created, windows were worse than useless: the starless depth created voids in the minds of those who tried to see into it. Hers was the only window, and the best of all possible windows, because it was a window that would not admit the dark.

Annalise slept, but her sleep was not sound.

Or rather, it wasn't the right kind of sound.

It was rhythm, and it was *wrong*. She shook herself awake, though the meds tried to keep her down.

Through the medicinal fog, she felt/heard the ship's song. She wasn't sure how—she'd never felt it in her cabin before.

She reached out to the bulkhead, and the pulsebeat of the ship's song hammered through her fingertips—more urgent, more intense, and her hand felt drawn to the cool surface as if by some flesh magnet. She let her fingers spread out and her palm sucked down on the plating. The depth of the rhythm grew, flooded through her, down to the soles of her feet and rebounded back. The rhythmic waves met and amplified between her thighs, pounding and pounding until she moaned and jerked her hand away from the bulkhead. She backed up to the edge of her bunk, clutching her hand to her chest, breathing as she hadn't in a long, long time.

The fake window wavered in her vision, came briefly into sharp focus, and wavered again. Vaguely Annalise registered the sensation of tears on her cheeks. She wiped them away—and felt the pulsing song inside her head.

Move without moving, arrive without leaving. Life beats inside.

Lifebeat tickles, sucks energy, throws off balance. Reminds me I am alive.

Arrive without leaving, move without moving. Destroy and rebuild instant by instant in every new place.

The words were not words, not language as she thought of it, not recognizable as anything other than pounding waves inside her skull. But she heard what they said.

Instants blend, stick and unstick, flow outward and inward. Borne by unseen winds, driven by other wills.

Annalise curled herself into a fetal position, insulated from the nearest hard structure by the thin padding on her bunk. She willed it to insulate her from the song.

Instants converge, on injury. Pain in an instant to come. And in those after the instant to come, nothing.

Annalise understood the wordless dirge in the marrow of her bones. Pain blossomed in her abdomen, and her heart pumped despair through her body. Desperation suffused her every breath.

Injured, up the spin and out. In the instants later, nothing more. I am nothing is me.

Nothing is destiny is fear. My heart beats in time with fear. . . .

Navy regulations forbade stimulating liquors aboard active vessels, except for very specific diplomatic functions that most captains interpreted rather liberally. But wherever something is forbidden, people will find ways to overcome those restric-

tions. *Indomitable* was no different.

Annalise had managed to get comfortably drunk. Her complete stash of coffee liqueur had been enough to dull the edge of the ship's song, so she went in search of anything else that would help. She left Doctor Noorani's medicines behind; she thought they must have made her hear the ship outside the Engine Room, and though the temptation seized her she did not crush and dispose of the pills. She presented herself at the galley, to wheedle something out of Petty Officer Ramirez. Olivia warned Annalise that the XO would hang them both from the nearest yardarm equivalent if he caught her drunk, but Annalise didn't care.

She was certain she had gone mad, and the thought comforted her somewhat: she assumed anyone truly insane would not question whether they were sane or not. If she recognized her madness, that in itself was evidence that she was not too far gone.

The XO didn't buy it.

They were in his cabin, with the bunk folded up against the bulkhead and a tiny desk folded down over his private sink. The sink made Annalise jealous.

"You came here highly recommended," Lieutenant Commander Williston said.

"Yes, sir," Annalise said.

"Nothing in your service record, your medical record, or your personal history to indicate any tendency toward public drunkenness or any mental condition."

"No, sir."

"Good interim performance writeups so far from Lieutenant Edgerell."

"Yes, sir."

Williston tapped the miniature desk with his index finger. Annalise counted the taps: one, two, three-four-five.

"Then what am I to make of this?" he asked. "What do I tell the Old Man about one of his officers getting sloppy drunk when she's supposed to be on bed rest? And it's the same officer who is on bed rest because an unknown crewmember attacked her?"

"Not unknown," Annalise said before she thought. The XO looked as surprised as she felt: his widened eyes and tilted head broke his superior-officer mask. Recognition broke through Annalise's consciousness and she knew . . . because the ship knew.

"Who, then?" the XO asked.

"Collins," Annalise said.

Tap, tap, taptap, taptap, tap. "Just a few hours ago you didn't know who it was. You hadn't seen anything that even gave you a clue. This is a serious charge, Lieutenant. What new evidence have you uncovered?"

"I just know," she said.

"I need more than that, and you know it."

Annalise clenched her gut muscles against the mounting frustration, and against the subtly growing ship-song in her head. She had to get out of this interview soon, and find some other way to silence the song before it overwhelmed her.

"Spill it, Engineer," the XO said.

"The ship is scared." The words tumbled out of her, and again the XO's surprise matched her own. He picked up his personal data device, started to activate it or select a program, then put it back on the desk. Taptaptap.

"What did you just say, Lieutenant?" he asked.

Annalise resisted the urge to repeat herself; it felt as if she were trying to stifle a cough. The song inside her head was minutely but perceptibly stronger, more insistent.

"I believe, sir," she said, measuring each word precisely, "that the *Indomitable*, or perhaps her AI, is telling me that she is afraid."

The XO's words were as precisely meted out as Annalise's had been. "Of what is the ship . . . afraid?"

Annalise folded her hands in her lap. The concepts, the images, the emotions had yet to line up clearly in her mind, and so did not fit well into speech. They were like Hillebrand fasteners that she was trying to install with a spatula. Her tongue and lips felt clumsy forming the words. "Of nothing . . . of becoming nothing. Of something that's going to happen, after which nothing will ever happen again."

The XO leaned forward and put both hands on his little desk. "I'm not sure that makes any sense."

"I'm not, either," she admitted.

The XO tapped for so long on his desk that Annalise lost count. "I'm going to consult with the first engineer, and with the doctor, about how to proceed. Meanwhile, two Marines are going to escort you back to the Mess—"

"That's not . . ." The glare in the XO's eyes stopped Annalise before she could say, "necessary."

"—where you will consume at least two cups of coffee and eat a hearty breakfast of beans and toast." The XO's voice was calm, but hard as a piece of permaplast. "You will drink an additional liter of water, in their presence. Take your time. You will either metabolize that meal and reduce the alcohol level in your blood, or you will puke it up and wish you had."

"The Marines will escort you to the showers when you are done eating. When you are human again, they will escort you to your quarters, where you will stay until the Mess next convenes. At that point, Lieutenant, you are back on duty unless the doctor orders otherwise. If you're fit enough to drink like a sorority girl, you're fit enough to work like a sailor."

"Dismissed."

* * *

"You look terrible," Marcus Overbay said.

Annalise barely heard him. The *Indomitable's* song was a drone deep at the base of her skull, as if a tiny bagpiper were playing a single midrange note from inside her cerebellum. Devon would think that was funny; he actually liked bagpipe music.

"And you're ugly," she told the powerplant officer.

"Now you're starting to sound like my older sisters," he said, and sat across from her. "Although they were more . . . creative . . . in their assessments. Later I realized that they were just jealous of my striking good looks."

Unbidden and unwanted, Annalise felt her lips twitch upward in a miniature smile. "You mean that they got a good look at you and were stricken with terror?"

Marcus shook his head. "You must be tired, or else you're not very good at this."

"Sorry," Annalise said. She watched him merrily shoveling gruel into his maw, and tried to resurrect the brief amusement she'd felt just a moment before. She closed her eyes and fought the urge to lay her head on the table.

"So what's got you down?" Marcus asked. He smacked the words around a bite of food.

"Everything," she said. "And nothing. Everything becoming nothing."

"What does that mean?"

"I wish I knew," she said. "I'm afraid I know. And I don't know what to do about it." She raised the carafe of water to her lips and nursed another sip from it. Her stomach rumbled and the taste of baked beans crept up to the base of her throat. She swallowed it back down and raised the half-empty carafe to the two bored-looking Marine corporals sitting at the next table. The older one nodded back; the younger looked as if he would rather be facing a barrage of pulsion fire than sitting in the wardroom with the ship's officers.

"What's that all about?" Marcus asked.

"They're my escort," she said. "When I'm done, they have to make sure I get where I'm going."

"So, are you in trouble, or are they your guardians?"

"Probably both."

"Did you really set up a secret machine shop somewhere? Rumor has it you were getting ready to make a robot Romeo for yourself."

Annalise looked closely at Marcus, but found no trace of guile or malice in his expression. "I think I'm being set up," she said.

"I don't know about that," he said, "but I told them I didn't think you were that stupid. I mean, why move fabrication equipment to some outboard compartment for a manufacturing project? It'd be easier to hide just the thing you were working on, and quicker to do the work where the equipment already was . . . Are you okay?"

Annalise moved her head, unsure if she was nodding or shaking it. The bagpiper in her brain had hit a high, sharp note that felt as if it might drill a hole in her eardrum.

She leaned forward, hands over her ears. Marcus leaned across his tray toward her. She reached out with her uninjured hand and grabbed him around the back of his neck; for a second she ruffled the short hairs at the base of his skull and thought of Devon. She pulled him forward until their foreheads touched.

"I've got to get out of here," she said. "Help me get rid of the Marines."

He stiffened under her fingers. "I don't think that's a good idea," he said.

Laughing a little to mask the pain, Annalise said, "Please, Marcus, you're the only one who doesn't think I'm crazy." He tried to back away but she held him tight. "I don't want you to get the wrong idea, but I'm going to kiss you now," she said.

She kissed him so forcefully that their teeth clicked together, but when he didn't pull away she gentled in to it. His lips were thin and his breath tasted of oily, peppery meat. She hoped he would forgive her for coming on to him, but she couldn't think of another way to distract the Marines. She knew Devon would forgive her.

She pulled back from the kiss and said, loud enough for the Marines to hear, "Could you take me from here?"

Marcus turned his head toward the pair of Marines, and Annalise did likewise. It took a second for Marcus to find his voice. "What do you think?" he asked them.

The older corporal shook his head. "Sorry, sir, we have our orders. She is to finish that," he pointed at the carafe of water, "then hit the showers, then her bunk."

Marcus pushed the carafe toward Annalise. "What if we reverse the order of the last two?" he asked. "I'll escort her, and take full responsibility."

Annalise drank the rest of the water in great gulps as the two Marines conferred. The older one was turned away from her, so she could not tell what he said, but in the motion of his jaw she discerned one word, spoken with contempt under a nearly transparent veneer of respect: "Officers."

She smacked the empty carafe on the table, got up, and grabbed Marcus's hand. "Let's go," she said. She barely gave him time to put his tray in the hopper. The Marines followed them out of the wardroom, but they kept a respectable distance.

Marcus put his arm around her, leaned in and nuzzled her neck. "What exactly is going on, Anna?" he whispered.

"You're my hero," she said. "You're the best little brother I never had."

The hatch to the showers was a third of the way to Annalise's bunkroom. She tried to pull Marcus past, but another Marine—a private who practically filled the narrow corridor—stepped into their way.

"Sorry, Lieutenant," said the corporal behind them. "Showers first, unless the En-

sign wants to call in the XO now.”

Marcus raised his eyebrows, but Annalise shook her head. “Just a second,” she said, and went through the hatch.

Annalise turned on the air vent, opened the water valve, and stepped under the spray—still in her uniform. The staccato pulse of the water on her head made a pleasant counterpoint to the brain stem bagpiping, but she only stood under for a second. She shut everything down and went back into the corridor. “Thank you, Marines,” she said, “I feel much better now.” The older corporal rolled his eyes.

“Let’s go,” she told Marcus. She dripped water as she walked, and the trio of Marines followed her trail to her bunkroom. Annalise cast a split-second glance at the elder corporal before she pulled Marcus through the hatch.

“Nice digs,” Marcus said. “A little small . . .”

“Hush,” Annalise said. “Holly’s asleep—”

“Not any more,” said Ensign Haleana Naheamalei. She pulled back the curtain on her bunk and peered out at Annalise. “Didn’t figure you to take a tumble after what happened, Anna,” she said.

“Diversionary tactic,” Annalise said. “Go back to sleep.”

“Yes, ma’am,” Holly said.

“Hey, I like your painting,” said Marcus. “You do it?”

Annalise followed Marcus’s gaze into the recess of her bunk, to the window that wasn’t. She reached across and stroked the window frame, staring at the beautifully imperfect, perfectly beautiful image. That was where she should be, chasing butterflies with Ori—

“Her *husband* painted it,” Holly said. Her tone carried with it a distinct undertone of, “and if you take advantage of my roommate I’ll feed you your own Y-chromosome factories.”

Marcus raised his hands, palms out. “Hey, Holly, I’m just the little brother.”

Annalise pulled her info port off the wall in her bunk, jacked her PDD into it, and accessed the ship’s system. The bagpipes in her head changed to taiko drums, those huge ancient instruments that summoned the gods, as she bypassed three firewalls and called up the main AI interface.

“Hey,” Marcus said, “you’re not supposed to be able to do that from a regular terminal.”

“I’m an engineer,” said Annalise. She barely heard her own voice over the frantic drumming. “And you will be, too, one day.” She called up successive status screens and said, “The Marines are gone, finally. Now I can get started.”

“Get started what?” Marcus asked.

“Making things right,” said Annalise. “Making things ready.”

“Whatever that means,” said Holly, “start it somewhere else.”

The drums in her head had quieted, leaving an almost soothing double bass background, when Annalise left her bunkroom about ten minutes after Marcus. By that time she had activated a false alarm in the ship’s celestial sensory suite, summoned a particular off-duty navigator to investigate it, and had four industrial robots on the move. Two of the four were gathering fabrication tools. The other two were converging on the celestial sensors; on those, Annalise had overridden their human recognition-and-protection routines.

As she made her way through the ship, Annalise shut down every voice and video port near the sensory suite. She verified that all the compartments near the suite were unoccupied, then sent the robots their commands.

She thought she might hear a scream, but as she floated through the central spine toward the sensor suite she only heard Isaac Collins whimpering.

"Does that hurt?" she asked. "I hope it hurts."

Collins could not turn his head, because one of the robots had it pressed against the deck. The industrial machine was braced against each of the corridor surfaces, as it had to be to perform any mechanical repair in the zero-gee environment, and it was holding the navigator in place as if he were a piece of stock about to be affixed permanently to the ship. Collins's body was turned at an odd angle, but his neck was still intact: he cut his eyes at her, curled his lip into a sneer, and turned his whimper into a growl. "You," he said without moving his jaw—it was clamped in place for him—and for a second Annalise almost admired his determination.

She rebounded a couple of times before she settled into place next to the robot. She used her PDD to correct the false alarm in the sensor suite, and logged it as a successful equipment reset by Lieutenant Collins. "If I wanted to," she said, "I could have my friend here squash your head as easily as I could squash an orange."

Collins said, "You crazy bitch."

Annalise held up her cast so Collins couldn't miss it. Her words came out to the same pulsing beat in her head. "Me, crazy bitch? You have no idea."

A single tear squeezed out of his eye; momentum overcame surface tension and it floated away. "I didn't want to do it," he said. "It wouldn't stop until I did."

Annalise stroked the robot with her good hand. The machine extended a grapple and poked it into Collins's back about where his kidney should be. Another grasped his foot and twisted his leg a couple of degrees past its normal limits. He groaned, but did not cry out. Annalise was impressed, but far from satisfied—then she registered what he had said.

"What wouldn't stop?"

"You know damn well," he said. "The noise! Couldn't think straight. Made me botch my course plots. Got me in trouble. You weren't listening—"

Annalise pulled her fingers away from the robot and it released the navigator's foot. He sighed.

She rotated herself until she was face-to-face with him. "You heard the song?" she asked. "It messed up your work?"

"It wasn't a song," he said. "It was noise, like a grinding wheel in my mind. I misread our position, calculated our drop point all wrong."

Annalise settled down to the deck. The song was still a bass rumble, slow but not terribly rhythmic, that pulsed in her heart and her guts as much as in her head. The robot eased its pressure on Collins.

"How could you hear it?"

"I don't know," he said, half-gasping, "but I couldn't *not* hear it."

Annalise bowed her head and tried to think. She felt as if she'd taken apart a pump and almost had it back together, except for an extra seal that she couldn't quite find a place for. But she didn't have time to take the whole thing apart again.

"The mistakes you made," she said. "Did you know you were making them?"

"Huh? Of course not." Collins seemed to be getting his breath back. "Why would I make a mistake if I knew it was a mistake?"

Annalise knew it was true; Collins might be arrogant, but his reputation as a top-flight navigator was secure. If the ship's song made him err, what had it done to her? She thought of repositioned welders and falsified logs . . .

"What did you mean, I wasn't listening?" she asked.

He looked away, then he closed his eyes. "You heard it," he said. "Hell, you called my attention to it. Then it got worse and worse. . . ." His voice trailed off, and another tear leaked out of his eye. "I'm sorry, Anna," he continued. "After I hit you, the noise was gone, just like I knew it would be. Then I carried you to the Infirmary—"

"You carried me?" Annalise was surprised by the vehemence in her voice. The pitch

of the song in her head changed, the robot pressed Collins harder into the deck, and now he did scream: a series of short, sharp wails punctuated by ragged breaths, each in time with the drums in her head . . .

Annalise squeezed her eyes shut and wished she could squeeze her ears shut as well. The noises built, matching frequency like overlapping waves, and with crystal clarity she knew. She had been manipulated, subtly before but there was nothing subtle about this . . .

She released the grapples. The robot pulled its appendages away from Lieutenant Collins and he floated away from the bulkhead. He moaned.

Annalise ran, or as near to it as she could manage in the null-gravity spaces: a twisting glide, pulling and pushing off every available surface to build up speed. She sang to herself, to try to mask the ship's song, the first thing that came to mind—a children's tune she and Ori had sung together:

*Bring me a net-full of bright-winged beauties
Red, blue, and golden stars plucked from the sky
Silver and green that we chase through the downy trees
Catch them all, darling, 'fore they flutter by*

Annalise was twenty meters away from habitation ring access point three when the alarm sounded. She flinched, almost enough to turn her in her flight through the corridor, until she registered that it wasn't a general alarm calling the Marines into pursuit. Then she realized what alarm it was.

Annalise closed the distance to the access point, slowing as the XO announced, "All hands, rig for in-transit in one minute. All hands, rig for in-transit in six-zero seconds . . . mark."

The ship was preparing to re-enter normal space.

No, no, it's not time, it's not right.

The pounding noise in her brain and her body fairly drowned out most of her conscious thought, building inexorably toward a crescendo that she could not endure. But the ship did not care, she knew that much now: it was consumed by fear, or impotent rage, or some unfathomable emotion it was trying to pour into her as if she were the Grail to catch its spilled blood. The climax would kill her, she was sure, but the ship was sure whatever it was would kill them all—an instant of time, soon to come, after which time would have no more meaning to the ship or its crew.

Annalise jerked herself to a stop, her feet pointing down the corridor toward the access point; she had to let go of her PDD and it caromed off a bulkhead. The sudden pain in her shoulder momentarily cleared her mind. The bliss of that quiet impulse! She had to get the song, the ship, out of her mind, and the only way to do that—

The hatch opposite her was to Power Station Two. Would Marcus have the systems secured yet? He was good, but still young; Annalise hoped he might be fumbling a little through the checklists, a few steps behind where he should be. But did she have enough time? Less than a minute—

Annalise pulled herself through the hatch so fast that she startled the rating inside who was coming to dog it down. She gave him no chance to complain. She called out, "Secure that hatch!" and breezed by him, aimed straight at the inner hatch.

Marcus Overbay was coming through the inner hatch, pulling it closed behind him. Annalise wished for something else to grab or push against; she doubted she had enough momentum to knock the young Ensign out of the way.

She was right.

She collided with him, and in classic Newtonian fashion began to rebound until

she wrapped her left arm around him. Marcus moved back with the impact and turned sideways, and Annalise slithered in next to him and around him. She grabbed the edge of the hatch with her good hand, compressed herself like a spring, then propelled Marcus into the power control space with a not-gentle-enough kick in the ribs.

He was yelling something, but she couldn't hear him over the ship-noise. "Sorry!" she yelled, and couldn't hear herself either.

She pivoted around the edge of the hatch, found purchase on the bulkhead, pushed the hatch closed and turned her attention to the inner sanctum itself.

Unlike the Engine Room, the ship's four Power Stations were more than AI interface points: each maintained a fusion reactor powerful and reliable enough to run the entire ship's life support for decades. Two reactors together were needed to power the high-specific-impulse, low-thrust ion engines the ship used for stationkeeping and minor maneuvering, because even in space the ship had an enormous amount of mass to move. Three reactors together put out enough power to drive the main engines at fair acceleration in normal space; but all four were needed to break through the space-time barrier, regardless of whether the ship was departing from or re-emerging into normal space.

It was impossible for her to shut down the reactor itself, but if she could shut off the power output, she could stop the re-emergence. They would miss the transit point and the transit time, and the ship would avoid injury and stop singing to her.

She had only seconds, but like every ship's engineer she had earned her stars in Power Stations. The physical layout was as familiar to her as her own bunk, but the procedures were slower in coming as the cacophony in her head made it hard to think. She had no time for an orderly shutdown, and it required two-person authorization anyway . . . she had no time even for an emergency shutdown . . . if only it were as easy as flipping a circuit breaker . . .

She launched herself across the chamber.

The XO's voice came over the PA, "Transit, transit, transit." The klaxon sounded the first of its triple blasts, a holdover from the ships that cruised under Earth's oceans so long ago.

Annalise's good hand closed on a stanchion, and with her injured left hand she fumbled with the first interlock to the access port.

The klaxon sounded again.

She disengaged the first interlock and put her hand on the second.

The klaxon sounded its third call. Annalise screamed along with it, a cry of frustration matched in intensity by the shrieking in her mind.

The universe twisted around her, as it did each time a ship re-emerged. Her hand, suddenly more substantial than the sculpted titanium alloy, fell through the interlock; her flesh solidified from the inside out, and she gasped a fleeting breath with coarse lungs, then the process reversed and her body softened again. She always feared that one day, after one too many times through the void, her body would melt away completely.

She pulled away from the access port, defeated, spraying tears. She floated backward, surprised that where her cast had been was a stump, spraying blood through the industrial green room. Through the spray, readouts indicated an automatic safety shutdown.

Annalise cried out again, more in anger than shock or pain. She had wanted to stop the re-emergence, and instead had gotten caught in it. She was too late.

Her back hit the far bulkhead and she bounced away, barely registering hands gathering her in. Because as her cry died away in echoes, replaced by frantic voices,

she realized the ship had stopped singing.

Pain revived Annalise. She was being pulled along a corridor—a longitudinal corridor, by the paint scheme—her arms and legs dangling behind her. In place of the cast that had immobilized her wrist, her amputated left arm was encased in an emergency tournipack.

She twisted around enough to see Ensign Overbay pulling her. “Don’t wiggle,” Marcus said.

“You’re the best little brother,” said Annalise.

“And you’re—”

General Quarters sounded.

Lieutenant Commander Williston’s voice mixed urgency with unbelief; Annalise could not recall ever hearing the XO sound incredulous. “Battle stations,” the XO said. “All hands to battle stations. Damage control parties report readiness. This is not a drill.”

Marcus pushed off a bulkhead to turn them down a lateral corridor.

“No,” Annalise said, then more forcefully, “No, Marcus! We have to go upspin!”

“What?”

She torqued her body out of his grip and spun into a support beam. She grabbed it with her good hand. “We have to get upspin. Outboard, section two-eight.” She oriented herself and pushed off.

“What the hell are you talking about?”

Annalise did not answer. She hoped that welder was still where she had put it . . .

She slowed enough for Marcus to catch up with her. “I need your PDD,” she told him.

“What’s this all about, Anna?” he asked.

“No time!” she said. She hooked her foot through a hold-down and pulled at his pockets. “No time to explain, no time to complain, no time for pain, no time, no time, no time . . .”

Marcus pulled away from her. His young face displayed all his confusion and tension: whether to hustle her to sickbay or the brig, or possibly abandon her to her madness and injury and return to the Power Station. He hesitated, and in that hesitation Annalise lunged, snuck her hand into the cargo pocket on his coveralls, and took out his PDD.

Marcus reached for it; Annalise pulled it back and lifted her free foot to his chest. She held up her left arm as if the tournipack was a shield.

“I need this, Marcus,” she said. Then, with more authority than she felt, “Return to your battle station, Ensign.”

Marcus hung there a second longer until the acceleration signal sounded. “Thrusting,” the XO’s voice said over the speakers. “All hands, brace for evasion.”

“I hope you know what you’re doing,” Marcus said.

“So do I.”

Marcus pushed off her foot to get velocity down the corridor. He bounced off the ceiling as the ship accelerated, then made it around the corner and was gone.

Annalise kept her foot in the hold-down and braced against a beam. She mounted the PDD on the wall so she wouldn’t have to operate it with only her thumb. She signed in and found the two maintenance robots exactly where she had left them. She noted three things in quick succession: not as much time had elapsed as she’d thought; First Engineer Edgerell had taken her other two robots but had been thwarted by her access restrictions from commanding this pair; and Isaac Collins was no longer in the vicinity of the robots. Guilt over what she had done, and almost done, to another Paracletan overrode the physical pain in her arm.

She released one more robot to Edgerell's command and directed the other to retrieve the welder. Then she pocketed Marcus's PDD and headed upspin and out.

Whoever they were evading was determined, Annalise decided. During her trek to the outboard compartment where she had secreted *Indomitable's* supplies—directly adjacent, she realized now, to the Engine 12 pylon—she had sustained a twisted ankle, a lump on top of the lump on the back side of her head, and several less serious contusions and abrasions as the ship was hit or moved away from where she expected it to be. Now, breathing heavily, encumbered by the tournipack, and under the substandard glare of badly placed emergency lights, she was struggling to seal a pressure suit she had taken from one of the emergency lockers.

She checked the voice circuits, but heard only static. She minimized the volume and set her suit radio to scan.

Annalise wondered if any of her frantic activity was even necessary now. If the ship had, in its unfathomable communion with space/time, “foreseen” itself getting injured by the attack, did shutting down the Power Station—even accidentally—change their re-emergence enough that she had averted the disaster? Would that be why the ship had stopped singing? Her logical mind insisted that there were other explanations; one that nagged at her was that *Indomitable* was trying to thwart her rather than use her, and her impulsive action might cause the ship's destruction. She dismissed that possibility and any other that violated her underlying assumption that she was not, in fact, crazy.

She realized that, even if it were true that she had saved the ship, she could never prove it. She had ruined her arm and her career, and she might never understand why.

She spread her gloved hand against the compartment bulkhead, slowed her breathing, and tried to pick up any rhythm from *Indomitable*. The stale plastic smell of the fresh-from-storage suit tickled her nose. Another maneuver pressed her hand harder against the surface. A dark shape occluded the corner-mounted light: the robot had arrived with the welder. Annalise closed her eyes . . .

The ship pulsed. Once, twice, soft as a butterfly's tongue lapping nectar. Relief welled up in Anna's heart; she hadn't thought herself capable of missing that connection to this artificial world that moved her between the stars. The ship was alive, she realized, but where before it had been frenetic now it was nearly catatonic. Its weak beats felt like tears, barely noticed before a desert wind blasted them away.

The far wall of the compartment crumbled.

The corner farthest from the hatch began to glow—red, orange, yellow—and a gust of wind pulled against her and was gone as the atmosphere was sucked out the hatch. Her pressure suit held, its magboots keeping her stationary even as the escaping air wobbled her. She kept an eye on the bulkhead as she read the status in her helmet display: two compartments in line from hers were open to space, the ship was losing air and fluids but valves and emergency hatches were closing. The hot corner of the room continued to glow; it seemed to have reached a peak temperature, and should be able to cool by radiation without losing its structural integrity.

Other, similar breaches had appeared all over *Indomitable*. Edgerell was directing damage control parties to the worst trouble spots. Hers, Annalise realized, was low on his list.

A red status light appeared on her display. One of the coolant lines to Engine 12 was still leaking; the upstream valves were stuck, partially closed. She expanded the icon and gasped: the redundant line, on the other side of the massive pylon that held the engine, had been crushed by a previous salvo. A chronometer appeared with an estimate: seventeen minutes until the engine heated up enough that it automatical-

ly shut down. She started to program the robot for the repair—

The ship was hit so hard that Annalise's head bounced against the side of her helmet. The data display winked out and came back with an unwelcome sight: another red status light, this one for Engine 12's main control circuit. The ship shuddered as the other fifteen engines struggled to maintain whatever evasive course the helm was flying.

Time lost all conventional meaning. Annalise silently cursed herself for releasing the second robot to Edgerell—why hadn't she kept both? She was going to need several more sets of hands. She had the components to repair the circuit—she hadn't returned them to their original storage spaces—but even if she had both hands she couldn't muster the dexterity. The only good thing was that an inoperative engine wouldn't overheat from lack of coolant . . . though the fluid was still boiling off into space.

The ship rocked, and shivered, and spun, and Annalise struggled to load the control circuit damage assessment and repair instructions into the last robot she still controlled. The machine came to silent life, anchored the welding unit to tie-downs on the deck, and trundled off, seemingly unaffected by the maneuvering and battering.

Annalise pulled out a length of tether, spun and tossed the magnetic bob on the end, and activated it when it hit near the hatch. Using the tether and her magboots, she made her way to the next compartment and out onto the blasted hull.

Voice chatter came and went over the comm circuit, usually garbled and mostly unintelligible, as Annalise surveyed the damaged hull section and found the coolant leak. It was right near the joint between the pylon and the hull: hard to see in the shifting light of whatever blue giant star they were near, except when the ship twisted around just so. It appeared to be a slow leak, from a longitudinal gash about half a meter long. As she watched, one of *Indomitable's* maneuvers drove the ship into the rapidly cooling globules: larger ones rained on the hull and stuck, but smaller, already-frozen pellets ricocheted off into space. She retreated before any of the coolant got on her suit.

Back in the relative safety of the open compartment, she reported her plan to repair the control circuit first and then the leak—wondering if any coolant would be left by that time. She heard no acknowledgement.

I'm a damage control party of one. Damage control is a bitch.

Ten minutes later, bathed in sweat as she wrestled a piece of plating into the jig on the welding machine, Annalise chuckled without real mirth. Not long ago she had mused about how little real work a ship's engineer had to do in the modern Navy. "Be careful what you wish for," her mother used to say, "you just might get it." She set a second plate in position and entered instructions into the welding machine.

The welder analyzed the two pieces of plate and extended its automated welding arm over the joint. Annalise wished she had had time to clean the surfaces enough for them to vacuum weld together; she wished she could X-ray the weld to catch any voids; but she said silent thanks that she didn't have to make the weld herself—it was years, after all, since she'd held a welding rod. And doing everything one-handed, even with the jigs and tooling she had squirreled away, made the operation hard enough.

She had just attached a piece of oversized piping to the welding machine, to be cut down to size and split to form a trough, when the red engine control circuit status light blinked and turned amber: operational, but barely within limits. The acceleration that swayed her in her magboots took on a more assertive character. Annalise surprised herself by smiling, then positively grinned when her robot returned.

"I'm going to call you Devon," she said, "because you can do anything." She uploaded new instructions to the machine, which strapped the welder, the plate, and the trough to its back and began picking its way toward the hole in the bulkhead.

Outside the ship, the robot's articulated arms could not brace itself in place. Instead, they splayed out and found the array of hold-downs that covered the ship. It spidered into position more easily than Annalise got there, and its camera examined the gash. Its brain suggested adjustments to her directives, which she reviewed, adjusted again, and approved.

Annalise supervised the robot under shifting light as the ship maneuvered. It cut away a section of the hull and extended the cut pipe over the damaged coolant line. She knew from the specs that it should fit and form a seal, so long as the coolant line wasn't completely destroyed. Escaping coolant began to solidify against the trough as "Devon" lowered the metal bandage over the line and began welding the edges. She reported the repair progress and received static-y clicks that, if she listened closely, had faint voices attached to them. Additional coolant spurted out from under the trough until the robot completed the weld.

The robot had started putting her welded section over the damaged hull when motion to her left—lateral movement out in space, beyond another of *Indomitable's* engines—drew her vision away from the repair job. The ship that moved in the distance was long and impossibly thin, more like an atmospheric craft than any starship Annalise had crewed. It was no human pirate ship, of that she was certain. She strained to see details, but her sight was obscured by the flash of some weapon near the vessel's aft end. And then *Indomitable* spun the other direction, back into the soft blue starlight glare, and she returned her attention to the task at hand.

She switched her helmet view to one of the robot's cameras and examined the seam it was laying down, satisfied at its apparent tightness and a little jealous of the quality of its work. The patch was an ugly thing, but if it held long enough they might live to repair it better.

Her radio crackled with a chime and a distant voice. "... hands, rig for out-transit in ... rig for out ..."

Annalise stopped the robot from welding a complete seam, and directed a series of spot welds so they could get inside. She began rigging her tether for the climb back into the ship.

"... transit ..."

The klaxon sounded.

Annalise pushed herself through the ship's wound and in, toward the inner bulkhead.

Second klaxon.

She hit the bulkhead at an oblique angle and spun; she caught up the tether and got one magboot on the surface. She looked up to see if the robot Devon was behind her.

Third klaxon.

Space outside the ship collapsed on her mind.

Annalise floated, detached from the universe, trapped in a microcosm of consciousness that she only fleetingly recognized as her own. Time stretched out into darkness that was infinitely pitch, no edges, no deeper depths or shallower shadows.

Indomitable pulsed around her, a single beat like the reverberation of the world. Annalise thought it might be her own heart. The ship pulsed again, and began a slow, deep, steady rhythm. It coalesced into a formless melody, a monotone hymn of praise to some higher intelligence. Annalise hated it, and could not help but love it.

"Anna?"

The voice came from the depths of the blackness that surrounded and penetrated

her. It sounded as small as the nano-etched ID tag on the underside of a PROM chip. It took two lifetimes for her to answer.

"Devon?"

"Who's Devon?" the voice said, and Annalise's heart imploded. It shrank like the Fallegur Bonnets that open for the bees and butterflies but close up tight if you touch their stamens.

"Her husband." She had heard this voice before, garbled and full of static.

"Oh. No, Anna, this is Marcus. The little brother you never had, remember? I need you to come back to us, Anna."

I need to come back . . . but not for a brother.

After an age of the universe, she found her voice. "I don't have a little brother," she said.

Annalise floated, the ship pulsed, the voices came and went. Husband, she had . . . Devon. Daughter . . . Ori . . .

Annalise floated. Presently, after what might have been an instant or an eon, another word came to her: home.

"Yes, Anna," the not-brother's voice said, "you do have a brother, if you want one. But we need you to come back, so we can take you home."

"Can't . . . find the way," she said.

"It'll come to you," the voice said, and she gave it the unlikely name of "Marcus." "And then you'll come to us."

Annalise imagined herself moving, but found no purchase in the void. Only vaguely aware of her limbs, she might be walking or spinning in place; her arms might be straight out for balance or just an axis of rotation. The void offered no directional cues; she had no indication or hope of progress, only a voice that sounded as if it were far off in her own head, saying, "You can do it, Anna."

And then a not-voice, hot and rhythmic like a pulsar, slow like a sunrise, crystal clear like water dripping off an icicle.

This way. In and in and spinning down and in.

Annalise woke.

"Welcome back, Lieutenant," said the figure seated next to her. She fought a tidal wave of dizziness and had to re-order her thoughts to force herself to remember who the man was. The XO. She thought he had another name, but it wouldn't come to her. "How do you feel?" he asked.

Everything around her moved in slow motion, then she realized she was panning her head around. She stopped and focused on the man's hand, his finger tapping against the edge of a device he held against his leg. The air smelled sharp, astringent. Fan noise and the whirr-click of a peristaltic pump tickled her ears. Beneath it all was a rhythm, slow, sure, and felt more than heard, that might have been her heartbeat.

"I'm not sure," Annalise said.

"I understand that's to be expected. The doctor will assess you, but I owe the Old Man a report."

Annalise was sure she was wrong, and unsure how she knew she was wrong, but she asked anyway. "Marcus?"

The XO raised his eyebrows. "No, that's Ensign Overbay. He's on shift this rotation. You don't know who I am?"

"Not your name. You're the XO? Sir?" She added the appellation as an afterthought. It seemed appropriate.

"Yes. Lieutenant Commander Jan Williston. I'm in the unenviable position of hav-

ing to commend you and reprimand you. One of the main questions in my mind is which one I should do first."

Again Annalise caught herself looking around. Puzzle pieces of memory fit together in her brain as she took in the doctor's approaching form and the bandaged stump of her left hand. Shock, and pain more imagined than remembered, hit her like a missile; before she could stop herself, she retched bitter yellow bile. The doctor stepped in and helped her clean up, mumbling platitudes she didn't hear over the rushing in her ears. He checked her pulse, shined a light in her eyes, and then moved away.

Annalise closed her eyes and made fists with both hands while she thought about what the XO had said. Her fists felt almost identical until she opened her eyes again.

"I don't think it will matter," she said.

"In the long run, it might. But in the short run, we all have work to do."

When Annalise didn't respond, he continued, "First we have the little matter of your commandeering ship's equipment and using it to torture a fellow officer."

Unbidden and unwanted, tears came to Annalise's eyes. She pressed a handful of the bedsheet to her face to staunch them.

"Lieutenant Collins admitted that he was the one who attacked you. He was under no duress when he made his confession, though I'm not sure his statement will be admissible in official proceedings. He seemed sincere in his regret, if that counts for anything. He gave a lame excuse . . . let me look it up to get it right. 'The ship wasn't getting through to her,' is how he put it. But he couldn't, or wouldn't, tell me why both you and he apparently have this ability to hear the ship's AI thinking."

"He doesn't know," Annalise said, "not really. I may know why, but I don't know *why* . . . that is, I may have a reason but not *the* reason. Not how, exactly."

The XO stopped tapping on his PDD.

A wave of fatigue crashed over her, and Annalise closed her eyes and laid her head back. "It's the only thing we have in common," she said.

"What is?"

She hesitated. It was a guess, as much a WAG as any she'd ever made. She chuckled, remembering something her dad liked to say, that half of life was guesswork, half was hard work, and the other half was pure blind luck.

"We both come from Paraclete."

The XO tapped something into his PDD. Annalise could guess what it was: the next time the ship transited into normal space, he would send a message . . . and the Navy would start asking any recruit from her planet if they could hear their ship's AI singing.

"That's an interesting theory, but until we get another holy roller onto *Indomitable*, we won't be able to test it here. The question is, do you still hear the ship? Is the ship still trying to talk to you?"

Annalise ignored the XO's slight against her planet's founders. She reached across with her good hand and spread her fingers on the bulkhead. Her own pulse seemed to beat in her fingertips. She strained her perception to detect another rhythm. She waited, breathing slow and shallow . . . somewhere a vent closed, a valve opened, and the everyday ship vibrations impinged on her senses. Trying to find the shipsong in that cacophony was like looking through fog and trying to pick out a butterfly's wing, edge-on.

"Not that I can tell, sir. But I heard it best in the Engine Room."

"Then when you get back on duty, you can let us know. Don't start to argue—you will be going back on duty. An official reprimand will be placed in your record, and we will convene an Article 32 hearing at the earliest convenience—

whenever that may be—to determine if you will stand a court-martial or if we will treat your, uh, altercation as something like a brawl. Unbecoming, perhaps, but . . . provoked.

“Alongside the reprimand will be a commendation for quick thinking and decisive action, while wounded and under fire, to place one of the ship’s engines back in service. That commendation will contain a reference to actions you attempted in Power Room Two that might have prevented our being in a position to be attacked in the first place. It will also contain a veiled reprimand for disobeying your immediate superior and failure to go to your assigned battle station, but as either of those actions would have meant disaster for the ship they will be downplayed.

“Meanwhile, you need to get up and about. You’ve been lying abed for over a week, so that’s a week during which your section has been short-handed . . . if you’ll excuse the expression.

“Which brings us to the matter of your medical status. Our tissue generation capacity was stretched thin after the attack, so you’ll have to wait for a new hand until we get to the refit station at Middle-Earth. First Engineer Edgerell, however, has rigged up a temporary robotic prosthesis for you. It’s ugly, but functional. You’ll have to program it with your PDD, but it should work well enough for you to return to duty.”

Annalise looked from the XO to the place where her hand should be, and back again. His official tone had almost lulled her to sleep, but she had slept enough and would have time later to decipher exactly what he said. The important thing was that she was alive, she had climbed back in from the dark, and that little by little she would find her way back, back home, back to Ori and Devon.

It was just a matter of time, and distance, which for her meant only patience. She knew she would get there, and that *Indomitable* would take her. ○

Copyright © 2012 Gray Rinehart

LION DANCE

Vylar Kaftan

Vylar Kaftan has published about three-dozen stories in places such as *Clarkesworld*, *Strange Horizons*, *Realms of Fantasy*, and *Lightspeed*, and she was a 2010 finalist for the Nebula Award. Vylar founded FOGcon, a new literary SF/F convention in the San Francisco Bay Area, and she blogs at www.vylarkaftan.net. Although her first story for *Asimov's* has a solid SFnal foundation, its eerie setting makes it ideal for our annual slightly spooky issue.

I knew Wing's idea was stupid. But we were all so goddamn sick of quarantine that it sounded great anyway.

"Chinese New Year on Halloween night, huh?" I asked him. We sat on his broken futon and some folding chairs, passing a bottle of Captain Jack among the eight of us. Someone leaned on a car horn outside our apartment. When they didn't stop, my buddy Matt leaned out the window and swore at them in Mandarin. Matt was loud—even a flu mask didn't muffle his bellowing. I swear, even though every restaurant in San Francisco Chinatown had been closed since February, tourists still cruised the streets. Even a pandemic couldn't stop them completely.

"Dude. Someone will shoot us," said the guy from 4B, who I think was named Jimmy Li. We all lived in the same nasty building on Grant Street above a dim sum place owned by our slumlord. I knew Matt, who'd invited me, and my little brother Jian, of course. Wing lived here in 3A. I'd just met the Chao twins who had different haircuts, and then Jimmy and some dude Xiang. At twenty-three, I was pretty sure I was the oldest guy here.

"That's the *point*," said Wing heavily, as if he'd explained this a hundred times when he actually hadn't. "We'll be in *costume*. First off, all the riots will be in the Mission, so that's where the cops will be. Second, no one's going to shoot a New Year's lion. Dude. It's Chinatown. All the old cops here are superstitious. Can you imagine how much bad luck it would bring? Even if some cop got itchy on the trigger, he'll think about it long enough for us to run away."

"No one's shooting anyone," said Matt. "For God's sake, this isn't Montana." He pushed his mask aside, swigged the Jack, and passed it to Jian. I snagged the bottle out of his hands. No freaking way would I let my little brother drink from that bottle. Who knew where the other guys had been? They might pull off their masks and drink, but damned if I'd let my little brother do it. Jian glared at me, but didn't fight back.

I passed the bottle to Wing. "They might shoot if things get out of hand," I said. "It's Halloween. Everyone's twitchy. But you're right, I heard a bunch of people are gonna swarm the Mission. That's where the cops will go."

Wing took another swig. He wasn't wearing a mask; that was only Matt and Jian and me. Wing went to the kitchen and reappeared with a stack of well-used dispos-

able cups and washed straws. He swiped an unopened bottle of Jose Cuervo off a shelf and handed it to me.

I thanked him and poured myself way too much tequila. I knew I wasn't supposed to peel the mask off, even for a minute, but it'd been a bad week. My parents were getting evicted and Jian's antivirals were out of stock everywhere. Pissed me off—HIV drugs did crap against the flu, but people were desperate and they got prescriptions from quacks. So my little brother might develop full-blown AIDS thanks to those selfish jackholes.

I slid my mask aside and sucked furiously on the straw. The Cuervo burned my throat as it went down. Screw it all. I felt so goddamn helpless. More than anything I wanted to *do* something to make things better, but what could I do? I couldn't cure the flu or save anyone's life. All I could do was avoid getting sick. I mean, I'd thought about helping at the hospital or something, but I had to protect my brother.

"Bo," said Jian, leaning over, "come on, gimme some of that. Please?"

I looked at him. He didn't ask for much. When he was fifteen and ran away, I'm the one who hunted him down in the Castro, where he was turning tricks for drug money. When my parents kicked him out at sixteen for being gay, I brought him to my apartment and took care of him. He was clean now, and hardly drank at all—so if he was asking, he really wanted it. I poured half a finger of Cuervo and gave him a straw.

"Thanks," he said, and turned away from the group in case someone sneezed near him. Didn't help much, but it couldn't hurt. He slid his mask and drank.

Wing was saying something about how his grandpa made lion costumes in Anhui Province and brought them to America. "They're in the closet," he said proudly. "They're awesome. And the best part is, we get an excuse to run around outside without having a damn 'essential errand' to do. People will love it too. Hell, everyone missed the big parade in February. Stupid city, shutting everything down. I heard they're gonna get even tougher with winter coming back round."

I missed the New Year's parade too, but it turned out the fast response saved San Francisco. Internet said that infection rates here were one of the lowest in the country—only 19 percent sick. Too bad we all had to live in lockdown until whenever the city ended quarantine. The buses didn't run, the power browned out a lot, and sometimes the toilets didn't flush. At least I had streaming movies online. Coulda been worse—Dallas and Miami didn't shut down public spaces until June, and by then it was way too late. There was this big mess where Dallas was taking hospital supplies from smaller towns to treat their victims. All their hospitals were understaffed and overflowing, just like ours—but worse. And of course there were the riots and shootings in Helena, but that was a bunch of idiots with guns. I just said, "We'll all wear masks, right?"

"Hell yeah," said Wing. "No telling what's out there." The others nodded. Lots of people were out of masks by now, or just careless about them, so I was surprised they agreed so fast. I gave up on the straw and slugged a mouthful of booze. It did sound like fun. But if I went, Jian would go—and I couldn't live with myself if Jian got sick. Hell, Jian was the reason I was extra-freaking careful when I left the house. You'd never catch me out without a mask.

"Check this out," said Wing, getting off his chair. He went to his bedroom and returned holding a giant red lion costume. Like all lion dance costumes, it was a two-person beast, like that Snuffy thing on Sesame Street. The big red head looked at me quizzically, as if it wondered why I wasn't wearing it right now. It had two palm-sized eyes with a googly expression like a cartoon character, plus a phoenix horn and a black dragon beard. Bright ribbons decorated its mane and haunches. It was shaggy and colorful and totally tempting. Even Jian didn't know this, but as a kid, the lion dancers were my favorite part of the New Year's parade. I'd always wanted to be one.

Wing put the head on, letting the body drag behind him, and did some goofy kicks and spins. The lion looked injured, like someone had broken his spine and left him to die.

"Ha!" said Matt. "You need the drums." He whacked the futon arm with a good beat. Wing danced like a homeless guy on meth. Ribbons flew everywhere as he worked the lion's jaw open and shut with the inside levers. Jian tossed his cup and wriggled into the lion's backside. They looked even funnier like that, since Wing would turn one way and Jian the other, and both of them wore blue jeans instead of colorful lion leggings. Now the lion looked like a surgical mishap.

But even so, it was awesome. Wing was right—people would look out their windows and love this, and even the cops would probably smile. As long as we didn't get carried away, it would be great to be outside for a while. And Jian looked so excited, dancing around like that. He was a lot more outgoing than me, and the quarantine seriously depressed him.

Jian shrugged off the heavy lion coat and looked at me. "Bo," he said, "if we don't freaking do this, you will regret it for the rest of your life. Plus, I will call you a chick-en-pansy-ass every day for the next nine months."

I knew he wasn't serious, but that final push was all I needed. I'd already wanted to do it anyway. "Okay," I said, "Let's go, as long as we stay close. Clearly the lion dance is an 'essential errand.'"

That phrase had become the new slang of the last eight months, ever since quarantine canceled the February parade. The phrase was in all the constant warnings from the CDC. Wing lifted the lion head and grinned at me. "We're outta Jack. Going out is *totally* an essential errand."

A couple of the guys whooped, and I knew we were doing this thing. I pulled Jian aside. "Dude," I said quietly. "Keep your mask on, and if there's any trouble, we're outta there. Got it?"

Jian clapped me on the back. "It'll be awesome," he said. "But yeah. No trouble."

I knew Jian was grown up now—but damn, he was only nineteen, and I paid the rent. Not to mention his judgment wasn't the best in the world. "Promise?" I asked.

"Promise," he said carelessly.

Before I could answer, Wing tossed the red lion head at me. I caught it by the giant eyeballs, one hand on each. Wing said, "You guys be the red one. That's the courage lion." He whipped the shaggy leggings at me, which fell on the lion head. He tossed the green lion costume at the Chao twins, and then brought out the gold one. "Jimmy, get your butt in here with me. Matt, you're drumming. Get the drum from the corner. Xiang, get the cymbals."

Suddenly the room filled with crashes, curses, and laughter. Matt pounded the drum and Xiang smacked the cymbals. Good thing you only needed two instruments for a lion dance, 'cause they weren't any good. The tequila filled my head and I shouted a loud, "Yeaah!" I stripped down to my boxers and T-shirt, and squeezed into the lion pants. I looked stupid, but it'd be better with the rest of the costume.

I picked up the head, and Jian grabbed my arm. "Nuh-uh," he said, laughing. "I'm topping tonight." He disappeared into the lion head and used the levers to move its face. The lion stuck its tongue out at me.

I punched his arm and crawled underneath the blanket-like back end. I grabbed his waist and hung on. It was kinda like doing a bent-over conga line. All I could see was the stained carpet, other people's feet, and Jian's butt. Sweat dripped around my flu mask, and I realized it was gonna get stinking hot under this thing.

Matt thumped the drum a few times and Xiang rattled the cymbals. Jian stepped forward and I lumbered after him. Crap, this was harder than it looked! I banged my knee on the futon. "Ow!" I yelled. "Hey, stop killing your butt!"

But then Wing shouted, "*Xin nian yu kuai!*" We all roared the greeting back at

him. Forget Halloween—it felt like New Year, dammit. The biggest holiday in Chinatown, and the parade was the best part of the whole thing. The cymbals crashed together and the drum pounded a frenzy of energy.

We all whooped as loud as we could. And then we ran down the apartment fire escape, three drunk Chinese lions with our equally drunk musicians. Tripping all over ourselves and each other, laughing and shouting like nothing was wrong with the world. Each step wavered below my feet. Jian swerved and I crashed into the railing.

“Slow down!” I called, but I was laughing. I didn’t really care. This was going to freaking rule.

Jian hollered, “This is for Steve!”

“Who’s Steve?” I yelled, but I don’t think he heard me over the cymbals. I figured it was probably a guy he’d been seeing.

We hit the street. Rain-dampened cement and dried-up gum raced before my eyes. Sidewalk cracks sped by like telephone poles from a car. All I could hear was Matt bashing the drum by my ears. The streets reeked of piss even through the drizzle. God, this place was gross. They cut trash collection to once a month back in April ’cause so many people were down with the flu. We ran along Grant Street, kicking empty cans and crumpled paper out of the way. Something splashed against my leg and I couldn’t see what. Smelled like bleach. Maybe someone had disinfected their front gate—like that would do any good.

“Jian, where the hell are we going?” I shouted.

“Who cares?” he yelled. “I’m following Wing.”

Next to me some gold lion legs kicked wildly near my face. Almost nailed me in the nose. “Knock it off!” I yelled.

Jian was laughing so hard he could barely speak. “It’s Wing,” he said. “I guess he actually knows some serious moves. He wasn’t shitting us in the apartment. Awesome. Hey Wing, check this out!” He tossed a few side kicks toward Wing. Jian had done pretty well with kung fu as a kid. We lurched sideways as I tried to keep our balance.

“Shit, man!” I yelled. “Warn me when you do that.” Wing came back at us with a kick, but Jian took cover behind the Chao twins, and I guess Wing lost interest.

We headed up Sacramento Street. The street-level stores were all iron-gated. The pandemic screwed all the Chinatown shopkeepers, including my parents. You heard lots of stories on the net about people starving in their houses and eating rats and whatever, but I don’t know how true that was. I was one of the lucky ones—I still had a job with Wells Fargo, crappy as it was. And I could work from home. Some of the big businesses were putting their people in lockdown hotel conferences for months and stuff, but that was for rich people.

I heard shouts from the apartments above. People played drums from their windows, keeping Matt’s beat. Someone yelled New Year’s greetings at me from high above. Something small and pointy struck my back and bounced off. I trampled a mini Hershey bar on the sidewalk.

“Ha! They’re throwing candy,” I said, laughing. “Trick or New Year’s!”

“There’s a couple of other people out here,” said Jian, who could see a little bit when he lifted the lion’s chin. “Old ladies with masks, staring at the costumes. There’s Superman making out with a witch. Oh, there’s a cop. Big white guy. But he’s not stopping us. Dude, there’s an old Chinese cop or security guard or something. In front of the bank. He’s smiling and watching us. I’m gonna dance with him.”

I knew this was the stupidest thing we’d done yet, but I went with it anyway. Enough Cuervo and I’d kiss my cousin. Jian launched us forward and kicked like a real dancer, which I tried to copy. Actually, the more we did this, the better I was getting, and I thought maybe we could pass for bad lion dancers now. At least I’d

stopped stumbling sideways when he changed directions.

And then—holy crap, there were cop-legs flashing all around me with crazy kicks. Jian stopped. I lifted the lion's flank and looked. The old cop had some serious-ass lion dance moves. Hell, maybe he was a parade dancer—some of those guys had been doing it for decades. I couldn't tell from his uniform if he was a backup local cop or just a volunteer security guard. The cymbals crashed louder and faster, challenging the cop to dance like a maniac. He did a handspring—with his holstered taser and everything—and then bowed to us with his hands folded.

"Holy shit!" Wing cried. "Did you see that?" He whooped and lifted his lion head to the sky.

I was laughing so hard I could barely walk. Everyone was fucking sick of quarantine, sick of being understaffed and overworked, sick of never relaxing. I was finally doing something good for the world, even in all this awfulness. I was making people smile. It was the goddamn awesomest feeling. And this cop—he knew we weren't a threat. Hell, this guy was my hero. I yelled to him, "*Hong bao na lai!*"

Jian laughed. The cop called me a greedy little boy for demanding holiday cash, but I knew he was teasing me. I was giddy with daring. Wing had been right—no one would stop the lion dance. Even the cops loved it. Fuck the flu. Fuck everything else. The lion dance was *on*.

"Let's dance in front of the hospital!" Jian called out. "Guys! Come on—Chinese Hospital!"

He dragged me at top speed through the street. I tried not to step on broken glass. My ears rang from the drumming. I caught glimpses from under the costume—a few pumpkins on steps, and one storefront with glowing orange decorations. Looked like a fake post office extension—the kind where people took your money to mail packages, except lots of them were frauds that stole your stuff. Mail took freaking forever now anyway, so that any flu germs on your stuff would get bored and die.

Jian hollered as we ran past our family's abandoned store, and I shouted along with him. We grew up in that place. But my parents were getting evicted from their apartment, 'cause their whole income had been that Chinese junk shop for tourists, and they had no money left. And my uncle went bankrupt—'cause when San Francisco closed the public spaces, he lost his restaurant to creditors, and my cousins were both in the hospital last May. I dunno—the city might have stopped the germs, but they trashed the economy.

Something smelled like puke, and Jian veered us away from that. No one knew what would happen after the pandemic, or how many people would be dead. I tried not to think about it, because it scared the crap out of me. Seriously. They said H2N2 hadn't been so bad in 1957, but since it recombined, we were all fucking toast. I felt helpless for a minute. Then I realized, shit, I can lion dance, and I got all excited again. This was the best night I'd had in months.

We lurched around the corner. The drizzle turned to steady rain, which made the streets smell better. My arms were sore from hanging onto Jian. I heard more drumming from nearby apartments, and some voices close to us that I didn't know. I guessed some random people had joined our parade.

Jian said, "Oh wow!"

"What? Is this the hospital?"

"Yeah. But in front of it—looks like zombies. A flash mob or something. Dead-looking people with cell phones. Dude, don't these people know what quarantine means?"

I peeked out. A zombie mob was right. About a hundred people wore awesome zombie gear—tattered clothes, fake wounds, and N95 respiratory masks. Most looked totally real, although I saw some sloppy make-up jobs. A few wore nurse's costumes and carried stethoscopes. There was even one dude pushing another in a

rusty wheelbarrow. One of the zombie chicks was totally hot, and I wished I weren't hidden in a lion's butt. The zombies moaned when they saw us, and shambled our way like *Night of the Living Dead*. Seriously freaking creepy. These were people who knew how to do Halloween.

I dropped the costume back into place. "Dude. They win."

"No way," Jian said. "We're a goddamn *lion*. RAAR! Let's show those zombies how to party!"

He pulled me forward. I caught a glimpse of the green-legged Chao twins next to me, and then all I saw was lots of zombie legs. Tattered jeans, sickly-green bare legs with stinky paint, and someone with loose flesh flapping off their shins like a kite. The zombies muttered stuff, mostly "braaains," and a couple of them poked my back and arms. I guessed they were sampling us for a meal later. I wondered if we could zombify the lion costume with some green make-up or something.

A couple of zombies started hammering on things they carried. Xiang clashed his cymbals together faster. Matt drummed harder and Jian dragged me forward. The whole thing was like a weird ritual. "Dance!" Jian called out.

I'd gotten better at matching him, so I copied his kicks. Except he was clear of the mob and I wasn't, so I had to half-ass it so I didn't smack a zombie. We rocked back and forth, trying to keep ourselves steady. Someone dropped a lit cigarette, which rolled under my face. I shoved Jian forward and stomped it out. He pushed back, which shoved my butt into someone's hips. They swore at me.

"Hey guys," Wing yelled over the drumming. "Check this out!"

I couldn't exactly see, but I heard some karate-cries nearby. I peeked out. The gold lion was dueling a bus-driver zombie. The zombie slashed with plastic claws, while Wing landed kicks near the guy's head. All for show, of course, but it was pretty epic. I heard cheers from the hospital windows above us. I don't know who it was, since anyone with the flu was dead to the world for a month, and anyone well enough to be off the respirator was sent home to free up the bed. Maybe it was the nurses or something. I wondered if a cute nurse would dig a New Year's lion.

Jian dragged us toward the battle. Just then, the bus-driver zombie yelled at the top of his lungs. Someone shouted and swore, and then someone else shoved me. Matt stopped drumming, though the cymbals kept the beat.

"Jian, what's going on?"

"Aw crap, the zombie's all in his face. Maybe Wing clipped the guy with a kick."

"What?" I peeked out. The bus-driver zombie was cussing out Wing. He was a big guy and looked totally pissed. He marched forward, pushing Wing back. Wing lifted the lion head and punched the guy in the gut, then fell backward over Jimmy, his lion butt. The zombie mob roared with anger.

"Oh shit! Come on." Jian took a sharp left, which whipped me sideways, but I kept my feet. I heard fists thudding into body parts and someone hit the ground. Someone dropped a plastic shovel by my feet that I nearly tripped on. If I'd been thinking, I would've jumped out of costume so I could see, but I was totally into the lion thing and I half-forgot we could separate. Totally dumbass, I know, but it was the tequila.

Jian led us away and said, "Slow down now, we're at a wall. We're safe here."

I panted, trying to catch my breath. I was choking in my mask, and sweat soaked my T-shirt. Glass shattered nearby. The crowd roared.

"Aw, shit! Someone threw a rock," shouted Jian.

"Hell."

"That was a store window—someone's climbing in now. Liquor store. Holy crap, this is—"

"*Shit!*" I yelled. "Jian, get out of here!" Oh my God, a riot—this would be another fucking Helena. Nineteen people dead when that was done, 'cause some moron

brought a gun to a cop fight. All over a bunch of toilet paper. God knew what people would do for booze, once someone started it.

Jian ran, and I stumbled after him. I couldn't keep hold of his waist. He got ahead of me and I slid out the costume's back. I grabbed the trailing fabric like a bridal veil and raced after him. I scraped my elbow pretty bad on the brick wall as we turned into the urine-soaked alley, but I was more worried about getting away. We ran past the Chao twins, and I saw a full bottle of Jack peeping out from under the lion's flank. Bastards musta stolen it.

Jian tugged on a heavy door that was propped just a crack open. "Not the hospital!" I yelled, but too late. He ran inside and I chased after him.

We stood inside the bare white hallways, breathing hard. Not a soul in sight. The place smelled like antiseptics and death. Half the lights were off. A bunch of red letter-strings gave the hallway some color, which was creepy once I realized the tattered paper said "Happy Valentine's Day." I guess no one had time to deal with it all. God, this place couldn't be any worse if it tried.

An alarm suddenly sounded from the door we'd come in, which made me jump. Jian stripped off the lion head and yanked the haunches away from me. He wrapped the fabric around the head, tucked it under his arm, and stared at me defiantly.

I said, "What the hell are we doing here, dude? Hey, Jian? *Jian?*"

He stalked away, like a man on a mission. I heard sirens outside and someone yelling on a loudspeaker. People were shouting. I couldn't tell if the fight was breaking up or escalating.

"Jian, what the—"

"Come on," he called.

I ran after him and grabbed his arm. He pushed me off, which got me mad. The hospital scared me. Every surface was covered in germs—I know how hospitals really are. There's gross stuff no one can clean up, not to mention germs in the air. But worse, just about every bed was filled with flu patients. It's not like I'm some crazy germaphobe, but this H2N2 thing—it killed healthy young people. People like me. And if Jian got it—no way in hell his body could fight it off. While the flu might not kill him, it'd trigger his viral load for sure. And without the right drugs—

"Oh shit. Jian, are you gonna steal your antivirals? Come on, man. . . ."

He ignored me as he read the names scribbled on door placards. I was torn. I hated stealing, but Christ—he couldn't get these drugs shipped from Canada, and everyone local was out. Wasn't this some famous moral question or something? I had no idea what I thought, and I didn't want to decide while running through a darkened hospital, wearing lion leggings and a respiratory mask. But hell—people were here every day. They wore masks when working and they didn't always get the flu. I'd be okay. So would Jian, even with HIV, because he had a mask. That's what I tried to tell myself. I was sobering up fast. I guessed it might be okay if Jian stole his antivirals, just this once.

But Jian walked right past a door labeled "supplies" and kept reading placards. I don't know if that room held drugs or vacuum cleaners, but he was looking for something else. We passed a small waiting area with a couch and a window. Outside, the cops were frisking zombies against the cop cars. I couldn't see any of my friends—no idea if they'd run off or what. It was eerily quiet inside, now that we were away from the door. The arrests through the window were like watching a muted TV.

"Jian," I pleaded, "let's go. Come on. Security will be back any minute. And they'll turn us over to the cops."

Jian stopped at a door reading "Wu, Gary." He raised a hand to push aside the door-curtain. I grabbed his arm and wrenched it behind his back. He yelped and dropped the lion head.

"We are *not* going into a room with the goddamn flu in it," I told him. Where the hell were the nurses? They should've been helping me out here. But so many had died of the flu already. All the hospitals were incredibly short-staffed. That's why they kept begging for volunteers. And still had Valentine's Day signs on the walls.

He stared at me, his eyes bright. "Bo, please. I've gotta go in there."

"No way."

"Gary is my boyfriend," he said.

My jaw dropped. Yeah, of course I knew my brother was gay. But I'd never actually met any of his boyfriends, even though he lived with me. When he was younger, he slept with anyone who fed him—and although he'd cleaned up a lot, he still didn't want me meeting his dudes. I dunno—maybe he worried I'd scare them off.

"Your boyfriend?"

"My lover," he said, with more dignity than most nineteen-year-olds had. "He's poz like me. I met him at the Lookout. I've wanted to see him ever since I heard he landed here."

"But you haven't left the house much since—"

He rolled his eyes. "E-mail, dumbass. He got sick three days ago and I found out from a friend."

"Why didn't you say something sooner?"

"'Cause you'd just worry about me like you always do. Now let me go see him or I will kick your goddamn ass."

I knew he wouldn't actually fight me for this. My little brother was asking my permission. Thing was, I couldn't possibly say no—not when we'd come so far. Slowly I dropped my arm. Jian picked up the lion head. We stared each other in the eyes, and then he went in the room.

I thought about staying outside, so at least only one of us was exposed—but I couldn't. I figured if Jian had the courage for this, I had it too. Besides, I reminded myself—I had a mask, and that's what they were for. Flu germs were probably swimming in the air anyway. So I brushed aside the curtain and went in.

A hollow shell of a guy lay on the bed. Didn't seem like Jian's type, but what did I know. Dude was old, maybe fifty, and drowning in a too-large hospital gown. His arms were like bones and I wondered how he was alive. This was not a guy who'd been sick for three days—he'd been here longer or starving for a while, or something. My stomach twisted as I saw all the clear plastic tubes over his nose and mouth. They hooked up to a big machine, which showed constant streams of numbers I didn't understand. He was either asleep or sedated.

This room was on the far side of the hallway. We couldn't hear the cop cars outside or the drumming or anything at all except this guy breathing. Oh my God, the room stank of death and sickness and everything else. It made Halloween vanish, the lion costumes vanish, the fighting and the dancing and the candy thrown at us vanish. Everything before now was shit, and *this* was real.

I sat down in a chair, wanting to be anywhere else. Jian held the guy's hand and squeezed it a few times. We sat there silently. It felt like forever, but it couldn't have been very long. After a while, a nurse came through the curtain. She caught her breath when she saw us and said in English, "Hey, who are you? Did you sign in?" Jian looked up but didn't answer, so she asked again in Mandarin.

Then Jian turned to the guy and said, "Steve wanted me to tell you it's not your fault. And he loves you." Then he stood up and walked right past the nurse, who was typing on her pager. I leaped up and ran after him, not wanting to meet security whenever they got here.

We walked out the front door to the street. No one paid us any attention. No sign of the zombie mob or our friends anywhere, aside from a broken bottle of Jack in the gutter. A cop car sat by the curb, lights flashing, but I couldn't see who was inside it.

Jian stopped walking and leaned against a light pole.

"Come on," I urged him, in case any of our friends had been arrested. We still wore our lion leggings and I didn't want to be seen. We crossed at the corner and headed back on Stockton Street. I saw a few people doing the Halloween thing—a vampire, a French maid—but all the costumes looked crappy and cheap. I don't know if it was the tequila, but my stomach churned and I almost puked in the road.

When we were two blocks away from the hospital, I grabbed Jian's shoulders and confronted him. "You've never met that man before in your life," I said.

He wouldn't look at me. I shook him and said, "What the *fuck* was that? I don't care if we were wearing masks—that was stupid. Christ. We should never have gone there. You might die."

"Steve *did* die."

"Who the hell is Steve?"

"Gary's husband. He got sick after Gary did. They ended up in separate hospitals. Gary gave the flu to Steve probably and then Steve died. And before he died, Steve emailed me and begged me to tell Gary it wasn't his fault, nothing was his fault, because *fuck* this flu and the quarantine, and *fuck* you for making me lie to you, and *shit!*"

He broke free, threw down the lion head, and ran off down the hill. I chased him, but slowed down after a while and decided to let him run. Jian had always been faster anyway. I watched him head into the darkness and turn the corner out of sight. I was sure he'd come home eventually; he knew how awful life was on the street. Everything made sense now. Jian risked his life to visit a stranger, because he cared about a friend. Made me look like a chicken-pansy-ass after all.

"Shit," I said, and kicked a can down the street. It clattered along the curb and landed in a trash pile.

I walked back to the lion head, which was stained with rain and gutter-crap and whatever people left on the ground. I picked the head up, gazing into its cheerful face. The jaw fell open as I lifted it, making the lion look very surprised to see me again.

God, I was an ass. Here I was, worrying about germs through my stupid mask, and hiding in my apartment for the last eight months. I didn't deserve to be the courage lion—not even the lion's ass. There was so much shit in the world, so many people dying—and here I was, healthy and not doing anything to help them. Not only that, I was keeping Jian from helping either. All because I didn't want to lose him.

I kept saying I couldn't do anything, but that was a lie. Screw that. The hospital needed help. I could volunteer. I was fluent in two languages—even if I didn't know anything about nursing, they could use me. I could work evenings instead of sitting at home watching movies. Fuck me for being a jackass so long. I'd do it. Tomorrow evening, I'd come back to the hospital and volunteer. Hell, I knew for a fact I could do security—and they needed me. They'd just suffered a terrible lion break-in.

I grinned at the lion head, figuring he could see through a flu mask. "Thanks, buddy," I told him. I pushed his jaw shut and carried him home. ○

Copyright © 2012 Vylar Kaftan

Ghosts

Cosmic neutrinos
the ghosts of supernovae:
memories of stars.

Cosmic neutrinos
pass through the Earth, and through us—
to them we're the ghosts.
—Geoffrey A. Landis

Copyright © 2012 Geoffrey A. Landis

THIS HOLOGRAM WORLD

Eugene Mirabelli

In these pages Gene Mirabelli has previously written about people who escaped the Napoleonic invasion of Venice by taking to the sky in cloud-like balloons where they lived for two-hundred years, and he's written a farce about a house where the kitchen faucet sounds like it's singing Italian opera and the shower sings French love songs. This current story is based on contemporary mathematics and physics. The physicist Brian Green in his book "The Hidden Reality" asks, "Do you believe in mathematics?" just as a theologian might ask, "Do you believe in God?" It's a good question, but very hard to answer. Especially hard when you realize just what some mathematics has led to.

Henri Orban was a pretty good physicist until his wife died. He was part of a team drawn from Stanford, the University of Chicago, Columbia, MIT, and Boston University to monitor instruments and examine some of the abundant data produced by CERN's Large Hadron Collider. The team was about to leave the States and assemble in Geneva when Henri's wife, Vivienne, died. An unobtrusive staph infection had taken hold in her flesh, sepsis followed, and during forty-seven hours of terrifying pain each of the systems of her body collapsed. Henri was at her side throughout the torture. She died and he was devastated.

2

As a graduate student at Caltech, Henri Orban had attended lectures by Richard Feynman, who had recently won the Nobel Prize. Feynman occasionally turned up at social gatherings that included graduate students, and Henri was disappointed to discover that the Nobel Laureate had a reputation as a womanizer and cared nothing, or very little, for the arts. Nonetheless, Henri was dazzled by the older man's brilliance. As for Feynman, he once remarked that Henri Orban was a bright young guy who didn't know the downside of being so completely wedded to a wife.

It's true, Henri and his wife were deeply attuned to each other. They were happy in each other's company and they knew it. They had no extended family—no living parents, never had brothers or sisters, and had no children—but they were warm and open-hearted and had a wide circle of friends. When Vivienne died, Henri's mind went to pieces. "She died and I did not," he said, stunned and baffled. His friend Peter Lambros had come over to get him out of the house for a walk. "I know what's happened, but I don't understand it," Henri told him.

"It's terrible, terrible," Peter said quietly, taking Henri's arm. "Let's go this way."

They walked in silence for a long while, Peter taking in the placid lawns and quiet, unassuming house fronts, while Henri struggled along, his gaze fixed at some vanishing point down the street.

"I can't understand it," Henri said at last.

Peter told him no one could understand it. Such things were beyond our comprehension.

"It's unreal," Henri said.

A brisk wind had come up, shaking the empty branches of the maple trees along the street.

"Are you cold?" Peter asked him. "Do you want to go back and get a heavier jacket?"

"No, I'm all right."

They walked on in silence again.

"I know the street is flat," Henri said a while later. "But it's like I'm walking up hill. I'm getting tired."

"Just a little bit further, then we'll head back," Peter told him. "It will be good for you to get a little tired."

Peter had stopped and was looking around. "All this," he said, gesturing at the trees bordering the sidewalk, the lawns and shrubs and ordinary houses, the ragged clouds streaming across the cobalt sky. "It's all fake. It's a scam. It's bogus."

Peter took his friend's arm. "Let's keep walking. It will keep us warm."

"Something's wrong. Something's wrong with this goddamned universe," Henri said. "And there's no god to blame," he added bitterly.

"There's no god to blame," Peter murmured, agreeing. "I know. I know."

"There's no heaven and the only hell is the one I'm living in!"

"Let's head back," Peter said.

Vivienne hadn't believed in an afterlife. Nor did Henri, who used to say that he had been in physics too long to believe such things. The memorial service for Vivienne was held in the chapel at the Massachusetts Institute of Technology. People spoke about the remarkable pair, Henri the physicist and Viv the painter, and everyone remembered the intimate dinners at their home, the lively conversation and the laughter. After the service, the CERN team leader flew off to rejoin his colleagues in Switzerland; Henri's friends, who had taken turns visiting him in the days immediately following Vivienne's death, resumed their previous routines, attended to their families and their jobs. Henri was alone now. But he felt no more alone than he had been when his friends had stood by him in his grief, taken him for walks, fed him. A gap had opened up between himself and everyone else: a gap, a space, a small barrier—something.

3

The chapel at MIT is unusual. It's a modest structure, a plain cylindrically shaped building made of rough reddish-brown brick, which is surrounded by a water-filled moat. The interior walls are also rough, uneven brick. There are no religious symbols

of any kind anywhere. The interior wall doesn't follow precisely the exterior's cylinder shape, but while essentially circular it has a very gentle undulating form. Some light is reflected upward from the water in the moat outside and plays here and there on the interior walls. But most light falls from above, pours through a circular aperture, or oculus, so that it catches on the myriad gold leaves and flakes that are suspended in air to catch and reflect the dazzle as it streams down to the blazingly white marble altar, an utterly plain bare rectangular stone. This is a hushed, meditative space, composed, illuminated, and held together by that shaft of light, light that from the beginning has been associated with divinity and creation.

4

Right after Vivienne's death, when everything was in disarray, her closest friend, the painter Karen Connors, brought hot soups to Henri's house and occasionally prepared dinner for him in his kitchen. And when winter came she and her husband Kevin convinced him to come to their house for a meal every now and then. Henri talked to them about Vivienne, often saying that it seemed terribly strange, actually bizarre, that she was gone. "Viv was so completely *here* all the time. And now she's gone. I can't understand it. How can a real person, a loving person, vanish from the world? I feel so stupid. Where do they go?" Karen and Kevin nodded and murmured yes, and listened sympathetically, but they felt it was best not to try to answer such questions. Henri asked what they thought he should do with Viv's easels, or her paints and brushes. "You might do a little painting," Karen suggested hesitantly. Her husband nodded, agreeing. "You might like it," he said.

Vivienne had always prepared their meals and Henri had never learned to cook. Once in a while he would slice vegetables for minestrone and he was knowledgeable and deft at making a salad, but most of the time Viv did the cooking while Henri set the table and washed the dishes afterward. Now, with Viv gone, he was eating in restaurants and that spring he went to the Good Kitchen Table restaurant. He hadn't been there for a year. While he was absently looking over the menu one of the waitresses, Vera Kelly, came over. She was thirty-something years old with rather short, stiff blond hair that was pulled back, most of it anyway, though some bits stood up like spikes. Her left arm from her wrist to where her jersey came down over her shoulder was wrapped in the dark blue coils of an elaborately tattooed dragon.

"I was so sorry to learn about the death of your wife. She was a beautiful person," Vera said.

"Thank you. Yes, she was."

"I remember how kind you were to me when my, you know, when it all happened to me," she told him. "And your wife sent me a note. I appreciated that. I kept it."

"Everybody was concerned about you," Henri said.

"Not everybody. But you two were."

Henri recalled talking with her at that time, but not what he had said. "How are things going?" he asked.

"I'm all right. I don't weep every day. Not all day, anyhow. Only once in a while." Vera smiled fleetingly. "Mostly on weekends. I have a twelve-year-old to take care of, you know, and that helps. It means I have to get up in the morning."

"Yes, I suppose it does."

She looked at him a moment, searching his face. "How are you doing?" she asked.

He hesitated. "I haven't run out of tears. I know it's true that Vivienne is gone, but

I can't believe it. I don't know how I can believe it and not believe it at the same time, but that's the way it is."

"Yeah, I know."

"You felt the same way?"

"I keep thinking I'll get to see Patrick and little Patricia again and actually, you know, we'll all get together like it was," Vera told him. "I don't think it will actually happen. But I don't know. Because I feel they're not really gone forever. Like, maybe it will happen. A reunion on the other side. What do you think?"

Henri hesitated. He didn't believe there was an *other side*, but he didn't want to deny Vera a comforting belief, no matter how fictitious. "I don't know what to think," he said at last.

He ordered a small salad and didn't finish it. When Vera brought him the check she also brought a plastic take-home box.

"What's that?" he asked her.

"That's a baked lasagna and a slice of apple pie. Take it home and eat it."

"I'm not hungry. I haven't been hungry for days."

"I know it. But take it home and try anyway. The animal needs to be fed," she added.

"What animal?"

"You," she said. "You look a wreck. Feed yourself."

5

Some months later the CERN team leader, Fred Ho, phoned from Geneva to ask Henri how he was doing. Henri said life was hard but he was getting by. "I'm even gaining some of my weight back," he added, trying to sound cheerful. Fred asked if Henri would like to come over to take a look at the collider. "It's truly awesome," Fred told him.

"Oh, well, no, not really," Henri said. "It's always been theory that interests me, you know. And certainly not machinery, though I admit it's a very impressive machine. Frankly, the only reason I asked to get onto the project was so Vivienne and I could go back to Paris again."

"I had figured that one out, Henri."

"And you were so kind as to say yes, for which I'm grateful."

Ho ventured to ask whether Henri was, well, not exactly working, but, say, thinking about physics. Henri replied that he was reading around, mostly about black holes. "That's about as far from reality as I can get," Henri added. "And I like it that way."

They talked a while, but in truth there wasn't much to say. At last Fred brought the conversation to a gentle conclusion. "Listen, I hope you keep theorizing," he said.

"I suppose I will," Henri replied. He gave a brief laugh and added, "Even if what I call theory, my critics still call speculation."

Then they both said Take care, and that was that. Ho told his CERN team that Henri wasn't ready to join them but, he added, at least the poor guy seemed to be getting by and that was good.

6

Black holes were first conceived of by John Michell, the eighteenth century natural philosopher. He speculated that if a heavenly object had sufficiently dense mass, its gravitational hold could prevent light from escaping. He called this object a

black star—a name more accurate than what we use nowadays—and, based on its mass, he calculated the radius of the sphere, now known as the Schwarzschild Radius, from which no light could escape. Of course, in 1784 no one had observed any black holes or anything that suggested they existed. Michell had used numbers and speculations to conjure up black stars mathematically.

7

Now Henri carried a book with him whenever he went to the Good Kitchen Table restaurant. He liked to eat late, when it was quieter, and he would read while he drank his after-dinner coffee. One evening Vera Kelly asked him what he was reading. “It’s about black holes. I’m interested in black holes,” Henri told her. “Yeah,” Vera said, thinking of graves and burial pits. “That sounds right.”

8

Mark Kleiner, a short man carrying a bulky bag of groceries, bumped into Henri in the slushy parking lot of the Whole Foods Market. They had worked together at the Barton Rogers Institute for a decade, but two years ago Mark had left to join a hedge fund in Manhattan. He asked Henri how he was getting along, and Henri said he guessed he was getting along all right. “What are you doing back here?” Henri asked him. “Growing nostalgic for the life of pure reason?”

Mark laughed and took off his glasses, which were wet from melting snowflakes. “Not at all,” he said. “I’m here visiting my sister. She had eye surgery and needs help around the house for a week. I heard you were on leave. Are you going back to the Institute, or going to join that group at CERN or what?” he asked, wiping his glasses.

“Or what, indeed,” Henri said. “I suppose I should get myself organized. I’ve been doing a little work on my own, theoretical stuff, just exploring, just a beginning. Vivienne’s still on my mind a lot.”

“Of course, of course.”

“There’s a gap, a rip, in the universe where she was,” Henri told him.

“You remember my sister,” Mark said. “After her husband died she said the world looked like a stage set, completely fake.”

Henri laughed briefly. “I know the feeling. Listen, we’re going to freeze out here. Let’s get a coffee and you can tell me what kind of math you’re doing at the hedge fund.”

Over coffee Mark described the algorithms he had devised for certain of the operations of the hedge fund managers, and Henri talked about his current interest in black holes and information theory, subjects which, he confessed, hadn’t much interested him previously, and he talked about a new hobby, painting. They talked for more than an hour. It was a good talk, Mark told his sister, and he sensed that, in fact, Henri was doing all right.

9

In 2010, astronomers announced they had been observing for thirty years what they now believed was the birth of a black hole created by a collapsing star. Their be-

lief was based largely on data interpreted from x-ray telescopes, because gas plunging into a black hole throws off x-rays. That's about as solid as evidence gets when it comes to these curious regions. Most of what is believed about black holes derives from extended calculations that originate in theories, or perhaps they should be called speculations, about the nature of the universe. Of course, the calculations are far more sophisticated than those made by John Michell in the eighteenth century, but they're still insubstantial mathematical calculations.

At a meeting of physicists in 1981, the cosmologist Stephen Hawking announced that as a black hole gives off radiation and "evaporates," all the information inside it vanishes utterly. One of the theoretical physicists at that gathering, Leonard Susskind, was appalled by the idea. As he pointed out, the belief that information is never truly lost—maybe scrambled, but never lost—is basic to science. So over the next twenty-eight years, Susskind worked out a proof that overthrew Hawking's theory and, indeed, Hawking, in calculations along somewhat other lines, came to the same conclusion.

10

In his office at Radiant Technologies, Peter Lambros got into his jacket, swept up his suitcase, and nearly crashed into Henri who was coming through the doorway. "Christ, look who's here! Come in," Peter cried, grabbing Henri's arm. "How are you doing?"

"I'm getting by, doing all right," Henri said. "What am I interrupting?"

"You're not interrupting. I have to fly down to Washington so I can be at a meeting at eight tomorrow morning to remind people why they want to fund us. Here. Have a chair. Take two if you want. It's good to see you. What's up?" He dropped his briefcase to the floor, loosened his necktie, and sat comfortably on the front edge of his desk.

"Thanks for taking me for those walks when I was out of my mind," Henri said.

"Every time we get together you thank me. Please stop. And you weren't out of your mind."

"Yes, I was."

Peter shifted and glanced out the window, his face heavy. "No. It was a terrible time." His gaze returned to Henri. "But you did well. Yes. All things considered. So, how *are* you?"

"Not great, but a lot better than I was fifteen months ago. My head's a lot clearer."

"You're looking better, too. What have you been doing?"

"Reading mostly," Henri said. "And tossing a few ideas around—theoretical stuff—black holes, information entropy, and more of the same."

Peter smiled. "You can't get much more theoretical than that."

"You're familiar with Leonard Susskind's work?"

"Susskind? I'm a businessman, Henri. I can't afford to be charmed by string theory."

"I was thinking about his dispute with Hawking. And Susskind's work on the holographic principle. It's interesting, the implications about this three dimensional world we live in. What I'm working toward is—" He broke off.

Lambros looked at him, waiting for him to continue.

Henri smiled. "Now you *do* think I'm crazy."

Lambros laughed. "No, not yet, I don't."

"You've got to get to the airport."

"Finish what you were saying, what you were going to tell me."

"I haven't worked it out yet. But, you know, there's an interesting question raised by Dostoyevsky: if a person is sick and feverish and he sees a ghost, does that mean

he's hallucinating because he's sick and there are no ghosts, or does it mean that ghosts reveal themselves only to people who are sick and feverish? I've been wondering the same thing about people who are sick with grief and say they see how things really are. That's what I've been thinking about."

"Great! And I'm thinking you should come to dinner," Lambros told him. "We're having some friends down to our place on the Cape. How about it? Eleni keeps asking me what you're doing these days."

"Well, maybe. I guess."

"Good! Eleni will send you a note. A few friends. Lots of good Greek food. Lots of wine. You need it. I'll tell her you said yes. Say yes."

Henri smiled briefly, said yes, and the two left the building together. Henri drove home and Peter Lambros was chauffeured in one of the company cars to Logan Airport. Peter had been worried about Henri, but after their conversation he was far less worried. When he returned from Washington, he told his wife that Vivienne was still at the center of Henri's mind, but that was only natural; the good news was that Henri was taking an interest in physics again.

11

Leonard Susskind, while working on what he called "my battle with Stephen Hawking to make the world safe for quantum mechanics," took up an idea put forward by the physicist Gerard 't Hooft. For good reasons having to do with information theory and entropy, 't Hooft proposed that a complete description of a volume of space such as a black hole can be considered to be inscribed on the surface of that volume. And Susskind, an exponent of string theory, was able to render 't Hooft's proposal in satisfyingly strict string theory terms.

Susskind then enunciated an astonishing idea: the Holographic Principle. Now, the surface of a black hole contains the scrambled information of the black hole's interior, just as the photosensitive film for a hologram carries a scrambled pattern that contains a complete three-dimensional hologram. The Holographic Principle extends this insight and says that the world we live in, what we take as our three-dimensional world, is actually an image projected from a mathematical film at the ever so distant margin of the universe. We live in a hologram.

12

Henri Orban never did join the CERN team at the Hadron Collider. He returned to work at the Barton Rogers Institute, gave seminars for post-doctoral students, and continued to work on his own theories and speculations. In his spare time he developed his hobby of painting; his subjects were what he called "active still lives"—arrangements of bottles, dishes, spoons, and cups, all floating this way and that way, quite weightless, above shelves or tables. On Tuesdays and Fridays he ate a late dinner at the Good Kitchen Table restaurant, where he was joined by the waitress Vera Kelly after her shift. He liked Vera, liked talking with her. He talked very little about his work, only enough to satisfy her curiosity as to what he did all day; he did explain the nature of black holes to her. "In other words, if you go there you don't come back," she remarked.

"Exactly. Very good definition of the Schwarzschild Radius," he said. They might talk about Vera's son and his troubles at school, or about Kevin Mack, a man Vera

was fond of, she said, "in a very major way," or about the disappearance of a dozen wine bottles from the restaurant cellar, and sometimes Henri talked about a movie he had seen, or his ultra rational colleague at the Institute, or about Vivienne. This evening Vera brought a cup of coffee to the table, sat down with a sigh, and kicked off her shoes. "So, did you smash any atoms today?" she asked Henri.

He smiled. "You can do better than that," he said.

"I know, I know. You don't smash atoms over there. But I like the idea." Vera swept her hand back and forth over the table, saying, "Smash, *smash*, and double *smash*! I was feeling that way a little earlier today."

"You had a bad day."

"Our busybody owner had a fight with the new chef, so the chef threw a plate of tuna at the wall and quit and didn't come back for two hours, that's all. All right, you didn't smash atoms. What did you do all day? And please don't tell me mathematics."

"Mathematics," he said.

"You're going to grow old before your time, Henri."

He smiled. "I'm already old. Maybe because I spend my time rearranging equations and trying to puzzle out what they mean. If they mean anything at all," he added.

"Why don't they mean anything? Because you make mistakes?" She took a swallow of coffee and looked at him over her coffee cup. "Is that it?"

"That wouldn't be so bad. You can always correct a mistake. But what if they don't mean anything because mathematics is only math and reality is something else? You can write equations that run backward and forward and you can say—physicists say—that everything in the physical world could run backward as well as forward, like rewinding a movie film. But you and I know that you can't go backward in time; we can't get to the past."

Vera laughed. "I love it that professors get paid to say the universe can run backward. But what about *your* equations? What do they say? What do *you* say?"

"I had hoped I could prove, if only to myself, that we live in a world that's deeply connected to a different world, a different reality. And that other reality is the primary reality, whereas this world is a . . . a flawed projection of it, you might say. I had hoped to show—" He broke off. "I had hoped to show that this world is only a degraded version of the original, and that the original is elsewhere. And that's where my—" he broke off again. "Well, it doesn't matter," he said.

When Henri didn't say anything more, Vera spoke up. "You really miss your Vivienne," she said.

"Yes," Henri said. "Where did she go?"

"Yeah, I know that question. What does all your arithmetic tell you about this shitty world and the next?"

"If I get real close to the mathematics, it tells me that I live in a hologram. If I stand back a ways and take a look at not only the math but a lot of other things—like Caitlin at the bar there, wiping a glass while she's chatting with the last customer, or Rick, standing at the door with his hands clasped behind him, watching the people walking by, or you with your shoes off listening to me—it tells me that mathematics and what it can and cannot do doesn't matter. Vivienne is gone and there's no knowing where, that's what matters."

13

Young Richard Feynman married his high school sweetheart, but she died scant years later, burned down by tuberculosis, devastating Richard. Sixteen months after

she died he wrote her a letter in which he told her he adored her. He said it seemed like a terribly long time since he had written to her and he went on to say he found it hard to understand what it meant to love somebody who was dead. But he still wanted to love and take care of her, and wanted her to love and care for him. He wanted to have problems to discuss with her. He told her that other women seemed as ashes to him and that only she was real. For she was his wife. And in a P.S. to the letter he said, "Please excuse my not mailing this—but I don't know your new address."

14

Henri Orban liked to say he was conceived in Budapest, born in Rome, had his boyhood in Paris, and grew up in the United States. The Orban family escaped from Hungary in the brief interregnum between the retreating German troops and the invading Russian armies. His mother was a school teacher, his father a civil engineer, and Henri their only child. Henri's playmate in Paris was Vivienne Charpentier; they were nine years old when they met and they remained in each other's company until Henri was fourteen and the Orbans emigrated to the United States. Henri and Vivienne carried on a teen-age pen-pal correspondence that became increasingly intimate and led to a number of trips between Boston and Paris. Henri and Vivienne married in 1970. About two years after his wife's death, Henri left the Rogers Institute and moved to a retirement community on Cape Cod. He continues to paint. ○

Copyright © 2012 Eugene Mirabelli

THE SEASON

Giant crabs trundle forth from the ocean.
Carapace twelve feet wide,
Claws eight feet long,
The strength to snap a man
Into quarters. Understand
This is no remote island,
No stretch of beach lined
With virgin palm trees, the waves
Shoving loose sand into meaningless designs.
This is the tourist destination
Virginia Beach, Virginia,
With two and a half miles of concrete boardwalk,
High rise hotels, cafes
With hamburgers at twice an inland price
And redneck beer on tap.
Young girls, who still do not know
The right size of bikini to buy,
Run from the sand to hotel lobbies;
Boys, who only moments ago
Were thinking sex, look for their
Parents. Grown men
Hide in the port-o-potties.



Rising on the tips of their legs
The crabs one by one navigate
The strip of yearly replenished tourist
Beach and step easily over
The boardwalk railing. In a few
Shakes and scurries they are on
Atlantic Avenue, and then Pacific,
And then gone amongst the low cost hotels
And the back line tourist shops and services.
People peer between beach front properties,
Their hearts still fists in their throats,
Thoughts of their ill considered belongings beginning
To rise dimly against their amazement,
Asking what is it the crabs want,
What ridiculous treasure could they be seeking,
If not us?

— Ken Poyner



Rented beach quadracycles
Crash into each other, their occupants
Stunned into abandoning their deposits,
Running for the King Neptune statue
Or the Twenty-sixth street toilets.
In their hundreds the crabs
Rise undetected by any science or sonar
And gingerly step over forsaken beach
Towels, still quivering radios,
Coolers with beer hidden under the legal sodas.
Screaming women run one way on the boardwalk
Then the other, some altruistically
Gathering lost children, others pointing
The way away from the water
As though it were not obvious.



Ekaterina Sedia resides in the Pinelands of New Jersey. Her critically acclaimed novels, *The Secret History of Moscow*, *The Alchemy of Stone*, *The House of Discarded Dreams*, and *Heart of Iron* were published by Prime Books. Her short stories have sold to *Analog*, *Baen's Universe*, *Subterranean*, and *Clarkesworld*, as well as numerous anthologies. Ekaterina is also the editor of *Paper Cities* (World Fantasy Award winner), *Running with the Pack*, and *Beware the Night*, as well as forthcoming *Bloody Fabulous* and *Willful Impropriety*. Visit her at www.ekaterinasedia.com. In an austere beautiful story that's been waiting for our slightly spooky issue, the quiet horrors of war seem far more terrifying than the perils of consorting with . . .

A HANDSOME FELLOW

Ekaterina Sedia

1

When people starve, their eyes become large and luminous, enough so as to invite comparisons with visages of saints on the icons. Which makes sense, since the saints were traditionally ascetic—anorexic even. I forever remember those golden-light eyes, softly unfocused, radiant, otherworldly, so sharply contrasting with frost-bitten fingers and red, peeling skin on wind-burned cheeks.

This is how it went: Svetlana, aged twenty-four and still unmarried despite her beauty, now heightened by hunger, woke up before dawn (which wasn't all that early in Leningrad, in December), and went to check on her mother. The children, Yasha and Vanya, slept in a separate room—a surprising luxury after most of the neighbors of their communal apartment had died. So had Svetlana's father—a large, strong man. People like that were built for peace, for hard work and big rations; it's the small and frail that could last on 100 grams of adulterated bread a day. His death meant even less food for everyone else—Svetlana was the only one now who

worked at the factory and received rations. The only other survivor in their apartment was a young kindergarten teacher, Lyuda, all alone in her room adjacent to the communal kitchen fallen into disuse.

Mother was still alive, and she weakly gestured to Svetlana—her hand a scrap of parchment in the dark—to go pick through her jewelry box. They were clever with things they had—most of the rings and nylons were already traded on the black market, for sugar lumps for the children and for extra bread. Sunflower oil and broth from unknown sources were a rare luxury. They avoided meat because of the stories of cannibals who dug up the newly buried bodies and attacked the weak and those who walked alone in the dark—and this is why Svetlana always carried her father's pistol, with a single shot in it.

Svetlana picked through the box. There were some pieces left, but who knew how long the blockade would last? They should pace themselves, she thought, and picked up a single brooch—a pink cameo with a carved white border, like seafoam made stone. "It's Grandma Anna's," Mother said. Svetlana could detect no expression in her voice—no argument, no affirmation.

"Don't wake the children," Svetlana said. "Let them sleep while I'm gone. When they sleep, they're not hungry, not cold." That day, she didn't have to work her factory shift, and the best pickings at the market were in the morning.

"They sleep longer every day," Mother sighed. "My boys."

Big strong boys, one nine, one twelve, with bodies that would soon be too large to live. "We should evacuate them. They send children out every day. And you could go too."

"Where?"

"Anywhere better than here."

"But the bombardments."

"They'll die here for sure." She bit her tongue—no mother wants to hear these words; then again, no sister wants to say them. "You know it's true."

"There's still time."

The Road of Life was all ice—thick, white Ladoga ice, the sturdy ice of an unmoving lake. It would hold until at least March. "I'm going, mama."

"Don't be long."

Svetlana wrapped her head in a thick grey woolen shawl and wrapped her body in an old, oily shearling—her dead father's—and walked down the six flights of stairs (one per floor, third floor is lucky). The cameo brooch was hidden in her mitten and she toggled it on one of her fingertips, the golden tip of the pin prickling ever so slightly.

The streets shone ghostly white in the dusk, and she watched her felt boots, making sure that they didn't step on ice slicks—treacherous pools of darkness in the soft powdery white. She was so focused on avoiding ice, not falling, not breaking her fragile bones, not being caught helpless by the roving gangs of cannibals, that she didn't notice when someone started walking along with her, step in step, the smooth swing of his long legs shadowing the uncertain stumble of hers. He smelled of earth (its fat, musty aroma was so out of place in the frozen starving city, the stone embankments strangling the black Neva and the sluicing green ice in it in its slow embrace), and she started thinking of summer without noticing the reason for her thoughts.

Svetlana looked up, finally, as the sun rose and she turned into one of the side streets. A familiar route to the out-of-the-way, the hidden. Wide spaces between old manor houses, narrow streets. She followed the Fontanka embankment for a bit, and then turned again, into Grafskiy Pereulok. Women in thick aprons and boots clapped their hands in the cold and stomped their feet, speaking in quick hushed half-whispers, "Come here, come here, handsome, potatoes fresh from the fields outside the city, buy a potato for your girl."

Only then Svetlana noticed the man who was walking next to her, even though the

smell of him was so deep in her nostrils she sneezed. His face was just as out of place as his smell—full and red-cheeked, bright-eyed, healthy. So handsome, so untouched—like a wax sculpture under museum glass. Lips so red.

“How much for potatoes?” she asked the woman.

“What have you got?” The woman drew away a thick covering of canvas off the top of a wooden crate, exposing a few small tubers, malaised and bruised with frost. They would be so sickly sweet in a pot, cooked over their metal stove. More floorboards will have to be peeled off that night—the boys can help with that. And maybe then she could go to the roof with other girls from the neighborhood, to watch out for incendiary bombs. Their building was lucky so far, but they always had buckets of sand with them to extinguish the foul things should one fall. She stared at the potatoes and let her thoughts roll leisurely, to distract her from the handsome man standing so close to her, as if he knew her—but how could one know something so alien?

Satisfied with the sight of the potatoes, Svetlana showed the woman her treasure—the cameo brooch left to her mother by Grandma Anna.

She nodded, and scooped the measly tubers into a newspaper cone; it took Svetlana all her willpower not to gnaw on them as soon as the newspaper rustled in her mittens.

“Do you mind if I walk with you?” the handsome man said, somewhat belatedly.

She hesitated for a moment—of course, it would be safer with him, unless he decided to hit her and take her potatoes away. She shifted her weight so that the pistol in the shearling pocket rested against her jutting hip. “I don’t mind,” she finally said. “You can walk where you please.”

And back they went, as the dusk slowly lifted and the snow sparkled weakly, as if touched by malaise. They passed two dead bodies, lying by the curb—faces up, eyes closed—and Svetlana wondered if they died like this, side by side, slowly keeling backward, or if someone put them there, pushed them aside to let the traffic through. They passed a small girl carrying half a loaf of bread—rations for an entire family, looked like, and Svetlana worried that someone would take the bread away from the girl, little as she was and unaware that carrying such treasures openly was dangerous. She stopped and waited for the girl to catch up to her, and the man waited too.

The little girl eyed them with suspicion.

“Let me walk you home,” Svetlana said. “Do you live far?”

The girl motioned east, to the rising sun. “Ulitsa Marata,” she said. “Not far.”

Svetlana turned to face the man. “Are you coming with us?”

He nodded, wordlessly, one corner of his mouth curling shyly but happily.

She wondered if her asking somehow negated her aloof demeanor, rendered it a pretense. Still, she had to take the girl home, even though the two boys waited for the potatoes, all the way back by Neva’s embankment.

She followed the girl in silence, and the man followed her—a hierarchy of silent guardians, each watching over the smaller and the weaker one.

“You smell funny,” the girl said, spinning around and pinning the man with her stare.

“Can’t be helped,” he said, smiling shyly still. “You can’t help it if your teeth are crooked, can you?”

The girl frowned, clamped her lips shut, and stayed quiet until they arrived at a three-story brick building. “It’s just me and grandma now,” she said. “Would you like to come in?”

“Some other time,” Svetlana said. “I have to take care of my brothers, but maybe I’ll bring them by one day, so you can play together.”

“Tomorrow?” Light grey eyes up, expectant. Impatient, but how could one not be? It would be foolish to plan ahead for more than a day.

"Tomorrow," Svetlana said.

"I'm Valya," the girl called out of the cavernous mouth of the entry way, disappearing from view.

"Svetlana," Svetlana called back.

"Ilya," the man next to her echoed.

2.

Things one needs to extinguish incendiary bombs: buckets of sand, blankets, mittens, several giggling girls. They drag the heavy buckets with effort, heaving them with all the might of their thin shoulders, the shoulder blades and the collarbones straining like twigs under the weight of encasing ice. Their legs wobble in boot shafts too big for them, like pestles in mortars. And still they laugh and gossip, and stare at the sky.

It's blackout, and from the roof one can see nothing but blackness. I imagine it sometimes, through Svetlana's eyes, straining in this absolute void. Human eyes are made to see, and panic sets in when they can't, and still they strain, trying to reach through the infinite distance of blackness into some pinprick of light. It is so dark here, like under ground. I imagine it would be like this, there.

Ilya shows up, unbidden and silent, and the girls titter more and then fall silent, after they notice how he follows Svetlana, how he's always helping her with her bucket even though she tells him not to. How both of them avoid accidentally touching their hands together.

He shows up every night they keep watch on the roof. Svetlana doesn't know how he knows—he just appears and sits by her when they rest, or helps with the buckets. They have enough sand up there to extinguish a hellfire, Svetlana thinks, if there was such a thing—but she's a materialist, and knows that there isn't.

He also comes by in the mornings when she goes out to wait in a breadline or to work at the factory or to take the boys to visit Valya, the girl they walked home on the day of their meeting. He never goes in with them though, but waits outside, through the cold, through the wind.

Valya's grandmother, Olga Petrovna, is old enough to die soon even without the hunger. She often cries that she's not strong enough to refuse her portion entirely, even though she only eats half and gives the rest to her granddaughter, and to Svetlana's brothers when they happen along. Sometimes she gives Svetlana jewelry to take to the black market. "Get some bread. Don't bring it here though," she says, "or we'll eat it all up. Take it to the hospital across the river. They need it."

Svetlana does as she is told, and Ilya follows, asking for nothing but mute solidarity. He refuses food when offered, but doesn't seem to suffer as much as Olga Petrovna does.

Olga Petrovna has stories and theories. She tells Svetlana that there's food in the city, only Zhdanov and other party officials keep it to themselves; she says that there's grain in Vavilov's Institute; the Genofond scientists keep all kinds of wheat and rice and every grain known to man. She also doesn't think the cannibals are really cannibals. "You're young," she tells Svetlana. "You don't even know who *upyr*i are."

"I know," Svetlana whispers, eyes downcast. The very word, *upyr*, makes her skin crawl, materialism notwithstanding. There was never a Russian child who wasn't scared half to death by the stories of those dead who rose from their graves and ate the living.

"You just remember," Olga Petrovna says, "if they ever come for you, all you have to do is to call them for what they are. 'Upyr,' you must say, and he'll turn into a man—for a little bit, at least."

Svetlana smiles, imagining herself confronting a gang of cannibals with words. "Men are still men. They're still dangerous."

"But if they're human, they won't try to eat you."

Svetlana shrugs, not convinced. With hunger like that, why wouldn't they try to eat anything alive and made of meat?

3.

In her mind, Svetlana never recognized her relationship with Ilya as courtship. It was only when Yasha and Vanya, re-energized by playing at Valya's quiet, cavernous apartment, as barren of floorboards as any other, and by her grandmother's stories and slivers of bread she fed them throughout (the children ate from her hands, opening their mouths wide and stretching their thin necks, like baby birds), started teasing. "Bride and groom," they started in a whisper and then, growing bolder, in a sing-song, when Ilya and Svetlana walked side by side behind them, heading home to mother. "Bride and groom."

Svetlana blushed and looked at her boots, the slicks of ice, the river swelling up leaden and white up ahead, and at the boys' shaven heads, blue under their hats—anywhere but Ilya's steady gaze and his hale earth smell.

Ilya murmured under his breath, as embarrassed as she felt. She couldn't quite make out the words, but thought that he said "Heart" or "My heart," and her stomach felt warm and tight.

When they reached her house, she looked up at him, into his sparkling eyes. "You can come in, if you wish."

She told the boys to be quiet or she'd box their ears if they breathed a word to mother, probably asleep in her room. The boys tittered, and she twisted Yasha's ear harder than she meant—that quieted them right down. Ilya waited patiently as she herded the boys to kiss their sleeping mother (her breath so shallow) and then to their own room.

She was not on air-raid duty that night, and she motioned for Ilya to follow her into her room; he instead remained standing as if stuck to the spot, until she whispered fiercely, "What are you waiting for? Come on."

She didn't light the candle and undressed in the dark. She could feel Ilya's solid presence, smell him as she unbraided her hair. She slipped under the covers and soon he followed, the mattress shifting under his weight, his body dense like iron. They lay side by side, their arms barely touching, until Svetlana fell asleep.

In the morning, he was gone.

4.

In the morning, she also discovered that her mother was up unusually early—a fat, lardy candle burned in the communal kitchen, and mother, wrapped in two shawls over her nightgown, coat, and boots, her bare venous legs ghostly white in the dusk, sighed and pulled the folding kitchen table to the center. Svetlana's heart sank.

"The neighbor's dead," Mother said. "Something awful happened."

Svetlana raised an eyebrow—dead was normal. "Awful?"

"The door was ajar this morning," Mother said. "Someone must've broken in. Yasha heard her whimpering and woke me, but when I got there, she had already bled out. People are turning savage."

On numb feet, Svetlana hurried down the hall, to the usually closed Lyuda's door. Thoughts buzzed in her head without taking shape, content with general notions—cannibals, someone killed her, wonder if Ilya's all right.

The woman lay in her bed, and one could think her sleeping if it wasn't for the wide gash in her neck, an extra mouth, blooming in a red obscene flower across her neck. The mattress was soaked with dark blood, but they could probably still sell it, or give it to someone who needed a bed, even if blood-soaked.

The edges of the wound were torn and raw, and there were definitive toothmarks. Svetlana tried to imagine a serrated knife that would leave a cut like that, but the mind rejected the possibility. She folded a doily from the bed table into a dense white rectangle, and stuffed it into the wound, and watched the doily turn slowly pink.

5.

It is important for a city in crisis, no matter how terrible, to maintain elements of normalcy, something people can anchor their sanity to. This is why there's still theater and musical concerts, and this is why when Ilya invites her to see a play, Svetlana accepts. She insists that the boys should come too, and Ilya buys them tickets to see *Les Misérables*—Gavroche is being played by a middle-aged woman, but otherwise the play is fine, and the boys seem to enjoy themselves. Both have been subdued lately and laugh little. They don't even tease when Ilya comes home with them again.

This time, Svetlana is asleep—a sick, heavy nightmare sleep—before her head even touches the pillow.

And as I tell you this, I know that you're wondering the same thing that I and my brother, although still too young at nine, wondered about: why didn't she have any suspicions? I have my own theory. I do think that some facts are merely too terrible to consider. Love complicates everything further.

She has nightmares about Ilya leaning over her, his chest pressing on top of hers like a tombstone, stilling her heart, stealing her breath. "My heart," he says. "I hold you in my hands. For the sake of your brothers . . ."

Mother is dead the next morning.

6.

Svetlana decided now that she was the head of the household, the boys would have to go. She bundled up Yasha and Vanya—or rather, Vanya, my brother, and me, and gave us all the food she managed to scavenge in these past days. She gave us our clothes, wrapped in blankets, and we stood in the hallway like two tiny transients. "They will be taking more children out this morning," she told us as we walked side by side with her. "Or maybe the next. You must go though, while the ice is still strong. We'll go by Valya's house, see if Olga Petrovna would send her out too." All the

while, her gaze cast about, looking for Ilya, but he failed to show up that day. Who can tell why.

None of us mentioned the dead kindergarten teacher and our mother, lying side by side on the kitchen table, with their windpipes torn out and gnawed raw.

Olga Petrovna, superstitious as she was (Svetlana said to the children that it was because she was from a village, not city-born like us), crossed herself. "When you take them to be buried," she said, "don't take them out of the door—go through a wall or a window. And don't carry the bodies along the roads."

Svetlana sighed. "We live on the third floor, we can't just toss them out of the window. And it's silly anyway."

"Not when an *upyr* takes a life. Do you want your mother to become one of the cursed? Do you want the devil to take her?"

"There's no such thing as an *upyr*," Svetlana said, and paced back and forth across the cold corridor while the children waited, huddled, by the entryway. "Or the devil, for that matter."

"Who gnawed them, then?"

"Cannibals broke in."

"And left the bodies?"

"Someone startled them." Svetlana froze to the spot. "I think it was my friend who did—he . . ."

Olga Petrovna didn't need to hear the rest. "Dear child!" she cried. "Daughter! You brought a stranger home? Do you even know what he is?"

"Just a young man," Svetlana said. "A handsome fellow. In any case, I only came to ask if Valya would like to come with us. I want to send the boys out, by the Road of Life. I know there are bombs, but at least they have a chance of getting out."

Olga Petrovna nodded slowly. "Better than them dying here, of hunger or worse." She gave Svetlana a piercing look. "Listen to me, daughter, and if there's anything you'd do, do this one thing: find out where your handsome fellow goes when you're not with him."

"How would I do that?"

"By cunning." Olga Petrovna hobbled into the darkened cave of her living room, and returned momentarily with a ball of uneven black yarn. "Next time you see him, you tie that string to the hem of his coat. And then you follow along. I'll go get Valya ready now."

Svetlana took the children to the rallying point, where they waited for hours in a long, silent throng of children, old people, and a few pregnant women. It was almost dark when the crowd started to move and the engines revved up ahead. Svetlana hugged the boys and cried over them and made them promise to be good and to write and, after the war was over, to find her. Just as she tearfully kissed the boys goodbye, a woman—short, squat, in military boots and a man's jacket—walked up to her.

"We're taking the smallest ones today," and motioned at Yasha (me). "Bring him back next week—they promise more trucks then. Today we have no space for him now, just the little ones."

"Please," Svetlana clutched her hands to her chest. "He's just one boy."

The woman nodded. "And there's no place for him. Do you know how many we turned away today? We're taking the small ones though." Her large mittened hands swallowed Vanya's and Valya's, and the three of them were gone.

Svetlana and Yasha returned home.

The girls from the neighborhood—the same ones that were on air-raid duty with Svetlana—helped her dress the two dead women and cover up the gashes on their throats. They took them on a sled and carted them to the site of the nearest common

grave, near Nekropol. The earth was too hard to dig, and they left them with the rest of the bodies awaiting burial, alone in the dark.

There were only two of them in the large communal apartment now, and there was barely any wood. They sat together under the covers, their breath white mist, shimmering in the darkness like anti-materialist ghosts. They slept with their arms around each other, secretly grateful for a warm body to hold.

7.

Many children died while evacuating. Many survived and were placed into orphanages around the country. Most went to school at their new places of residence, and lied about where they were from and what their fathers died of (a living father was a rare treasure, and yet a potential embarrassment—he better be a war hero). Most of the fathers died in the war; best if it happened in Germany or in the Stalin-grad battle. Having a father who died in the siege was a liability, and this is why most of the siege kids lied—having a father who starved to death was only a step above a father who was executed for being an enemy of the people. On the playground, every father was a war hero. Some kids were lucky enough to really have fathers and brothers who were war heroes, and they never failed to mention the fact. I hope that Vanya learned the correct lies quickly.

8.

The next morning, Svetlana tells Yasha to sleep and not to open the door to anyone, and leaves for the factory. She is not sure if it's her shift or if the factory is even open, but she goes anyway. She is relieved and terrified to discover Ilya waiting just outside.

"Where are your brothers?" he asks.

"Gone. Evacuated, the boys and Valya." (She is hoping that Yasha is not looking out of the window, as he often does, seeing her coming and going. She is too afraid to look herself and betray him.) "I have to be at the factory."

"I'll walk you," he says.

She wraps her arm under his, gingerly, and they walk arm in arm, step in step, in silence. The sun is out and the river sparkles, and all the while her fingers are working, working, to wind the ragged black thread Olga Petrovna gave her through the buttonhole of his sleeve.

He doesn't seem to notice as they walk, or even as he kisses her goodbye, his mouth moist and cold, lips liver-colored, pressed against hers for one suffocating moment, and then he is gone—walking away toward the embankment, the left bank. He never even noticed that the factory gates were closed.

She waits for the black thread to unravel and lets it slack as he disappears from view. Then she follows him. They walk again, step in step, separated by a length of black woolen thread. It hangs like the silk of a monstrous spiderweb, like a curving meridian line—she imagines it as a thick jagged crack in white ice, running across Lake Ladoga, separating her from the evacuated and the saved, a thick woolen thread, fuzzy and itchy, that connects her to him without ever touching. Cleaved, in both senses of the word, along the embankment.

He leaves the embankment near the Admiralty, and goes west. West and west and west, crossing streets and bridges, and Svetlana is so busy keeping the thread in her

hand not too taut, not too slack, that she doesn't even notice the names of streets and rivers—Moika, Fontanka, all the same.

She doesn't know this place, and the thread is no longer pulling or unraveling. She is looking at a low metal fence. "What is this?" she asks herself, but a passerby mistakes her bewilderment for curiosity.

"Volkovskoe Lutheran Cemetery," he says, and wraps his wind-chapped face in the wide collar of his thickly padded canvas coat. "Only they're not burying anyone—the ground's frozen solid."

"I know," Svetlana whispers, and follows the thread, along the fence, through the ornate gate. Her feet are numb and her fingers tingle as if it's a live wire, not a woolen thread she's holding. She follows it, unyielding and fateful like the needle of the compass, until the thread snakes across already frozen clumps of dirt, strewn about as if thrown by hooves and paws, and disappears under a tombstone, empty of any names save for a lone star in its left upper corner.

9.

Svetlana did not remember her way back home. Even the hunger retreated, giving place to profound, impossible resignation. It was the second time that year that her world tumbled upside down, and everything that she knew was right was proven to be otherwise: first, it was her secret, unexamined belief that she would be all right, which came to an abrupt end in August; now it was . . . she refused to name it even in her mind, no matter how the imagined Olga Petrovna tried to claw through her thoughts, through the erected mental wall of distracting thoughts and resonant determination to *not think about that, you mustn't think about that, you mustn't think* that word, *you mustn't*.

"Call it by its name," Olga Petrovna insisted, her face clear in Svetlana's mind despite her decisively squinted shut eyes. "It will destroy him."

No, not destroy. Make him human.

"And then what?" Svetlana wondered aloud. No one ever seemed to know the answer, it seemed—once you made those creatures human, you killed them, the wisdom went. Otherwise, you couldn't touch them. But could you let them live?

"I'm hungry," Yasha said the moment she got home. "Can I go where Vanya went? They say there's food there."

"Soon," she promised. "Come now, we'll sleep and the time will go by faster. Before you know it, you'll be in some village in Ukraine, and it'll be warm, and they will have fresh milk in clay jars, and plums and apples and cherries you can pick off the tree."

"And bread and butter," Yasha sighed.

10.

Human arms are a thin thing, especially the arms of a girl starved half to death—such a trifling thing, such an easy barrier to bypass. It didn't matter how much Svetlana hugged Yasha to her in her sleep—just to keep him, until the next day, the next week, when maybe they would have a place for a larger boy who would soon be large enough for labor, for digging graves in frozen cemeteries and for hauling buckets of sand onto the roofs.

She woke up because of the heavy suffocating presence on her chest and the emptiness of her arms, the sticky trace of something cold on her fingers, and a loud, wet chewing. *Soup and dumplings*, she thought in her fogged-up mind, *bread and butter and treacle*, before she heard cartilage and a long whistle of a windpipe suddenly too wide for breath.

It was so dark that even with her eyes wide she couldn't see—but she shut them again, and covered her face with her sticky hands, and screamed, "Upyr, upyr, leave him be!" as loud as she could. In the dark, she flailed, looking for something to hold onto, but there was only darkness seeping between her fingers.

11.

It takes one a while to get used to talking about oneself in third person. I am Yasha, and yet not entirely. I sleep in the Volkovskoe Lutheran Cemetery, even though we're not Lutherans or even German. I wish Ilya was here with me, to explain things, to tell me why I was always so cold and why my own sister wouldn't look at me, wouldn't call me by my name.

That night, he didn't eat me up like he did my mother—he left just enough of a soul glimmer that I woke up under the pile of frozen bodies and clawed my way to the surface. Even though people were hollow-eyed and starving, many wanted to take in an orphan, so I survived without him.

I only learned what happened to him a few days later, when there was an air raid. What that old bat, Olga Petrovna, said about upyr becoming human for a while was true. What she didn't know was that once human, the upyr would seek death—he would go to the roof of some apartment building and wait for the German bombs among the giggling, gossiping girls and the buckets of sand. He would die a hero's death, he would cover an incendiary bomb with his own body and save everyone, and the newspaper would write about him. People would know his name.

And so I wait by my sister's door and beg her, I beg her for the word and a shot from my father's pistol, so that Vanya can finally have a hero for a brother. ○

Copyright © 2012 Ekaterina Sedia

John Alfred Taylor is a Professor Emeritus (English) living in Southwestern Pennsylvania, who writes horror and science fiction. His latest publication is a tale in *Bloodlite III*. A collection of his horror stories, *Hell Is Murky*, is available from Ash-Tree Books. John writes verse too, not necessarily SFnal, and has published many poems over the years. He reads the news for laughs, except when he starts screaming. It's just possible that his reading led him to . . .

CHROMATOPHORES

John Alfred Taylor

The four of us went moire that Monday. My face and neck were shifting rust over white because I'd switched my hair red to match Anne's, while her skin flickered green. Chromatophores are the best—sofun. Mother said no to them at first, but I wore her down. Mom is strictly last century—still wearing makeup and sunblock.

We met on the train each morning and made plans for the day. Our secret name, the one we never told outsiders, was the Quad, and the Quad ran Flintridge. Principal Sienkiewicz and our teachers might think different, but what did gloops know. We decided who was popular and who was nobody, who was in and who was out. Lots of the boys didn't notice, but the girls did, and some of them hated us. Not that that mattered as long as we stayed on top.

What helped was our second phone. We had the usual one tattooed in front of our right ear, but also one even more invisible that ran down our throat on the left like police and firemen use. Expensive, but worth it, since the four of us could talk in secret after we learned to subvocalize.

We used the secret phone on the train so none of the other students could hear. "Agreed we do our thing at lunch?" Pat said. "On my signal."

We all nodded, then gathered by the door. You have to be ready, because it only opens for thirty seconds to save the cool in the car. We eased to a stop under the big sunshield at the front of the school, and we're out, rushing through the blast toward the security chutes. Just my luck to get in a longer line than the others. At least it was dry heat, though my mouth was parched by the time I could cycle through.

"Welcome, Janice Spiegel," said the Watchbird. "Art class in fourteen minutes, Climate and Ecology at ten." I never understand how the thing can recognize me whatever skinmask I'm wearing: some kind of voodoo algorithm maybe.

Art was fun, because I could do whatever I wanted to there and Ms. McKie said I had talent, but Ecology was the usual waste of time. I'd watched the lecture animation on my textab the night before, and this was just a rehash for slugs and strivers. The class was never a laff riot with Grim Jim as Resource Person, but time really slowed down when this slug boy didn't understand what convection was. Even though no phones worked there, I could shrug at Anne across the room. She grinned

back. Then a striver girl asked him a complicated question—I tuned out when I heard him say “adiabatic lapse rate.” I didn’t care how things turned hot or how much of Florida went under by 2030.

Strivers were weird. They wanted to know things just to know them, or else things for work. Though who needed a job? Not little me—my citizen’s share was all I needed. The grinds could do the rest.

Near the end of the hour Grim Jim winced and went blank for a moment, then told us all to switch on our textabs for an announcement. Principal Sienkiewicz’s face filled the screen. He announced that Elsa Moreno had passed away, and the school would hold a memorial for her tomorrow. Not much of a surprise, since she’d been gone five days—the latest search party must have hit the jackpot.

At noon Pat told what she’d heard. We all looked silent and solemn, thanks to our special phone link. They’d found Elsa way out, in the storm drain at the corner of campus—no need for *that* lately. What made Elsa hard to find was that she’d dressed chameleon. People couldn’t find the body till the clothes and chromatophores degraded. I could guess how it happened, because Elsa was special needs as well as striver. She took pills for epilepsy, and wanted to be a xeroscapist so bad she’d hiked outside in the daytime.

“She was pretty much a mummy when they found her,” Pat announced.

Maureen went “Ew!” out loud before she switched to stealth. “Maybe we shouldn’t do our act now we know she’s dead?”

“Why not?” I said. “Might cheer things up.”

“No,” said Pat. “Maureen’s right. Our kazoo thing can wait till another day.”

Who cared about a grotty grind? I thought, but kept my mouth shut. Mucho unfun.

We rallied on the train home. Pat pointed out that the memorial tomorrow was an opportunity for a fashion statement. Anne said black was never wrong. What about hair, I asked, and Maureen said *hijab*?

I surprised Mom by doing my homework before supper, explaining that I was going to be spending some time down at the fabber: they’d found the girl who disappeared, and I wanted to dress right for the memorial. Mother got all gooey at the thought I cared. I laughed inside on the way down to the mall.

Anne was already there, and the two of us spent more than an hour fabbing dresses, sleek and shiny or nappy velvets, some so black you couldn’t quite tell they were there. The fabber remembered our measurements, but that was just the start. Because we had no mirror except each other, we stuffed lots of rejects into the chute before we were satisfied.

I guess we stayed too late, because Anne staggered and almost fell over. I asked if she was all right. “Just felt dizzy for a moment. Too much excitement.” We laughed and were out the door with our new dresses.

It was worth it. The four of us were superplus hits when we met next morning. People on the train really noticed. Not just students, everybody. We were different, but the same. The Dearborn Look had been big after some imam allowed that chromatophores could be modest, and the Quad was bringing it back for the occasion. We were four black nuns, with the black of our faces meshing with the black of our *hijabs*; the lower half of my face was all black, Anne’s was split vertically between black and white, Pat’s face was leopard-spotted, and Maureen was zebra.

I’d hoped I could fool the Watchbird, but it knew me right away.

They held Elsa’s memorial in the basketball court. The four of us sat well up in the bleachers, but still got noticed, especially by the boys. We looked like black nuns all right, but sexy.

Principal Sienkiewicz stumbled through the eulogy or whatever it's called. He didn't say anything unexpected: sad, so young, bright with promise. What was surprising was that he seemed to mean it. Sienkie was always a softy. Before he dismissed us he announced that grief counseling was available—anybody who wanted a conference could come down and sign up.

When we were down on the floor I started toward the woman seated at the folding table. "Where are you going?" Pat asked.

"Feel like some counseling."

"You're kidding!"

"Just for laughs," I explained. "Superplus it'll get me out of class."

"Crazy," said Maureen.

"Maybe sumfun," Anne said.

There were people in front of me and I had to wait. Sienkie's podium and the table were hung with black crepe paper. There were guys shooting baskets at one end of the court by the time I reached it.

Halfway through math class I was called out for my conference. At student health Mr. Brown waved me into a privacy alcove, surprising me because I'd been expecting a woman like the one who signed me up.

Short and wide, with a face as rumpled as his suit, Brown smiled understandingly when I admitted I hadn't been that close to Elsa. "But how do you feel?" he asked. I couldn't speak because he might see I was faking, so put on my tragic look. Easy with half my face veiled with black. Brown nodded, and said he'd seen this lots of times—came from having somebody the same age die unexpectedly. It wouldn't be such a shock later in life.

The four of us had a good laugh that afternoon when I told them how I fooled the grief counselor. This was in study hall and I told them on the secret phone, so people stared at us when we started to laugh.

That was Tuesday. Wednesday we did our kazoo thing at lunch: walked in and turned our faces into clown masks with red noses and spots on our cheeks, then hummed "Show Me Sumfun Day and Night" into the mouthpieces loud as we could. The kids in line had never seen a kazoo before. They stared and cheered. We passed them around while Pat explained where she found the fabber code.

Kazoos were all over school Thursday. In the lunch line everybody was playing them except this one girl who was still wearing black two days after. Nofun maybe, but Lynn had been Elsa's friend, and when the noise got too loud she started to cry.

The needlenosed girl next to her smirked and started to sing,

"Do you ever think when a hearse goes by

That you might be the next to die—"

while her trash boyfriend accompanied her on his kazoo. Real grade-school was all I thought, but Anne stepped forward and slapped Needlenose hard. Boyfriend looked like he wanted to fight, but Pat and I moved up beside Anne to form a united front, and he backed down. Lucky no teacher was watching, or all of us would have been in trouble.

No problem, though the words from the stupid song kept running through my head. At least Needlenose hadn't got to the part where,

"The worms crawl in, the worms crawl out,

The worms play pinochle on your snout."

I wondered what pinochle was.

Anne fainted in gym class the week after. But Pat knew better. "She didn't faint. Some kind of seizure. Melly Jenks saw it. Says she was jerking like a spaz when she went down."

"Scary," Maureen said.

The three of us were on the way out at the end of the day, close together in the middle of the crowd.

Totally weird. Anne was healthy—she'd never had a fit before. Then I remembered her being dizzy at the fabber. "So where is she now?"

"They called an ambulance. Guess she's at Hillcrest."

"What's wrong with her?" asked Maureen.

"Who knows," said Pat. "The doctors'll find out."

Anne wasn't at school the next day. Or the next. We had no idea what was happening, we only moaned and groaned. Finally Pat exploded. "We keep talking in circles. Till we learn something, we're just scaring ourselves for nothing. Anne would probably laugh to hear us. So let's put a mute on it for now."

That made sense, except that evening I couldn't help myself. Anne's family lived real close, three pods over and one level up, and I went whether or not I'd be welcome. Her mother opened the door. "Anne isn't home," she said when she recognized me.

"That's why I've come," I said. "I need to know if she's all right."

Mrs. Evans' face crumpled up, but she let me in. Mr. Evans was sitting in the multi room, though not watching or listening to anything. He looked as sad as his wife. They made sure I was sitting down with a hot rFresh in my hand before they said anything more.

"Girl's old enough to be told," Mr. Evans said.

She nodded. "Anne's very ill."

I walked home in a daze. I'd learned some big words, scary words I didn't understand. *Melanoma, metastasis*. I called them up on my contacts and tried to read the overlay, but couldn't make sense of it—trauma trauma trauma. The Parental Bodies were watching a show and barely noticed when I came in. Which was good because I didn't want to talk.

I went to my textab once I calmed down. Easier to read about the M-words when I wasn't walking and shaking. It was still difficult—doctors speak a secret language—but I clicked on every term I didn't know till I understood. Maybe the difficulty was what kept me from screaming.

It was harder explaining to Pat and Maureen the next day. Pat shook her head. "People our age don't get cancer."

"Maybe not so often," I said. "But she's got melanoma, and it's metastasized."

"Metastasized?" said Maureen.

"Spread. To her lymph glands." Maureen looked blank. "And brain—why she had the fit in gym class."

"So she won't be back for awhile?" Pat asked.

"Don't think so," I said.

I was wrong. Anne came back the following Monday, looking a little worn but cheerful. We made her very welcome, hugging and laughing. The only difference was she had a red scarf (not a *hijab*) wrapped around her head. Looked stylish on her, not desperate. She showed us why in the girls' lounge once we expelled a couple of outsiders: her shaved scalp was no surprise, but she had tiny bandages on the front and back of her head. "That's where they anchored my head in the stereotaxic cage," she said, and explained how they locked the cage to the bed and the bed slid back under the gamma knife. "I was there about an hour. Boring. Didn't feel a thing, except I couldn't scratch my nose when it itched."

"So that's it?" said Pat.

"For my head. But I still have to go for chemotherapy once a week. A real bitch."

She was strong enough for the train, though the rush into our home cool left her a little breathless. "So except for the chemo you'll be okay?" I asked as we went between the ads at the front.

"It'll take a while to see if the gamma knife worked. Because chemo can't help my head—something called the blood-brain barrier."

After I turned off at my pod, I stopped and watched her appear and vanish between the light panels down the street.

Chemo took a lot out of Anne. She'd go for chemo Wednesday afternoons, and didn't come to school every Thursday. When she did she looked pale and tired. Then Anne didn't come to school at all. I was scared enough to call: she was home, rather than in the hospital, and told me to come visit.

Her mother handed me a surgical mask first thing. "Remember, don't get too close. And try not to touch anything in the room." Like I could float above the floor.

Anne was wearing a mask just like me. They'd brought in a hospital bed, and she had the back cranked up. Her eyes looked old. The closest chair was a good ten feet from the bed, and to add to the distance, we had to talk over the noise of a big air scrubber that ran all the time. She explained that her immune system was compromised, but would be improving now she was done with chemo.

"Doctors decided chemo wasn't any use. Glad of that—my appetite's better already." Not that Anne could eat anything home-cooked: the nurse that came in every day brought self-heating meals and bottled water in sterile packets. "And what I don't eat goes in there." She indicated a bin with a biohazard warning, and I thought how wrong that was: she wasn't the biohazard, everything else was. I was wearing a mask because I was dangerous—I could kill her with a breath.

She said that if everything worked out right she might be back to school in two or three weeks. "I've been trying to catch up." She patted the textab in her lap. "My teachers send me the class schedules—do what I can when I'm not too tired."

When I left, she said: "Say hi to Pat and Mo for me."

I told them about it on the train to school.

"You think she'll ever be back?" Pat subvocalized.

"She thinks so."

Pat shook her head.

Maureen stared with her mouth half-open.

Next I knew Anne was in the hospital again. I learned the visiting hours and took the train to Waco on Saturday. Alone. I'd told Pat and Maureen it would really cheer Anne up to see all three of us, but they couldn't make it.

Anne was in a bright little room with pots of flowers by the bed, and there was no surgical mask nonsense. "My immune system's superplus now. Bone marrow bounced back. Lots of lovely leucocytes."

Maybe sickness was educational: Anne could talk about bone marrow and blood cells as easy as s'mores. I caught myself wishing we could make some right there. "So how's the food?" I asked.

Talking got easier—ordinary girl talk, except Anne laughed a little too much, and once she stopped in the middle of a sentence, eyes empty while I waited for her to come back. Scary. Then she twitched and blinked. "Out for a second I guess?"

More like thirty.

"That happens—called *petit mal*. They say the gamma knife didn't quite cut it. Whoops—made a funny." A flicker of a grin. "Why I'm back in here. They want to try an experimental treatment."

Sounded like desperation.

"You know what I miss? My kazoo. I had it with me when I came back, but it got lost. So boring."

I promised to bring mine next time.

"Boring being sick," she snarled, "boring being here. I could die of boredom—" She caught herself, bunched up her face. "Except it won't be boredom—"

I slid round the side rail, got on the bed beside her, and hugged. No reason not to get close now. "If only you could get out some."

Anne pushed her face into my neck. "I know. I miss it. Just going to school or shopping in the mall. Even going 'round the gym track. That time last winter most of all."

"Last winter?" I asked.

"Out at your uncle's ranch." She must have felt me tense. "Something wrong?"

"Your bed," I lied. "The rail dinged my back." Wasn't going to tell her what I'd realized.

I was scared on the train home. For myself, not Anne. For her it was too late. She'd asked what she'd done wrong. But it wasn't just her: both of us had been dumb last winter, shared the stupid.

Uncle Gus's house is mostly underground, so he doesn't pay much attention to the weather. You can see for miles from what windows there are. And that was the temperature. The afternoon was cool for January, maybe 75, and Anne looked out and said, "Let's go for a walk."

Going out in the daytime? But it wasn't too hot, and it would be an adventure. "Sure," I said, "except we don't have sunscreen."

Anne laughed. "Who needs sunscreen when we've got chromos?" She turned one arm black to demonstrate.

A minute later we were out the door, black all over except for our faces. The glare would have been too much if our contacts hadn't adjusted, and I still had to look away from the reflection of the sunshields on the hydroponic sheds.

But we were headed the other way.

It felt free to be outside. There was a breeze, taking away the puffs of dust when we walked, and soon we were running for the joy of it, running till we were out of breath, then glowing and trudging on. We turned back while we could still see the house, and were there before Uncle Gus returned, dressed in his wide hat and long-sleeved shirt.

We'd thought melanocytes protected us, but forgot they needed protection as well. I could have cancer, too.

The Parental Bodies got me an appointment with the dermatologist quick. Two days later I was wearing a tyvek robe and sitting on the end of an examination table, waiting for the doctor. Finally the door opened. The man in the white coat said he was Dr. Benson, and the woman Ms. Negroponte. He called her his "second pair of eyes."

First he took my history, the usual stuff, but looked serious when I told him about Anne and our trip outside. "You haven't noticed any change—moles turning color, ragged edges?"

"Not where I can see."

"Then we'd better have a good look."

"Full comparison scan?" Ms. Negroponte asked.

He nodded, and she told me to shuck the robe and go over to this thing in the corner. It reminded me a little of the jointed arm that holds a dental X-ray machine, except this one stood up from the floor high as my chest, with a skinny arm ending in a camera sticking out of a vertical slot in the pillar. "Put your feet there," she said, and I stepped inside the circular rails and fitted my feet on the painted outlines. "Grab those handles up there. And relax. You won't feel a thing. Now contract your chromatophores."

"All colors?" I said.

"Right. Ready now?"

She hit a switch, and the pillar started to ride around me on the rails, with the skinny arm going up and down and in and out. The tiny camera and light looked up between my legs, circled my butt, did my tits and back, admired my armpits. I had to close my eyes when it reached my head.

"Very good," she said. "This time let your chromatophores show a little, just the black ones," and the camera rode its merry-go-round one more time.

Then things got boring. The two of them pulled their stools over in front of a big screen and started looking at pictures, all me, all naked, but no fun. Boys like to see skin. Not like this: the computer had spread mine out—no contours and every inch of me flat as a map, with a grid and locator marks around the edges. Even the smoothest skin looks bad in closeups.

They kept shifting images, occasionally stopping and marking the grid before going on, Ms. Negroponte sometimes catching spots he missed. Finally they were done, with an outline picture of me full of blinking Xs rotating on the screen. It didn't look too good.

I'd put the tyvek robe back on while I watched. Dumb of me that early, because now I was bareass on the exam table with the doctor leaning over me. He was looking through an eyepiece in a little thing pressed against me. "Negative," he said, and she said, "Check," and read out another set of numbers. Every time he peeked at me and said "Negative" again I felt better.

I turned on my side, I turned on my back, and kept hearing "Negative," but once he paused and said, "Not sure. See what you think."

I held my breath while she came over and took the instrument. Finally, "Nothing special."

Then he had me turn on my other side. A few more minutes and they pronounced me free of melanoma. Dr. Benson explained that my chromatophores were the reason they'd had to be so thorough. "Cloned melanocytes are just as vulnerable."

Mother was in the waiting room. She saw the news was good before I said a word, but when we hugged I started crying: I hadn't realized how frightened I'd been till then.

I saw Anne one more time.

The other Quads never visited. Pat had written her off, and was already replacing her with a suckup named Kate. So except for her parents, I was the only one who got the shock.

I might have been warned if I'd stopped at the nurses' station before. Really didn't understand what I was seeing when I walked in. Lots of metal at the far end of the bed, and then it started rising. I saw Anne's face inside a metal halo, and remembered what she'd said about wearing a stereotaxic cage for the gamma knife. Except now the cage was on for good, and merged with the powered bed frame so she could sit up.

Anne started laughing. "The look on your face!" Good to give her something to laugh at for a change. "Does look weird, I do look weird. Like being built into the bed." Anne brought her hands up to feel the metal around her face. "Have to be, because I can't hold this thing up on my own."

She'd told me earlier they were going to try an experimental treatment, and now she explained. The gamma knife had failed. Instead they were injecting targeted nanoparticles directly into her brain. "The cage isn't just to keep the needle in place—there's a thing on it that directs the teeny-tinies." When she said, "Sometimes I feel them nibbling away," I wondered whether the new therapy was working.

But that was the only crazy thing Anne said, and who could blame her? I would have been gibbering if I were locked onto the bed like that.

She wanted to know how things were at school, how Pat and Maureen were. I told her they were fine. I listed who was dating whom, and what couples had broken up lately.

That reminded me. I opened my purse and brought out the kazoo I'd promised—gift-wrapped, but Anne knew what it was before she opened it. She put the kazoo to her lips, and hummed "Show Me Sumfun" loud as she could while I sang along. A nurse came along and looked in, leaving us smiling.

Anne's smile didn't last. The next moment she was staring—not at me or anything in the room—and her lips were trembling. "I'm afraid. I don't want to die but—" She touched the cage beside her cheek. "They say this thing can give me a few more weeks. I don't know what for."

Anne died four days later.

My feelings were confused. I was desolate because she was gone—there was a big hole in the world—but glad because she'd escaped the bed trap, the machinery that kept her dying longer.

There was no memorial at school: she'd disappeared so gradually.

At least Pat and Maureen came to the funeral, though maybe to make a fashion statement. I wore a plain black dress, and sat with my folks and Anne's parents. People went up to the pulpit to share their memories of Anne. Mother signaled I should join them, but I shook my head. I wouldn't be able to speak.

Things have changed for me. I pay attention in class now. Especially Biology. I know it won't bring Anne back, but still. I thought about aiming for medical research, then realized it's not my thing. Afraid I'm turning into a striver. Even asked a question or two in Grim Jim's class.

I'm concentrating on my painting. I used to fool around in art class—drew butterflies, pixies, cartoon animals, caricatures, funstuff. Not now. I'm working on a triptych for Anne.

Learning lots from earlier artists. People I barely knew existed: Rembrandt, the Goya guy who did war atrocity pictures, Holbein's woodcuts of the Dance of Death, Durer's *Melancholia*. Don't get me wrong—I'm not all gloom. I like Vermeer's painting full of light just as much, and Renoir's pictures of people dancing and picnicking are superplus.

I know them full size and close up because some days I stay till the janitor comes—the wall screen in the art room is sharper than my textab.

I started from photos, but photos are just the start. I've learned to strip things down to truth, I've reprogrammed the painting tool again and again to make the colors fit.

Still, hinges were a problem. Though lots of people painted three pictures and called them a triptych, I wanted mine to be the real thing, a painting that opens like a cabinet, the reverse of the two front panels becoming the side panels when spread out, and I didn't want any space between the three. Finally a woodworker online clued me in to card table hinges.

The outside looks like the carving on a tombstone, very *trompe-the-whatzit* as the French say: just Anne's name and dates.

But when the leaves are open there's the girl I want to remember on the left—it was easy showing what she looked like, hard to show who she was.

On the right is a picture of her at the last, trapped in the bed, staring out of the cage around her face.

But the middle panel shows us outside last winter. If it wasn't for our white T-shirts and shorts you'd think we were naked because our legs and arms are black silhouettes. We're just coming over the top of a little hill, with Anne ahead.

Both of us are laughing. ○

Copyright © 2012 John Alfred Taylor

Will Ludwigsen's work has appeared in *Asimov's* twice before ("The Speed of Dreams" in March 2010 and "We Were Wonder Scouts" in August 2011) as well as in many other places like *Weird Tales* and *Strange Horizons*. He teaches creative writing at the University of North Florida and his collection *In Search Of and Others* is forthcoming in early 2013. You can follow his blog of the strange and wondrous at www.will-ludwigsen.com. In Will's mysterious new tale, heartbreaking truths are revealed about . . .

THE GHOST FACTORY

Will Ludwigsen

Worthington Wood isn't a forest but a hospital—a sprawling and defunct mental facility crumbling into the primeval Florida landscape like the ruins of Tikal. Built during the Second World War as a training airfield, the Wood sits thirty miles from civilization amid yellowed grass, low oak trees sagging under Spanish moss, spindly pines, and knots of leathery palmetto. Its dozen concrete block buildings sit baking in the heat, their state-sanctioned pastel colors fading to a sickening hue of governmental decay.

People still live here, people you can't quite see. People no one ever quite saw. I guess you'd call them ghosts, and they were my patients.

Now I'm theirs.

The first thing to know about me is that I'm the worst case worker in the history of the Wood, and that's really saying something for a state institution. I mean, I took my first college course in psychology because I was curious how other people learned to feel when I hadn't, and I stuck around in the program because it was still a little sexy in 1975 to pretend I was helping the world. Over the gentle gurgle of a beer can bong, I could say things like, "If we could perfect the science of empathy, man, we could totally stop our planet's death trip," and it would get me into some girl's dorm bed.

Thirty-odd years and two divorces later, I still haven't perfected the science of empathy. Counseling is a vocation for listeners in a society of talkers, and the only reason I had a career at all is that my ambivalence closely resembled listening. I didn't "advise" my clients like all my colleagues did, and I let the screwballs carry the conversation while I thought about other things—whether it was worth going back to school to study computers, maybe, or if anybody like me could get away with a heist like D.B. Cooper's.

Crazy people are a lot less interesting than you'd expect. For one thing, they're lit-

erally hard to understand: they ramble in long torrents of learned psychological jargon, sometimes with random realizations that the rest of us take for granted. You know that feeling you got when you realized that every tiny star was a sun? They get it for things like figuring out that all the doors on the ward open outward or that it's possible to eat cake with a spoon. They're addicted to epiphany, a little like drunks—drunks who sit on the couch in your office and pick their toes or hold their fingers in their mouths. Most of them are fixated on some terrible event or wound or misconception, chasing theories off a cliff. Pretty much like all of us.

Not long after I started here, I saw a guy argue with a tree. He was this huge turtle of a man, bare flesh hanging down his back, yelling at a pine, pointing in all directions and shaking his fist while the tree took it all with aplomb.

I watched between my office blinds as things escalated. First there was a shove. Then, a bump of the chest. Finally, the guy leaned back, wound up his arm like Roger Clemens, and socked that tree but good at full force.

The man grabbed his arm, hopping and swearing. I could have intervened. I could have broken up the argument. I could have, you know, called someone over from the Infirmary at least. But I let those blinds snap into place again because I didn't want to do the paperwork.

I know, I know: it makes me sick, too.

In one of my final reviews before we shut down for good, Doctor Federovich asked me straight out, "Do you even give a shit about these people?"

I sat there blinking, wondering how to answer. "Well, sir," I said finally, "I don't think they want my shit."

We're surrounded here at the Wood by a pasture on one side, a lonely state highway on another, and a thick swampy forest on the other two. It's not just any kind of forest, either: it's Florida forest, all Jurassic-looking with chest-high palmetto fronds and towering pines and little clearings of primordial loam, wet and sticky. It drones with locusts all day and all night, the sound of nascent life straining to evolve.

They've long since cut the power, so it's dark enough to see the stars at night—even the Milky Way. I sit on the porch of one of the old doctors' cottages, waiting and watching.

Every few nights when I'm tired or drunk, I'll see them pass, my old patients. I can't *want* to see them, I can't try: they somehow know when you aren't quite looking. It's only from the blurred edges of my vision that I see the train of hospital gowns winding in silence between the buildings, hand linked to hand, maybe a hundred of them. They cross the scrabbly lawn, making gentle sounds, whispering and giggling from one end to the other like a pulse down a single giant neuron. When they get to the edge of the fence going out or coming back, they pass through without even pausing.

Valerie is always last, and sometimes she turns to look at me before she's through. She hasn't beckoned, though, so I haven't followed.

Valerie came to Worthington Wood in 1990. The money for her care came from her father, an attorney in a nearby town who didn't need a nutty daughter wandering around to ruin a good thing. She was the only resident of the Wood to arrive with matching luggage, two powder blue suitcases packed with heels, skirts, blouses, slacks, T-shirts, underwear, hose, scarves, and books (I remember *The Grapes of Wrath*, *Heart of Darkness*, and *Helter Skelter*; but there were more). Oh, and a make-up case with a mirror on the inside of the lid.

When she wasn't sunning in her Wayfarers on the smoking patio, she passed from counselor to counselor. She started with Pauline, a specialist in art therapy who encouraged her to paint or sculpt, and the result was a striking series of realistic crime

scene portraits, the victims drawn as stark white silhouettes. She went on to David, whose focus on cognitive behavioral therapy provided her with a deck of index cards with practical daily advice like, "When you're angry, breathe!" In talk therapy with Beryl, Valerie recounted the plot of "A Good Man is Hard to Find" as an incident from her childhood.

When she ended up in my dark, cramped office with twenty layers of government latex paint on the walls, the first thing I asked her was, "So you came here to play with us?"

"No," she said, kicking off her shoes and folding her legs beneath her on my fraying green couch, commandeered by the state from someone's yard sale. "I came here to find out if any of you were real."

"Huh," I said. "Aren't you going to be disappointed?"

She didn't say anything else and I didn't either. For that whole first session, I leaned back in my chair and doodled a spreading vine pattern across my legal pad. That's what we did for the second and third sessions, too: sat in silence.

"Is this your way of wearing me down?" she asked at the beginning of the fourth.

"No. This is my way of getting a peaceful hour in the middle of the morning," I said. "You're the quietest wacko we have." I held up one of my worn Philip K. Dick paperbacks. "You mind?"

"Be my guest," she said.

I'd made it halfway through the book two sessions later before she started talking. If I looked up, she'd stop. Like the figures I see making for the fence some nights, she didn't bear direct observation.

There's no electricity or running water at the Wood these days. That's less inconvenient than it sounds because I've got all the fuel I need for my lantern from the old heating oil tanks, and I collect rain water in barrels. It's fresher than the stuff on the ground or out of the ancient irrigation well, anyway.

What little I eat comes from a groceria about ten miles down Highway 31, a place where the migrants buy their food. A bag of corn tortillas and a couple of dented cans of beans can last me weeks because, well, I'm not that hungry. I haven't been for years.

Valerie had left her withering cow town not long after high school to start college at NYU on a math scholarship. She "hit a wall," she said, in a class called Philosophy of Mathematics—no amount of study or thought could get her past it. She tried to switch to Statistics but that was worse. "Too practical," she said. "And scary to find out that everything's approximate . . . including me."

She'd dropped out and headed west for no other reason than she'd never been there, and she'd tried starting school again in Utah and Arizona. Somewhere in there she visited New Orleans and Mexico City, Toronto and San Diego. She tried singing in a band, modeling for art classes, even working in an Alaskan fishery for about four hours. She stayed with friends—even if she had to make them.

"I bought us all food with my dad's Shell card," she said. "You'd be surprised how long people will let you crash at their place if you're buying all the beer and snack cakes."

She saw things, she said, strange things. The LSD wasn't helping and neither was the heroin, but she'd been getting the sense that the world was getting too bright to look at quite directly. Some people glowed and others faded; she couldn't see the difference why. All she knew is that she was one of the faders and it scared her.

There wasn't much in her story to differentiate her from any other twenty-something with a brain, figuring out that the "system" is a sham and trying to decide if she wanted to play along. That's not a sign of being mentally ill unless you make the inconvenient choice.

When her father bought her a flight and ordered her home one Christmas, she made that choice. "I went off the rails a little," was how she put it.

A boy wasn't exactly at the center of it, but he hadn't helped. She'd been best friends with Ben in high school, talking almost every night on the phone through their junior and senior years, though they hadn't spent much time together in person outside of school.

"It was platonic as far as we knew," she said. "But come on. You can't talk about all that stuff—what you want to be when you grow up, what you think the world should be like, which teacher is sleeping with what student, how many years we have until the world breaks us down and makes us normal, all the important stuff—without being more deeply in love than anybody can be past the age of seventeen. Right?"

I knew she didn't need an answer.

"There was kind of a weird intimacy there, as though we'd skipped over that terrible awkward part of a relationship where you're fumbling your hands together and trying to figure out what to say to be romantic. I think we were too afraid that hanging out together in the real world would ruin things."

I nodded slightly, but she didn't notice.

"Anyway, I came back from the West Coast all out of my head. I can't remember if I was drinking then or not, but I sure as hell was shooting up. There's a picture of me standing by the Christmas tree with my younger sister Emma in our church dresses, and my eyes are all sunken and my hair is all crackly. I'm blurry, underexposed. I look like Nancy Spungen after a bad weekend bender, and Emma looks like Holly Hobby.

"And Ben came back from school, too. Actually, he'd finished and was getting ready to go to law school. God, law school! Not that he told me or anything: I heard from my mom who knew his mom. He was home for the summer, working for his dad's gas business. I knew it would get back to him that I was home, so I gave him a whole week to call. Of course he didn't, so I thought it'd be funny to go get his ass out of bed in the middle of the night. Your sense of humor changes when you're high, I guess."

It was hard not to wince sympathetically at that.

She shook her head. "All those years I'd known him and I'd never been to his house. They had this crazy fence like ten feet high and I almost killed myself climbing over, cutting my hands and legs to ribbons. I don't think I had shoes. I had no idea which room was his, so I ran around his yard all bloody, pressing my hands against the windows, standing on tiptoe to see inside. His parents were out of town; there were sweet little mystery novels on their nightstands. I saw his sister's room, scattered with all her cheerleading crap; she wasn't home, either. And then I came to his room. It had a set of golf clubs leaning inside the window."

I glanced up from my book, and she sat up now, no longer resting her weight on her legs. It's good to notice these things in case a client isn't ready to admit a feeling yet. Or if she's going to leap at you.

"Golf clubs. Like a good plutocrat ought to have, right? I cupped my hands to the glass and there he was, asleep. So I smack my hands against the glass a couple of times, smearing blood all over.

"He finally opens the window and says, 'Valerie! What are you doing here?' Then he says, 'What the hell happened to you? Are you okay?' And all I can say is, 'Golf clubs!' And all he says is, 'What are you talking about? Calm down, will you?' And that's when I realize he's all clean cut and confident, which is to say stupid, and I want to hurt him. I grab for the front of his pajamas—he was wearing pajamas, for Christ's sake—but he smacks my hands away and says, 'What's wrong with you?'"

She'd slid off the couch now and knelt on the floor.

"And God, I couldn't say. I couldn't talk at all, I don't think. I kind of howled. They called the cops and I ran off into his parents' orange groves."

Even in Florida, it gets chilly in the winter. I wondered how long she'd hidden in the groves, bleeding, shivering. Or maybe she didn't feel any of that at all. She didn't say.

"You know what made me mad, don't you?"

Yes, I thought I did. But she didn't want my answer.

"It was that he'd gotten his life together first. Before I did. Before asking me or taking me along. Isn't that terrible?"

I didn't break our pact to answer.

"He wasn't fucked up anymore, not like I was. I wanted to fuck him up. And I did."

You know that Valerie and I slept together, right? There's a reason she stands out among all the patients I neglected, and not just because she was the one who'd gone crazy for a more interesting reason than most.

Some guys in my position would point out that it was voluntary, which it was, and that we needed each other, which we did. But come on: I fell in love with her story, and she fell in love with my willingness to hear it.

I'm a terrible counselor, but Valerie was the first and last patient with whom I had what most people would call an "affair," though the word implies a desperate passion that wasn't there. We talked and kissed and finally made love out in one of these doctors' cottages, not like teenagers or college students but more like a tired middle-aged couple. It was slow and gentle, quiet, as though neither of us expected much.

I don't live in the same cottage we used. It was abandoned then and it's abandoned now. Built for young doctors whose families hadn't yet made the move to Florida, all these cottages have a threadbare plaid couch and twin beds, plus a chrome-edged kitchenette table in a mustard-yellow galley kitchen. The closest my cottage comes now to being haunted is my memory of how Valerie used to stand behind a similar counter in only her T-shirt, opening cabinets in search of cups for water. Those could have been quiet Sunday mornings in 1970, judging by the décor.

My cottage is two doors down. It's not haunted, not like the rest of the place. The light here comes from my lantern, and the doors lock and unlock because I latch them. The glowing windows on the ward or the doors that slam—that has nothing to do with me. Not directly.

Valerie didn't finish her story in the next session or the one after that. She looked through all my books during one hour, opening the three-ring binder manuals the state gives you for diagnosing people, maybe paging through to find herself. I hadn't decided on a diagnosis; I hadn't even thought about it. "Wacked" was about the extent, but then, that's all of us, and the doctors can't write prescriptions for "wacked."

About a week later, she told me the rest.

"I didn't go home that night," she started suddenly. "I walked all the way back to town first, hiking down Highway 70. There's this place we used to go when we were kids, an oak tree leaning out over the river with a rope hanging from a limb. It's so painfully Mayberry. You swing out onto that rope into the brown water, and you hope like hell the splash scares the alligators and moccasins away. The water is full of tannin from rotting leaves so you can't see the bottom until you're in it, either, and sometimes you knock your legs against a concrete block or an old stump down there. There are big patches of oil on the surface from the boat ramp fifty feet up the river, too. You come out looking like a bass."

I knew the kind of place.

"So that's where I went that night. I mean, the moon was out and the air was clear, so I thought, 'Screw it, I'm going swimming.' Maybe it was one last challenge to Ben: if he knew me enough to find me there, maybe there was hope, right?"

I supposed there might be.

"And damn if he didn't find me there like three hours later. He'd gotten dressed when I ran off, tried looking for me in the groves awhile, and then drove into town in his father's Lexus. Thank God I didn't see him in it or I'd never have let him close to me. As it was, I didn't know he had the car until after.

"I'm diving under the water over and over again, pacing across the narrow point of the river there, my hair stretched flat along my back and the water flowing past my face, probably the cleanest I'd been in a month. I see the headlights flash through the trees, and a few minutes later, he's squatting atop one of the big roots you use as a step to get onto the tree, waving at me to come closer. I don't, though: I keep treading water, leaning back a little so he can see me. Can see what I wasn't wearing."

She did it then on the couch, holding out her arms like wings and closing her eyes.

"And then I start talking, everything coming out in a rush. Everything I've seen, become. Everything I am now, without him around to listen anymore." Eyes still closed, she floated her arms above the back of the couch. "The water keeps washing in and out of my ears and I'm only catching a few of my own words. I know one of them is 'alone.' Another is 'afraid.' Still another is 'lost.' I try to tell him how I don't feel like me anymore, that maybe there isn't a 'me' at all."

She rested her arms now and opened her eyes.

"I drift in closer to the shore and lift my head above the water. He's been talking, too, and I can hear now that he's been telling me about settling down, choosing a path, respecting myself, growing up, all that intervention crap. He hasn't heard anything I've said. I feel sick and cold. Soon I'm underneath that oak and I kick my leg and my leg goes right through it. Like I'm a ghost. Like I don't exist."

The water at night, I thought. Hard to tell distances, easy for the moonlight to be bent—

She glowered at me, knowing what I was thinking.

"No, I pass right through the root. First my foot, then my leg, then my hand. I'm disappearing. He's making me disappear."

I tried not to show any thought on my face. By then, Valerie and I had already slept together twice in that doctor's cottage, and we'd laid in that narrow twin bed a long time naked and quiet. I remembered now that she'd pressed her fingers into me all over, kneading me like dough on my back and my chest. Patting like a blind person, she'd been making sure I was solid. Or that she was.

"I can't let him make me disappear. So when he's gotten tired of stooping and sits on that root now with his legs dangling close, I go to them and reach. I expect my hand to go through but it doesn't, so I untie the laces of his terrible preppy shoes and let them drop in the water. He's paying attention now, so I reach up and pull at his shirt and pull at his pants and pull him to be naked like me in the river. I have my arms around his neck when we fall backward off that oak root, and the water tries to squeeze between us but it can't. I slide my hands up his back, and I whisper, 'Why didn't you come with me?'"

I looked up, but she didn't notice.

"He sputters, trying to say something. I can feel him getting hard, and I know he won't hear me anymore, not like he used to, that I'd always be invisible to him from then on. The rope from the tree isn't far behind us, and I manage to reach it with the very tips of my fingers. I twist the loop at the end around his neck and shove him as deep under the water as I can."

My breath caught in my throat.

"My knee's on his back, squishing in, solid now. The harder I pull on the rope, the more solid I feel. He tries to flail his arms back, but they can't reach far enough to get me. They stop after a while, and I let him drift off down the river, free."

* * *

I'm not sure where they go. Sometimes during the day, I walk out to the corner of the fence where they pass through and I curl my fingers in the chain links. From what I can see from this side, about fifty yards of palmetto lead in a winding path to a stand of Australian pines. Of course, they leave no footprints, and where they go after that, there's no telling.

Once, I went around the outside of the fence to look around and I regretted it. The woods aren't right that way, when I cheat. Sure, it's dark in there and the pine needles crackle beneath my feet and the wind whooshes through the treetops, but all I see are old Styrofoam cups blown in from the highway and a toppled refrigerator dumped here long ago.

There's nobody there when I walk around the fence. The only way is through.

Almost everybody at the Wood liked to pretend they killed somebody. We had one guy who said he'd shot a Hells Angel with a speargun from the wall of a seaside bar, and another who claimed he'd been a back-up trigger man at the Kennedy assassination, assigned to a manhole in Dealey Plaza. To hear them tell it, they were all farm-league Mansons.

So I wasn't sure I believed Valerie. She enjoyed embellishing reality a little too much to be entirely credible, for one thing. For another, she was about five foot six and a hundred and thirty pounds, not someone I could envision drowning a strapping frat boy. Of course, I'd seen her naked by then, thin and long beneath me, and nobody naked looks like a killer.

But I checked anyway, visiting a few nearby libraries to scan through back issues of the local papers, looking for mention of bodies floating up out of the Peace or Manatee rivers. I wasn't surprised or unsurprised when I discovered an obituary for a Benjamin Farrell, found tangled in mangrove roots twenty miles down the river from his hometown. The body had been badly mutilated by animals of some kind, maybe alligators, and the cause of death was indeterminate. The going theory was that he'd drowned while swinging drunk into the water late one night as the kids often did, though nobody could convince any of Ben's friends to admit they'd been with him. Valerie had gotten lucky.

I thought that finding out that she killed someone would inhibit our relationship, but somehow it was just the opposite. I'm not saying I was turned on by what she did, not even excited or sympathetic; there wasn't much of that left in me. But we walked out along the fence even more often, sneaking into our cottage or the west entrance guard shack or the vehicle barn for the talk therapy that mattered—the silent kind, sweaty and wide-eyed.

Our sessions in my office, the official ones that required reports and diagnoses, took on a quiet and comfortable quality, like retirees at home after fifty years of marriage. Our conversation was casual and funny. We shared little stories of our lives. Sometimes she read aloud to me or I to her.

I remember she read from *Grapes of Wrath*, that section with Muley Graves. He was the nutty ranch hand who stayed behind when the Joads lit out for California, lurking in the abandoned barn like a feral cat. He gets swallowed by the tractors when the banks come to take the land.

"I'd stick around, too," she told me.

"What for?" I asked.

She shrugged beside me; we'd gotten bold enough to sit together on the couch sometimes. She'd fallen asleep on my shoulder once, even. "Maybe because someone's got to see what happens next. To see things to the end. Like how every funeral has to have one guy who watches."

"Huh," was all I said. I imagined that Muley Graves was a paranoid schizophrenic, with the foreclosure of the farm as a triggering event for a lengthy episode. He saw himself as the last defender of the castle, a classic delusion. I didn't tell her that, though.

"I never want to be one of those people who takes the hint, you know? Who leaves when you want her to."

Not much worry of that, I figured.

Valerie and I tried our best to be discreet, but we were never quite sure who knew about us and who didn't. There were a hundred patients on each ward during the Wood's peak population, and way too few case workers—an average of one for every thirty or forty patients, each with complicated case histories to maintain. There were even fewer actual doctors, and most of them came in once a week from neighboring towns to write the prescriptions we recommended with a cursory flip through the files.

It was a situation both helpful and harmful to our relationship. On the one hand, almost nobody was watching if you took a walk with your patient in the fields. On the other, the few that were would find it suspicious that you'd take that extra time with one of your forty cases.

Doctor Federovich turned out to be the latter type, of course.

"Don't get too used to her," he said one day passing me on the ward.

I stopped but he didn't. That was all the confirmation he needed.

"You won't be here long," he said over his shoulder. "Neither will she."

Oh, she's still here. So am I, in my way.

When people stumble on the Wood today, they can't always tell what it was. It didn't look much like a mental hospital even when it was one—no bars on the windows or anything, no rooms full of scary wires or restraints—and now it could be a bunch of old warehouses.

A guy from the county comes out maybe once every couple of months to drive around on his tractor in big reckless circles, missing huge patches of weeds but doing well enough to keep it looking good from the road. Sometimes kids will park their cars by the old front gate at night, sometimes to neck and other times to scare themselves with the idea of madmen electroshocked to death or madwomen driven to suicide. They roll down their windows, trying to listen over their own giggles and shushes, and I'm always so very tempted to make the mournful wail they're waiting for.

They sent a couple of detectives once to find me. Well, not me specifically, just the source of the lights people sometimes report seeing from the highway. I guess those are scary when you're driving by yourself on a dark road, expecting your own headlights to be the only illumination in miles of black. It can't be my lantern they see; the porch doesn't even face that way. Maybe they see the flow of that long bluish stream of patients slithering through the field. If I saw that from inside a car, I'd call the police, too.

The cops poked around in the doctors' cottages. They opened closets, flipped through my paperbacks, tried all the light switches, sniffed around in the bedrooms to see if someone had been sleeping there. I keep a pretty clean house; it's hard to tell I live there, which come to think of it, isn't all that different from how I lived back in the regular world.

They swaggered between the old hospital buildings, cupping their hands to look in the windows. They jiggled the door handle to the cafeteria, one of three doors that are still locked. They squinted off into the woods, right at the spot in the fence where the figures go through, but they were comfortable enough still to light cigarettes before heading back to the unmarked cruiser.

* * *

I wouldn't find out what Federovich meant until a staff meeting two weeks later. That was when, seated at the end of the table in his ceremonial lab coat with his hands folded, he told us soberly that the state was closing down the Wood by the end of August, six months away.

"The official word isn't coming until next week, but I thought you might like to know in advance, perhaps to make arrangements." He paused, not looking at us but somewhere in the upper corner of the room. "I trust that you'll keep this confidential from the clients in the meantime."

Right, I thought. The staff had worse poker faces than the patients. Everyone began to talk at once, not quite to anybody specific but loud enough that anyone within about fifty feet of the conference room would hear.

"You've done good work," said Federovich, glancing around at everyone but skipping over me. "And I assure you that the state will do everything it can to place you in other positions where you can continue to do so."

"What are we doing with the clients?" I asked, careful to use Federovich's term. I'd called them "wackos" once and gotten written up for it.

Everyone looked at me, probably surprised I'd asked the question.

"There are two options, of course: release to community care or transfer to Chattahoochee."

Chattahoochee was another state institution with higher security than ours. It was far closer to everybody's image of a mental hospital, one with bars in the windows and screaming behind the doors. It was where the dangerous and hopeless went.

"Of course, nobody's funding the halfway houses any more than they funded us, so there's no telling how many of the clients we release into the community are going to get care at all after a few months. I expect some will end up in jail or homeless."

He said it so matter-of-factly. I might have heard it matter-of-factly, too, if I hadn't been sleeping with one of them.

"So treat 'em and street 'em?" I said, saying aloud in a meeting what so many of us had grumbled for years.

Federovich didn't blink. If he saw one bright side to closing the Wood, it was that I'd be out of the mental health care field however long it took to find a job, maybe forever. "Essentially, yes. Our task now is to classify the clients based upon their suitability for community release. For the chronic or dangerous cases, of course, there's nothing but Chattahoochee. I'm establishing a board for the final determinations based upon all your recommendations."

So my choice, not really a choice at all, was to send Valerie to Chattahoochee or release her back to the world. Would she kill someone else? I doubted it; nobody had that emotional import in her life anymore, not even me, and nobody would again. But I knew she wasn't finished with whatever she was becoming.

I made the mistake of hurrying her.

It gets stormy in the summer here, and violent gray thunderheads gather in the afternoons like a herd of buffalo. If it gets too bad, I go into the old ward building and curl up on that green couch in my office. I don't do it often because of the noises.

The ward is full of whispers at night, and the horrible government tile just passes them from one end of the building to the other. A mumble at the far door can sound like Valerie purring in my ear, though it never is.

It's just a myth that ghosts scream and wail. They mutter, making you strain to hear, just like the patients used to.

I'll admit I entertained the fantasy of keeping Valerie. I'd find some way to "cure" her and we'd drive away from the gates of Worthington Wood to get married at the

courthouse. She'd have her matching suitcases in the back of my car, and we'd go off and drive somewhere that didn't scare her, where she saw nothing.

I think the surest sign of love is the need for a road trip together. I wanted to see Valerie seeing Pigeon Forge, the Alamo, the Grand Canyon, the world's biggest ball of yarn, and a hundred Waffle Houses and Cracker Barrels in between. Something had happened to her the last time she took that trip, and I wanted something to happen to me, too. It hadn't in such a long time, and maybe she had some to spare.

So the priority in those last months was fixing her. There are strategies we were supposed to follow, a checklist of guilt and remorse, but the first logical step was to stop sleeping with her. It could only help to isolate the variables of whatever was wrong, after all.

"Come on," she said a few days after my unspoken decision. She tried to pull me from my office chair and instead it squeaked forward and thumped against the desk. "What's the matter with you?"

I planted my feet to go no further. "We never talk anymore," I said.

"Sure we do. In the good way."

"No," I said. "I mean, I don't think I'm helping you."

She bent over me, both hands on the arms of my chair, her hair hanging in my face. "Are you trying to *fix* me?"

"Why else are you here?" I replied.

She stood up, smiling wryly. "For the company," she said. Then she shook her head. "It's sweet, it really is. Probably something to do with guilt, am I right? You've screwed a patient and now you have to make her not a patient anymore."

I hadn't thought about it that deeply, but yeah, maybe that was part of it. But not all.

"We may not have all the time we think we do," I said.

"They're closing down the hospital."

See? The patients probably knew before we did.

"Well, that's part of it, yeah," I said. "But, even if the Wood was here forever, you wouldn't want to stay, right?"

"Why not?"

"Because this is a mental institution, Valerie. It does things to people."

"So does the rest of the world," she said. Then, more quietly, she added, "I'm more solid here than most places."

"Valerie—"

"I have a theory about crazy people," she said.

Most of them do. "Really?"

"Really," she said. "I think the people everyone else calls 'crazy' are drifting from this world to another one. Slipping between the cracks, sort of. And not all of their brain goes into the other world at once and it can talk to the other part that doesn't and it says things neither side can understand."

That was a popular theory with the wackos, that they were visionaries seeing into some other quanta of reality or the realm of Faerie or whatever. My heart sank to hear her say it because it was even more proof that she'd taken too much of the Wood to heart. Now she too was addicted to epiphany.

"How much of your brain is here and how much is there?" I asked.

"It's not the brain you should be worried about," she said.

She meant the spirit, I assumed. Another favorite theory was that the Wood blunted the edges of the soul, wearing people thinner and thinner until they didn't exist anymore. The wackos liked that one because it offered an upside to being cut loose thanks to psychiatric facility defunding.

Valerie opened the DSM, our venerable handbook of just what the hell goes wrong with people. "Or maybe I'm just schizophrenic?"

The idea had occurred to me. Delusions, disorganized speech and thought . . . mild, certainly, but present all the same.

"Oh, wait. How about Narcissistic Personality Disorder? 'Grandiose sense of self-importance,' check. 'Believes that he or she is special,' check. 'Sick and tired of the world not mattering to her,' check and double-check."

I'd thought of that one, too. Also Schizoid Personality Disorder and Antisocial Personality Disorder. Lack of feeling for others, flat affect, delusional fixations, self-absorption—I mean, worse than the rest of us.

"You know what I think it is?"

She sat on my desk, knocking things over with her bare knees to sit Indian-style a few feet away from me, her gown high. "Ooh! You've cured me!"

"I think you've got 'Shit-or-get-off-the-pot-ism.'"

"Huh," she said. "Is that in the index?"

"No. It's a common affliction of people with higher-than-average intelligence who don't see any meaning in the world, no purpose, so they wait for it to manifest. Of course, it never does . . . and so they keep retreating and retreating inward."

"Until they disappear," she said.

"Yeah, that's a word for it," I replied. "They don't realize that to be solid, you have to do things. You have to be meaning yourself."

Valerie's eyes narrowed. "That's the stupidest thing I ever heard."

And that was the most hostile thing she'd ever said, so I thought I was on the right track. I pressed some more.

"I'll tell you the stupidest thing I've ever heard." I could hear myself talking but it didn't quite sound like me. "The stupidest thing I've ever heard is that a smart and beautiful woman can't get past the ninth-grade idea that the world is a sham hardly worth her intelligence. Everybody with an I.Q. over a hundred thinks that, and maybe a few of them are right. You know what they do?"

Valerie folded her arms and gazed over my shoulder out the window. "What do they do?"

"They fake it. They play along. And then they live what they love some other way, writing or drawing or building birdhouses or calling into talk radio shows when no one else is looking. They stop staring at their feet too much to walk."

"Fake it," said Valerie. "Play along. That's a great idea. I never thought of that. Maybe I can do what you've done, living out your imaginative fantasy existence in this awful little office at this awful little mental hospital. It's a bravura performance, your faking."

"Yeah, I know. That's why I'm qualified to tell you all this. You think I've never felt like I'm fading? All my life, I've always been empty, like my feelings don't go deep enough. My mother died and I was empty. My wives left me and I was empty. I was empty on drugs and empty in therapy. You're the first thing that fills me up and makes me solid, but that's only a metaphor, right? I've always been real, you've always been real." I reached for her hands but she pulled them away. "You helped me figure that out."

"I'm glad my therapy is working out for you," she said. "Come talk to me when you really get it."

I blocked her from getting up. "Valerie, they're trying to decide what to do with you. The two choices are a halfway house or Chattahoochie. Neither of them is good. Once you're in the system, you never get out. They just keep caring about you less."

"Wow," she said. "That's almost worth seeing, like absolute zero."

"I care about you—"

"You care about me? You *care* about me? You know what? Go to hell. You don't care about me. You care about the idea of me, the idea of what I can be for you. A magical crazy fairy to sprinkle life dust in your life or something." She slid herself off my desk

with a crash of papers and file folders. "I liked you better when you didn't talk."

She was turning to leave and I grabbed at her arm. She swatted back to knock me away. Somehow, though we were a foot apart, we missed. But we couldn't have missed. We passed right through one another, our limbs phantoms.

We were both surprised, not just by the miss but by the cold, sharp pain in our hands where they should have touched. She walked backward, shaking her head with a smile on her face and looking around. She reached for the shelf of reference books but pulled back. She reached for the wall to steady herself, but she pulled back from there, too.

"I'm fading," she said.

She backed toward the door. I wondered as she fell silent if she was thinking of killing me, just to see which one of us was real. I wondered why I hoped it would be her.

I break windows these days for fun. I'll roll my sleeve down over my fist and pop it through the panes of glass. Some of them are reinforced by a thin crosshatch of wire, but even those bulge inward with a satisfying spray of clear pebbles. I'm all the happier if I slice into my arm because blood . . . well, blood is solid.

That's why they move furniture around the wards, why they slam the doors. They're testing if they're solid anymore. When I punch a tree sometimes and it doesn't always hurt, I get my answer.

The last days at the Wood were like the fall of an empire: the conquered people growing restless and bold, the conquerors nervous and checking their watches. Things were never too orderly at the Wood even during the good days, but those end weeks slipped into chaos: patients sleeping in rooms that weren't theirs, groups staying up all night in the day room, people missing meals and sometimes even meds. We were down to two nurses per shift and one visiting doctor, plus two psychologists. I was one, to Federovich's annoyance; everyone else had taken new jobs. I wasn't looking.

Some fifty patients remained, all of "pending status." The others had gone off to community care or Chattahoochie, and even a few off to prison. The ones still around had family issues, nobody knowing if they could be released and where. They were easy to ignore—easier, I mean, even than they had been—parked quietly in their day room chairs. Among them was Valerie, who'd murdered her boyfriend and gotten away with it.

She'd stopped coming to session and started palming her meds. She ate only breakfast. She grew thinner and more drab, the kind of person I could see only in the corner of my eye. And she'd never look at me.

Valerie was making her choice for good now, and she was showing the others how to do it, too. They sat together in their dressing gowns in the day room, staring at the television. They smoked cigarettes once an hour on the patio. They whispered amongst themselves, and they looked over their shoulders at us with grins. They'd walk together in pairs, swinging their clasped hands high to the front and then high to the back, not caring if anyone was in the way.

She was teaching them, I know now: teaching them to be invisible. They gave us no trouble, which in itself proved to be a kind of trouble in the end.

For my final determination, I thought of trying reverse psychology on Federovich, giving him something to overrule one last time. But I couldn't bring myself to write anything but "community care" on the recommended disposition line.

Federovich chose Chattahoochie for her instead.

"It's too late," he told me, closing her folder after the committee meeting. "You all but say it in your report. She's institutionalized now, shutting down. Whatever you talked about with her, whatever you did in those sessions—it didn't work. Your last patient intervention was a failure. I can't say it much bucks the pattern."

Oh, it did, I wanted to say. Valerie was never part of a pattern. But I didn't say anything, didn't mention she might even be worse than he thought. It was another of my little cowardices.

I sleep very little these days; I just don't need it. Mostly, I watch and listen, maybe waiting for those tractors to come and take me like they did Muley Graves. Valerie left all her books behind and I read that chapter every so often, trying to figure out if he was real or not, if he had a choice at all but to stay where things were firm.

Valerie and the other final fifty patients disappeared on May 2, 1998, sometime between 11:08PM and 11:14PM, if the security cameras are anything to go by. The nurse on shift left Valerie and a few others staring blankly at the television news for a quick smoke, never leaving earshot of the chuckling weatherman. She got a cold feeling, though, so she stamped out her cigarette half finished and leaned back inside. The day room was empty.

So were the rooms. And the cafeteria. And the grounds, according to the security guards as they patrolled in their whirring golf carts with melodramatic badges on the sides.

In six minutes, Valerie and the others had wordlessly made their great escape. All of the doors were locked. No one found a tunnel or a hatch. The patients left all their things behind, sometimes even the gowns in which they'd been sleeping. A few made their beds first. One left a tip for the janitor.

The cameras showed static.

Federovich was incensed: he'd taken a position at a far more respectable hospital in another state, and word that he'd lost fifty human beings with questionable legal standing didn't keep him in the job long enough even to move there. With the help of three county sheriffs' departments and the Florida Department of Law Enforcement, he tried to track them down in every direction, probably to redeem himself.

Men rumbled across the yellow grass fields in ATVs or clopped down dirt roads on horseback. Helicopters made the palmetto fronds dance and shiver. Divers checked the ponds and creeks; I told them that the old swinging rope at the boat ramp might be a good place. In the end, they found nothing.

The epiphany to which I'm addicted now is that people get less real the less you listen to them. That's what ghosts are, right? People to whom nobody listened, people lingering to find someone who will? I don't know if they're dead or alive or whatever, but I know something comes unanchored when we ignore them.

I saw it all the time in those corridors on the ward, living doctors and nurses breezing by the gowned specters standing in doorways or slumped in chairs by the TV. How many people had I walked through with nothing but a shudder? How many people were edges to me, not quite alive?

The whole world's a ghost factory. We all fade like the paint on these buildings, sometimes from too much sun, sometimes from too little. We blur and blend to the murky shades left behind when something vivid dies.

And now, except for your attention, I'm one of them.

I wasn't useless in those last days at the Wood, whatever Federovich said. I wrote the reports he demanded, affirming that none of those missing would be dangerous, for one thing. For another, I helped the security guard lower and fold the flag on the last day, wide and blue and loud with insect cries from the woods.

I drove slowly outside that gate, the second-to-last car before the state inspector. I rolled down the windows and took a road trip to a nearby town for supplies. I re-

turned by night, knifed all four of my tires in a shaded glen of pines far from the road, and came home. Here.

I'm going to stop writing now. They're coming through almost every night, the ribbon of spirits, winding between the old concrete buildings toward the woods. Always the woods, those Australian pines where it's always a little chill and cloudy, where it's quiet enough for their whispers to keep each other so slightly anchored to our world.

I'm going to stop writing now and leave this for you, whoever you are. A transient? One of those cops? The guy driving that bulldozer at Muley Graves? It doesn't matter. Your attention will come too late to make me solid, to stop me from passing through the fence to join them, but I thought someone should know. All crazy people think that, don't they?

I'm going to take her hand as best I can, and then I'm going to listen until we're both real again. Even if it takes forever. ○

Copyright © 2012 Will Ludwigsen

NEXT ISSUE

DECEMBER ISSUE

Our December issue will gift you with **Steven Popkes'** compelling new novella about a rock star brought back from retirement to reinvigorate a moribund recording industry. Under his mysterious collaborator's influence, the future of music and performance will certainly change in "Sudden, Broken, and Unexpected" ways!

ALSO IN DECEMBER

Chris Beckett transports us to an alien planet where two little children are lost in "The Caramel Forest"; **Robert Reed** reclassifies *Homo sapiens* and nothing is ever the same, especially if we continue to heed "The Pipes of Pan"; some of our stories may be pretty serious, but **Sandra McDonald's** explication of "The Black Feminist's Guide to Science Fiction Film Editing" certainly isn't—unless you think editing the whole male-patriarchy thing out of classic SF films is a bad idea; taking a decidedly long view of humanity's quest for the stars, **Ken Liu** shines a philosophical light on "The Waves"; and returning to the neighborhood where miracles have been known to occur, **Mike Resnick** investigates the strange rumors about "The Wizard of West 34th Street."

OUR EXCITING FEATURES

December features **Robert Silverberg's** Reflections on "Libraries"; **Peter Heck's** On Books; plus an array of poetry and other features you're sure to enjoy. Look for our December issue on sale at newsstands on October 2, 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!

Steven Utley is probably best known to *Asimov's* readers for his time travel tales to the Paleozoic era. *The 400-Million-Year Itch*, the first volume of Steven's Silurian tales—has just been released by Ticonderoga Publications. In a departure from the distant past, the author's newest story takes place aboard a starship and depicts an experience that can only be called . . .

SHATTERING

Steven Utley

. . . we know mainly two things—that we are here, and everything else is out there.

—B.J. Bayley

Sleep came, finally, and a dream as well, but not (as he would have expected) a dream about the things uppermost in his mind: the ship, the voyage, his wife back on Earth. He dreamed instead of a time machine. Yet it surely did have to do with everything, at least insofar as it partook of the science fiction shows he had so loved during his childhood and adolescence. Would I even *be* here, he had recently asked himself, if I hadn't grown up on those idiotic old shows? And true enough here he was, a featured player, possibly (though it was too soon to tell) even the hero, in a real-life science fiction drama. And when he awoke, he thought, That's definitely one for the dream diary.

He would get up after a while and write. The problem with trying to remember dreams and impose sense on them is that as soon as you try, you start revising and embellishing them. It's the classic Heisenbergian dilemma: if you try to observe a thing (even a dream), you affect it. But here is the dream in its general form, and if the details are add-ons, they come from the same place the dream itself did, I think. Each human brain houses a repertory company and stock sets, so that the same faces and backdrops are constantly pressed into the service of new dramas and burlesques. I keep going back to the house where my wife and I had lived when we were first married. The house is long gone in reality, but I keep going back to it, finding my old friends, acquaintances, enemies, all going through their paces, all unmarked by the passage of time; obviously the place made a profound impression. Well, my wife and I were happy there, and occasionally unhappy, too, during that period when we were knocking the rough edges off each other. I tend to wake up when I remember that the house was eventually razed to make room for condominiums (today's condos, tomorrow's slums). But, anyway, in *this* dream the cellar held a contraption that hummed like the ship and smelled of oil, of nostril-searing ozone, and there were two men with me. Of course we were scientists, explorers, and this was our time machine. ("Return with us now to those thrilling days of yesteryear when the woolly mammoth and the trilobite roamed free!") But the machine broke down when we

had gone back only a few thousand years, and we had to get out to see what the problem was. Steam came out from under the hood. It was the silliest-looking thing I've ever seen, and the sheer silliness was what snapped me back to consciousness. They say ("they"? *they*) what wakes you from dreams is that one detail that is just so wrong, even amid what are by definition surreal details, that the sleeping mind rejects it vehemently, dream over, we're outta here.

But that would be later. For the time being, he awoke to the ship's subtle but persistent throb, just at the threshold of his awareness, only to be lulled back into sleep again, into another dream, albeit one without machines. Asleep in his niche aboard the ship, he dreamed he lay awake in bed with his wife. The clock-radio played light classical wake-up music. He moved to get out of bed, but his wife held him back, touching his shoulder, his cheek, his shoulder again.

"Stay here with me."

"Time for me to go."

"No. Stay."

The music seemed to intensify, demanding to be obeyed.

"I can't stay. I do want to, but I've got to get up."

She sank back against her pillow and watched him dress. "Don't think I'm not proud of you, of what you're doing. But you're far away, and I miss you terribly, and sometimes when I'm alone here I think it's just going to go on this way forever."

"I'll come home to you as quickly as I can. Faster than light."

She turned her face from him.

"I *will* come home to you," he told her, his throat thickening, strangling him with pain.

She looked at him again and put on her brave face. Then the wake-up music faded back into a subliminal throb of machinery. The air became close. He looked up into Sutter's unhandsome but solicitous face as she stood by his bunk, leaning slightly inward over him, her hand lightly touching his shoulder. She asked, "Bad dream?"

"No," he said after a moment. "Not at all. A good one, really. I was with my wife. Back on Earth."

"It *looked* like a bad one." Sutter leaned back from the bunk. She was a big-boned, solidly fleshed woman. She would, he reflected, not for the first time, make two or maybe even three of his wife. "You were twitching and moaning when I came in. There're tears on your cheeks."

He brushed his cheeks with the back of a hand. "No, it was a nice dream. Well, bitersweet. I miss her."

"Of course. Well, you're on shift now."

He stood and stretched. "Any problems?"

Sutter's broad mouth stretched into her version of a smile. "Are you kidding?"

Perhaps (he wrote in his dream diary) I should have started at the beginning. But when was the beginning? As far back as those science fiction shows I mentioned, or even farther back, back through Einstein, Newton, back to the first dirty hairy savage who looked at the night sky and wondered what the stars were and how he could get at them? Historical context is important if you are making history.

Well, here's where the beginning ended: Somebody from the executive office called us together; after reminding us that we had been sworn to secrecy (as though we could have forgotten; we were layered in secrecy like the heart of an onion), he announced, perhaps not exactly in these words but in words to this exact effect, "Even now, even as you are about to enter one of the most rigorous and challenging training programs ever devised, a spacecraft of particular capabilities is undergoing final trials. It is to the plodding fusion ram as the fusion ram was to the Wright Flyer. It will

soon be ready for its maiden voyage. As for yourselves, you've been carefully selected from hundreds of candidates. You're the best there are, superbly qualified men and women. *Some* of you will be aboard that ship when it sets out—" he paused; he was not without a sense of drama—he clearly had rehearsed this moment—"for the stars!"

Gasps and murmurs moved through the room. There was nervous laughter from a few, applause from a few others; most of us, though, could only sit trembling with astonishment. Well, no, not so much astonishment—it wasn't as though we were just any superbly qualified men and women who had wandered in off the street; we had all known about the starship and talked about it among ourselves and dreamed about it in private for years. And we had filed into that room sensing that something major was in the offing, that we were about to become part of whatever it was, but however prepared we may have been for the eventuality, we were not quite ready for the actuality. The stars! *The stars!*

The speaker continued: "We can now create the phenomenon known as a singularity. We can achieve simultaneous states of zero volume and infinite density—and reverse the process at will! Tardyon-tachyon conversion has become reality; has in fact been reality for several years now, based on earlier findings about spacetime anomalies, et cetera. Our robot probes have traveled to the Centauri system, four and a third light-years from Sol—traveled there and *returned!* They found no habitable worlds, but they did demonstrate the awesome capabilities of the tardyon-tachyon converter. Now we, or, rather—" he smiled his well-rehearsed smile and exhibited a certain basic sense of comic timing—"you, some of you, as humankind's representatives, are going to take the next step. A big step, across that same distance, to the triple suns of Centauri!"

I can't speak for anyone else who was there, but I know I began to pray then. What I prayed was, Please let me go. Let me be aboard that ship. Let me have a part in the greatest adventure ever undertaken by members of my species.

Well, that is how I thought, that is how I saw the thing: in grand terms of human destiny. So it was right and proper that I should have pleaded thus to whatever gods I really believed in and to some I didn't. I was one of the best, a member of the first team, proven, experienced. I had as much right as anybody else. I had, in fact, more right than nearly anybody else.

Not that my wife ever disagreed with that assessment of my qualifications, not that she hadn't always been supportive of my work and proud of me, not that she wasn't a strong and strong-minded individual in her own right, but she burst into tears when I told her I had been chosen for the mission to the Centauri system. Until then everything had been for her purely theoretical: Someday my husband *may* fly to the stars; *someday*. Now that I was, in fact, in practice, going to fly to the stars, she exhibited a fearful side of herself that I had never before suspected.

I tried to allay her fears by sounding the grand theme. "We feel—how can I say this without sounding pompous? We feel *exalted*. To be sure, we feel lucky and entitled and proud all at the same time. Lucky and proud because we out of all the billions of our species have been chosen to do this amazing thing. Entitled because our lives have been shaped to this end. We're doing what we're doing, going to *the stars*, because of all the human beings who've ever lived, we're the best, the most-qualified, physically and mentally. Proud because this thing, this voyage into the unknown, is momentous. It's epic. And we do feel exalted. Our task dwarfs all previous human endeavor."

"Now," she said bitterly, "you do sound pompous."

The ship speeds on its way, and my crewmates and I settle into an undemanding routine of monitoring our craft's various functions. We exercise, recreate, eat, sleep. Our schedules and duties overlap only at the edges, as it were, so for extended peri-

ods I see no one else. Occasionally, when our schedules do coincide, we converse by intercom as we go about our business in different parts of the ship.

Posterity, please note: we are serious-minded, highly trained professionals, but we aren't grim unsmiling automatons. We tell one another jokes, we share reminiscences about our lives back on Earth. Sometimes we feel like overgrown children. Although we actually have little to do with the running of the ship, each of us has assigned tasks related to our specialties. In fact, I saw very little of the others in the beginning, and never all of them at once. Tilford sightings are still rare; usually he's crawling around in the innards of the ship, checking, unnecessarily, systems designed to run and maintain themselves, and if we hear from him at all it is as a disembodied voice. Occasionally Commander Bell invites First Officer Sutter and me to join him on the bridge during our free time. We sit among the consoles and flashing lights, our fingers hovering over the keys of the emergency manual overrides. Our faces, reflected in the gleaming surfaces, reveal expressions of almost-conspiratorial delight. *We could take over*; the reflections whisper to us, *we could see what this baby can really do*. As though the ship were a flashy model of automobile; as though we were youthful hellions who had defied all authority to commandeer it for a joy ride. But, yes, it is a joy ride.

Moving through the ship now, gliding from handhold to handhold—it is really rather more like swimming—up the hollow length of the radial axis. Pausing from time to time to pull out an access panel and admire the circuits and things. I have no idea what I'm looking at—this is Tilford the systems engineer's job, not mine, and probably he wouldn't appreciate my looking over his handiwork, but how is he to know, since I haven't laid eyes on him since the start of the voyage? Yet I feel compelled to do this. Why? Why not? Just checking.

I go all the way up to the dorsal observation blister. There's nothing to be seen there—it's as though the clear bubble enclosing the observation pit were painted black. The instruments (were I to consult them) insist that the hull lights are functioning properly; these should be visible from the blister. But there's not the faintest glimmer in the darkness. The blister bulges out against a nothingness so complete as to make deep intergalactic space seem as dense as concrete by comparison.

Greater minds than mine have pondered its nature. I distinctly recall one of them expressing itself thusly, "I think hyperspace must be a very small place. Smaller than our own cosmos by far. How would you be able to get anywhere if it weren't?" Perhaps; I'm no philosopher, my concerns are purely phenomenological. What (I ask myself) if the instruments are lying? And not just the instruments that say the hull lights are working, but all of them? What if the ship isn't really traveling at all? What if it's just hanging suspended in the void or aimlessly drifting, or in any case not proceeding on course? How does one plot a course through nowhere?

And what if the ship's clocks are malfunctioning? What if they're just giving me readouts that mean nothing? How can I know whether the ship is overdue to emerge into normal space?

Oh, God, as though the human mind were capable of regarding any of this as normal.

They warned us that something like this could happen. It does follow. It does seem logical. Enter a realm where objective time (Time) doesn't exist, and subjective time is bound to become a little fragmented. I was thirty-one years old when the *Stephen W. Hawking* left lunar orbit and began accelerating outward from Sol. I have no idea how old I am now. I have no idea what time it is. I have no idea if it's possible to know anything any more.

But, I decided at length (how long? who knows?), No, everything within the ship is going as it ought to go, and as for everything outside the ship, well, what *is* there outside the ship to cause any problems?

Nevertheless, I spend hours in the observation blister, peering out at the darkness, straining my eyes for a sign that there is something out there in that emptiness. Light doesn't travel here, but other things may. Every now and then I awaken from dreams in which I have seen something outside, something that peers in through the bubble and watches me, something that waits hungrily, perhaps runs strange smoky fingers or tentacles, who knows what, over the ship's smooth skin and through the airlock bay in search of some fine seam through which to ooze further into my world. In and after such dreams, I hide in the depths of the ship, as far from the airlock bay and the observation blister as it's possible for me to be, with all intervening hatches closed and dogged. This isn't rational, Sutter tells me, and I couldn't agree more. Nevertheless, I hide, and keep my eyes closed the whole time. One becomes invisible when one's eyes are closed.

Within the ship, of course, I'm under observation by the ship itself. There are monitoring devices everywhere, activated by heat, sound, motion: step into a compartment, breathe, exist, they switch themselves on. Everything we do to pass the time between sleep-shifts, constructive or otherwise, is recorded. A precautionary measure, they explained to us back on Earth, in case something should go wrong. Not that anything *can* go wrong, of course, the odds against that are so, ha ha, astronomical, what with backups to the backups to the backup system. The robot probes have helped us iron out the bugs, test animals have returned alive and unharmed, we're absolutely convinced that there's almost nothing to riding this big baby (that's how they spoke of the ship, "riding this big baby") to the Centauri system and back. You may even become bored along the way, ha ha. But *if* something were to happen to the crew, some one-in-a-trillion accident, the ship could find its way home on autopilot, and there would at least be the data to pore over for causes, reasons, explanations. So the next expedition wouldn't have to deal with the same problems.

Problems? Well, yes, there have been a few problems.

Well, one big one I can think of.

The unconquerable human spirit has met its match out here.

I dream about the ship and hear it shriek and sing as it passes, a shadow, a specter, a wisp of blue-gray smoke, into the nothingness, into the middle of nowhere. I dream that the nothingness convulses as though in agony. How is that possible? Yet it happens. Soft tentacles flex, extend, coil about the invader. The nothingness has been penetrated before, but only by the cold unliving robot probes. The nothingness is aware of a difference this time, it senses the heat and light and life within the *Stephen W. Hawking*. Tentacles reach down into the ship and move about unseen, touch the sleeping minds of the soft things it finds. I dream the blackness assaults the unconscious first officer. Sutter twitches in her casket, her eyes flutter madly behind their lids. She tries to claw her way up from sleep. Sutter, yes, would resist fiercely; the darkness would be repulsed, at least at first. Commander Bell is next; distressingly, he doesn't try to fight or try to escape; he whimpers and wets himself. Who knew that the man wasn't hard all the way through? Next it's Tilford's turn. Tilford, too, whimpers as he is violated, curls into a fetal position, but then he accepts his fate, awakens, his fingers itching for the reassuring cool slick feel of one of the heavier tools in his vast collection.

And I, all I can do as one of the tentacles embraces me, as darkness pours into me, is wish that I had listened to my wife when she begged me not to come here. I had awakened to her touch, no words had to be spoken; unable to recall when or how it must have happened, I knew nonetheless that we had come to terms with each other and could now, if we truly wished it, make our peace. We kissed, cupped our palms

to each other's chest so that I again marveled at the contrast of my white hand against her chocolate flesh—began to make a more deeply felt love than any we had ever managed back on Earth. Afterward, we lay with arms and legs entwined and she said, You don't have to be here, you know, you never had to be here.

But I did, I said.

No.

Yes. It was important to me to be here. Understand, please understand, this is what I wanted, what we all wanted. We were, all four of us, professionals, volunteers, and we saw the necessity of this. The inevitability of it. We truly believed that it is the destiny of humankind to go out and spread itself among the stars.

But no longer?

I said nothing.

It's too dark out here, she said. Effort counts for nothing out here. It's too big and lonely and empty and I think there may be something here that doesn't like you. She tenderly stroked my cheek. Come home, my love. Please come home.

I am coming home. As fast as ever I can. Faster than light.

That made her smile. Side by side in my narrow bunk we somehow slept. She was gone when I awoke. I arose and crossed the cold silvery room to cry beside Sutter, my tears freezing on my cheeks. Stretched out on her back beside Commander Bell she waits patiently until I've finished crying. She lets me talk. My breath comes out white mist as I argue my case: unnormal space isn't a place but a thing, a being, and it doesn't like me.

Sutter laughs as best she can. You're seriously suggesting that the void is a conscious, malevolent entity?

Or at least a conscious, curious entity. I'm saying it's a definite possibility. We know only what the robot probes told us about the void and that's not much. We don't know what's really out there.

Nothing is out there. Literally nothing. Zero to the infinite power. There's nothing out there that can chew up people's minds. There isn't even an *out there* out there. If our mission fails, we have only *ourselves* to blame.

No, you're wrong, you're wrong. If I'm right, we can forget about the stars. Merely to reach for them means trespassing in a place, a realm, a plane of being, that's beyond our ability to comprehend or endure. We weren't designed for this kind of experience. We can't deal with it. I'll tell them when I get back. And I am going to get back, I'm going to get home to Earth and walk off this ship under my own power.

Sutter laughs unpleasantly. Don't tell me you're thinking of coming out of this a hero!

Why not? All I really care is that I get to go home. I don't care about being a hero, I just want out of this place and off this ship. And out of the agency, too. My wife's on Earth, and I want to see her again.

She left you. She didn't want any part of this any more, remember? Why should she have changed her mind?

Because I've changed mine. She left me because I volunteered for this mission. She said, You almost died the last time, how can you face it again? And I said, Because I believe it has to be faced. But not now. Not any more. I don't believe it can be faced.

At last screwing up my courage, I enter the observation blister. I paint little stars on the inner surface of the blister to create the illusion of something familiar outside. The blister turns into a cozy medieval cosmos of fixed celestial objects; I am at the center of everything.

Somewhere deep within the ship Tilford laughs and says, You're pathetic.

Yes, I agree, this is pathetic. Yet I have to laugh.

After I have laughed until my face is slimy with tears, I sit down. My terrible awareness of the blackness beyond the blister, the emptiness, has settled too deeply into my flesh to be exorcised by mere painted stars.

I have the dreams. I have far too many of the dreams.

I dream of the ship and it is empty empty empty empty. I dream of the void, the monster: its curiosity (hunger?) (thirst?) (chaotic maliciousness?) satisfied, or its pain relieved, its enemies vanquished, its prize secured—its unknowable desire fulfilled—the nothingness enfolds the ship in its tentacles like a starfish consuming an oyster and settles itself to digest.

I awaken screaming and my screams go echoing throughout the ship and up from the cold silvery room comes Sutter's cry, For God's sake go back to sleep, you trying to wake the dead? Come back to bed. We're all supposed to stay here in the freezers.

What the hell, I ask, do we need freezers for aboard a faster-than-light ship? (This, he noted afterward in his diary, was the *wrong* detail that finally ended the dream, though its wrongness took just long enough to register for him and Sutter to have a final exchange.)

There is, Sutter replies, no faster-than-light ship, you idiot, no tachyon-tardyon converter—just a conventional fusion ram plodding through space. You woke up for some reason, and now you're carrying on like a crazy person.

And I call back to her, Well, it doesn't take much to make a person go crazy out here.

And the ship speeds on through the darkness, who knows, perhaps forever. ○

Copyright © 2012 Steven Utley

Variations on Twinkle Twinkle Little Star (or something like that)



1. Where Wolf

Listen, my friend. I know what isn't a pillow when I see one and I'm not taking a single clo off in this room let alone getting into bed. So give it up.

2. Weird Wolf

The Vietnamese lady is leaning intently over your paw, finishing your French nails. Bits of fur are floating in the foot bath.

3. We're Wolf

That's us, bad boy, silhouetted on the hill behind your house. Be nice, or else.

4. Word Wolf

n. 1) a truly unfortunate choice of Scrabble opponent 2) someone who, if you say "Mokie and me like to sniff armpits together" or "liverfluke at it's best" leaves long red scratches down your arm 3) someone who, on cold mornings, is never at a loss for rime

5. Ward Wolf

In the night-lit hospital, a sister, black-and-gray hairs sticking through her wimple, clicks in to check on Granny. Check? Well, not exactly check.

6. Whirr Wolf

A pest with wings who meets his petite amie at you and they suck your blood through a straw.

7. Wart Wolf

The little hairy mound on your arm that you stroke when you're thinking.

—Lola Haskins



Copyright © 2012 Lola Haskins

Jay Lake lives in Portland, Oregon, where he works on numerous writing and editing projects. His 2012/2013 books are *Kalimpura* (Tor) and *Love in the Time of Metal and Flesh* (Prime). His short fiction appears regularly in literary and genre markets worldwide. Jay is a past winner of the John W. Campbell Award for Best New Writer, and a multiple nominee for the Hugo and World Fantasy Awards. The author can be reached through his blog at jlake.com. Jay's first story for us since October/November 2005 treats us to a far-future tale of intrigue, daring acts of defiance, and the sudden revelation that . . .

THE STARS DO NOT LIE

Jay Lake

In the beginnings, the Increate did reach down into the world and where They laid Their hand was all life touched and blossomed and brought forth from water, fire, earth and air. In eight gardens were the Increate's children raised, each to have dominion over one of the eight points of the Earth. The Increate gave to men Their will, Their word, and Their love. These we Their children have carried forward into the opening of the world down all the years of men since those first days.

—Librum Vita, Beginnings 1:1-4;

being the Book of Life and word entire of the Increate

Morgan Abutti; B.Sc. Bio.; M.Sc. Arch.; Ph.D. Astr. & Nat, Sci.; 4th degree Thalassocrete; Member, Planetary Society; and Associate Fellow of the New Garaden Institute, stared at the map that covered the interior wall of his tiny office in the Institute's substantial brownstone in downtown Highpassage. The new electrictricks were still being installed by brawny, nimble-fingered men of crafty purpose who often smelled a bit of smoke and burnt cloth. Thus his view was dominated by a flickering quality of light that would have done justice to a smoldering hearth, or a wandering planet low in the pre-dawn sky. The gaslamp men were complaining of the innovations, demonstrating under Lateran banners each morning down by the Thalassojustity Palace in their unruly droves.

He despised the rudeness of the laboring classes. Almost to a man, they were pale-faced fools who expected something for nothing, as if simply picking up a wrench could grant a man worth.

Turning his attentions away from the larger issues of political economy and surplus value, he focused once more on history.

Or religion.

Honestly, Morgan was never quite certain of the difference any more.

Judging from the notes and diagrams limned up and down the side of the wide rosewood panel in their charmingly archaic style, the map had been painted about a century earlier for some long-dead theohistoriographer. The Eight Gardens of the Increate were called out in tiny citrons that somehow had survived the intervening years without being looted by hungry servants or thirsty undergraduates. Morgan traced his hand over the map, fingers sliding across the pitted patina of varnish and oil soap marking the attentions of generations of charwomen.

Euftrat.

Quathlamba.

Ganj.

Manju.

Wy'east.

Tunsa.

Antiskuna.

Cycladia.

The homes of man. Archaeological science was clear enough. Thanks to the work of natural scientists of the past century, so was the ethnography. The Increate had placed the human race upon this Earth. That was absolutely clear. Just as the priests of the Lateran had always taught, nothing of humanity was older than the villages of the Gardens of the Increate.

Nothing.

Sick at heart, Morgan turned back to his photographic plates, their silver salts bearing indubitable evidence of the ephemeral nature of such faith in the Increate.

The stars do not lie.

"Gentlemen of the Planetary Society . . ." Morgan Abutti let his voice trail off a moment. His next words, once uttered, could never be taken back. Not before this august assemblage of the greatest scientific minds of the modern era. He drew in a deep breath and plunged recklessly onward. "On examination of considerable evidence from fields as varied as paleontology, archaeology, and astronomy, I have been compelled to confront the distinct likelihood that we, the human race, are not of this world."

He paused to give the audience a moment to consider the proposition. The racket of the city of Highpassage echoed from outside the Society's Plenary Hall—steam whistles, horses, motorcars, the grumble of the new diesel engines powering the latest generations of airships. The seven hundred faces staring at him included a scattering of the paler-skinned northern folk, who were finally entering academe and the sciences thanks to the same progressive policies that had helped pave Morgan's own way to the exclusive University of Highpassage. That women had been allowed to study a generation earlier had cracked open the door that later admitted the traditionally inferior white race.

The world was growing more open-minded by the decade in spite of itself. Were his colleagues in the Planetary Society ready for this, his grand conclusion?

What he'd thought to be shocked silence degraded into murmuring, muttering, even outright laughter in a few corners. Some delegates rose from their seats, ready to move onward to more fruitful pursuits. Others struck up conversations with their seatmates, or commenced making notes, in some cases with deliberate ostentation.

Morgan had lost the audience, waiting for their reaction to his news.

"I have . . . have assembled a précis of the evidence . . ." he began, but his voice trailed off. A moment later Doctor Professor the Revered Lucan Matroit, Secretary-General of the Planetary Society, plucked at Morgan's sleeve.

"My deepest regrets, ah . . . Doctor Abutti," Lucan said quietly, his tone as formal and disinterested as if the two of them had never met before. "The Society thanks you for your contributions." He quite effectively twisted Morgan's arm and propelled him toward the heavy maroon velvet curtains marking stage left.

"Dear ones," Lucan called out to the audience, which immediately stilled its unrest at his piercing voice. "Let us now offer praise to the Increate, as redress to Them for the caprice and irresponsibilities of free will . . ."

Morgan did not hear the rest of the invocative prayer. Two of the Society's burly porters—like most of their fellows, former Thalassojustity Marines—seized him by the upper arms, shoved his despatch case into his hands, jammed his bowler hat upon his head, and escorted him to a service entrance from which he was summarily ejected into a dung-spattered alley under the doleful gaze of a brace of hinnies hitched to a rag man's cart.

At least they had not thrown him bodily into the muck. No, even that embarrassment had been trumped with a few mere words from Lucan Matroit.

Gathering the shreds of his dignity, Morgan resolved to retreat to the shelter of his office at the New Garaden Institute. The Avenida Tram line ran past the Plenary Hall, and would deposit him within two blocks of his destination.

Waiting for the next street car to arrive, Morgan noticed one of the porters watching him. The man leaned on a pillar of the rococo façade of the Plenary Hall, smoking a fat cigar and making no effort to hide himself or pretend interest in anything but Morgan. After adjusting his collar tabs and fussing with his shirt front, Morgan held his leather case to his chest as if it could armor him, and waited among the ladies' maids and bankers' daughters for the tram.

Riding among a crowd consisting mostly of servants summoned memories that Morgan had expended some effort setting aside. The human odor of painfully starched cleanliness and faint malnutrition within the tram was far too reminiscent of his own childhood. He stared out at the streets of Highpassage, ignoring the people around him with their muted gossip, and wondered what he'd been about.

Seeking truth, *science*, had been his path out of ungenteel poverty. That the good universities admitted scholarship boys at all was still a strange novelty when Morgan had first enrolled. He'd studied beyond reason to qualify, understanding perfectly clearly he would have to do twice as well to be thought half as good as someone of monied birth and good family.

Even now, with his doctorate and his post at the New Garaden Institute, far too few listened with ears of reason. People only saw and heard what they wished. If he'd been a titled scion of some ancient house, Matroit would not have been able to rush him out of the Planetary Society.

The most important discovery of the modern age was being crushed by pettiness. No different from the rough back alley games of his youth. The strongest ones, the ones with the most friends, always prevailed.

Head pressed against the glass, feeling the shudder of the tracks through the tram's iron wheels, Morgan almost wept to realize the world's unfairness had no end. He could never be good enough, never have possession of enough facts, to surpass that barrier.

The New Garaden Institute's offices occupied the majority of an elegant building that had been designed and constructed during the height of the Neoclassical Revival at the beginning of the previous century. It had been one of the first structures in Highpassage built with the intention of being gas lit and centrally heated. Plumbing stacks, gas valve closets, ventilation shafts for the introduction of fresh air to the

innermost precincts of the structure—the building had been a truly visionary project from the century’s most famous architect, Kingdom Obasa. A brilliant Iberiard educated outside the top-ranked university system, Obasa had very much gone his own way in both engineering and aesthetics. As a result, for all of its brownstone glory, the New Garaden Institute nonetheless resembled nothing so much as a cathedral that had been partially melted.

The recent addition of an array of rooftop electrickal signaling devices for the propagation and reception of radio waves had done nothing to alleviate the building’s strangeness.

Stung, embittered, saddened by his setback, but firmly in command of himself once more, Morgan stumbled through the vestibule into the receiving parlor only to find the Desk Porter in close consultation with a pair of on-duty Thalassojustity Marines. His view of the wide expanse of maroon carpet, delicate settees, and brass rails telescoped into a horrified vision of another ejection from his barely attained positions of privilege. The Marines’ formal red tunics contrasted oddly with the firearms borne by both of the large men. While Morgan had little familiarity with weapons, even he could see that these were not the long-barreled, wooden-stocked rifles carried on parade, but rather short, snub-nosed bits of machined steel slung tight on well-worn leather straps. Businesslike tools of violence, in other words.

“Ah, Dr. Abutti,” one of the Marines said, even before he’d turned from the Desk Porter’s podium. The man’s purple-blue eyes were like grapes squeezed into the unnaturally pale, ruddy flesh of his face.

Morgan was impressed for about three beats, until he realized the Marine had seen his reflection in the glassed-over painting of the Battle of Mino Harbor behind the podium.

“Indeed. I do not believe we have been introduced.” Morgan glanced pointedly at the Desk Porter. The Desk Porter—was his name Philas? Phelps?—just as pointedly failed to meet Morgan’s eye.

“No need, sir. You’re to come with us. Thalassojustity business. You’re being called before the Lesser Bench, sir.” The Marine favored Morgan with a warm smile that did not meet the eyes. His fellow favored Morgan with the blank stare of a gun barrel casually swung to bear.

“Now?” Morgan asked with an involuntary swallow.

“Now.” And after a moment too long, “Sir.”

“I may be some time,” Morgan told the Desk Porter.

“I’ll make a note, Doctor.” This time he did raise his eyes with a faint flash of malice.

*When first they hanged the pirate Black upon the beach
Little did the captains trow what they set upon the sea
Neither haunt nor hollow, down the long years between
Justice for the open waves, and a fire upon the deep
—Lords of the Horizon, Ebenstone (trad. attrib.)*

By sharp contrast with the New Garaden Institute, the Thalassojustity Palace was arguably the oldest building in Highpassage. It was certainly the oldest building still in regular use. The legal and sovereign relationship between the Thalassojustity and its host city was ambiguous, strained by two millennia and more of precedent, treaty, and occasional open warfare.

In other words, arguably not in Highpassage proper. The Increate, as always, manifested Their power on the side of the big battalions.

Morgan Abutti was treated to a close view of the Pirate’s Steps, the ancient risers that led to the formal portico. A temple of the sea, the palace had been looking out

across the Attik Main for over a third of recorded history. He knew the building well—impossible not to, as a fourth-degree Thalassocrete. The initiation ceremonies stressed history above all else.

Normally he used a discreet side door for the alternate Thursday lodge meetings. Only criminals and heads of state paraded up the Pirate's Steps. He knew which he wasn't.

"What have I done?" he asked of the two Marines for at least the sixth time. For at least the sixth time, they gave him no answer. Even the false smiles had vanished, to be replaced by a firm grip on each arm and the banging of one Marine's firearm against Morgan's hip.

At the top of the steps, he was hoisted around and faced outward, so that he stared at the bottle-green waters of the Attik Main. Shipping crowded the waves, as always at Highpassage, one of the busiest ports in the world. Great iron steamers from the yards at Urartu far to the east passed above dish-prowed fishing boats whose lines had not changed in a thousand years of beachfront ship building. A white-hulled Thalassojustity cutter cruised past barges and scows waiting for their dock pilots. Overhead, a pair of the new Iberiard dirigibles beat hard against the wind, engines straining as they slung urgent deck cargo to landfall from a vessel waiting too long for a slip.

Highpassage, crossroads of the world.

But the message wasn't that, Morgan knew. He'd sat through too many initiations not to see the point the Marines were making. The hanging tree, the ultimate symbol of both justice and power across the world's maritime extents, stood on the beach below him, memorialized as a granite monument to the largely legendary death of the largely legendary pirate Black. That angry court of captains and bosuns had met on a firelit beach in the teeth of a rising storm over two thousand years past to take justice in their own hands after the King of Highpassage had declined to act. The sailors had broken Black, so the story ran, and unintentionally founded a line of power that controlled the high seas to this day, serving as a pragmatic secular counterbalance to the widespread spiritual and temporal influence of the Lateran Church.

Drawing on that tradition to this day, justice, as untempered by mercy as the sea itself, was the purpose of the Thalassocretes.

"You're a man of keen wit and insight," said the pale Marine in a surprisingly soft tone, to Morgan's surprise.

"I am likely blind to much in this life." He felt as if he were uttering his last words. "Science is both my mistress and my muse. But even I can still see history."

Like estranged lovers met on a sidewalk, the moment swiftly passed. A rough adversity resumed. Morgan found himself pushed within, toward the upper halls and the quiet, incense-reeking rooms of the Lesser and Greater Benches of the Thalassojustity.

The Most Revered Bilious F. Quinx; B.Th. Rhet.; M.Th. Hist. & Rit.; Th.D. Hist. & Rit.; 32nd degree Thalassocrete; and master of the Increate's Consistory Office for Preservation of the Faith Against Error and Heresy, watched carefully as His Holiness Lamboine XXII paged through one of the *prohibitor*a from the Consistory's most confidential library.

The two of them were alone—unusually so, given His Holiness' nigh everpresent retinue—in the aerie of the Matachin Tower of the Lateran Palace. This room was Quinx' private study and retreat, and also where his most confidential meetings were held. The latter was due to the architecture of the tower walls that rendered the usual methods of ecclesiastical eavesdropping futile.

Quinx, in both his official capacity and from his well-developed personal sense of curiosity, worried about the possibility of spying via the new electricks. For that rea-

son, he had thus far forbidden any lights or wires to be installed in the Matachin Tower. He preferred instead to rely on traditional oil lamps tended by traditional acolytes who damned well knew to keep their ears shut. And besides which who wore nubble-soled slippers so they could not sneak.

Privacy was both a commodity and a precious resource within these walls of the Increate's highest house. Quinx made it his business to control the available privacy as much as possible.

Still, having His Holiness leaf so casually through a *prohibitorum* was enough to give a thoughtful man a galloping case of the hives.

Lamboine—who had once been called Ion when they were boys together in a mountain village plentifully far away from the Holy Precincts—raised his eyes from the page. “There is nothing in this world I am not entitled to know, Bili.”

“You understand me perfectly as always.”

Those words summoned a small, sad smile, one that Quinx also remembered far too well from a youth lost six decades past. “That is why I am the Gatekeeper and you are my hound,” Lamboine replied. As ever, his voice was preternaturally patient. “I have always wondered why our friends among the Thalassocretes have never sought to place a man on the Footstool of the Increate.”

Ion was one of the few remaining alive who could provoke Quinx to unthinking response. “Do you honestly suppose they never have done so? I am numbered among their rolls, after all.”

“They think you their spy in the house of the Increate.” Another small smile. “In any event, I should think I would know if one of them had ever held my throne. My opinion is that they have never felt a need to. Truth is a strange commodity.”

“Much like privacy,” Quinx almost whispered, echoing his own, earlier thoughts.

The Gatekeeper shook his head. “Privacy is just a special case of truth, or its withholding. This . . .” His hand, palsied with the infirmity of age that had yet to overcome Quinx, swept over the open book. “This is truth of a different sort.”

“No, Your Holiness. It is not. It is only the Thalassocretes’ story. We have the Increate and the evidence on our side.”

“What makes you think there are sides, Bili?”

In that moment, Quinx saw Lamboine’s death. Flesh stretched tight and luminous across his face, the deep, natural brown of his skin paling to the color of milk in coffee, his eyes brittle as cracked opals. The man’s fires were guttering. “There are always sides, Ion. That has been my role these long years here, preserving and defending your side.” He paused a moment, then added. “Our side.”

The Gatekeeper waited several measures of silence too long for comfort before replying. “I am glad you did not claim a side for the Increate. They are all, and They are everything.”

“Of course.” Quinx bowed his head.

A trembling hand descended in surprising blessing. Quinx had not even realized that the Gatekeeper had set the book down. “Do not rely too much on evidence, my oldest friend. It has a way of turning against you in time. Proof can change with circumstance. Faith is the rock upon which we must always build.”

Quinx remained bowed until the Gatekeeper had departed, shuffling far enough down the spiral stairs to summon his attendants, who bore him away on a wave of soft whispers and perfume. After a time, he rose and set some incense alight before kneeling on a bolster with a small ricepaper copy of *Librum Vita* in his grip. It had been made in distant Sind, something of a curiosity, copied out in a firm hand by a man wielding a brush comprised of only a single hair. Act of faith? Dedication to art?

It did not matter. The Increate’s words fit in the palm of Quinx’ hands. From there, he drew comfort as surely as he had from his mother’s grasp once so long ago.

Or Ion's.

The relief of prayer drew him in then, toward the dim inner light that always filled Bilious Quinx when he sought the Increate in honest, faithful silence with open heart and empty thoughts.

Much later he trimmed the wicks in his office and lit the night lamp. Darkness had descended outside, the evening breeze bearing the itching scent of pollen and spring chill off the mountains to the east and south. Quinx opened his windows, their red glazing parted to let the tepid lamplight spill out and compete with the distant stars.

The Lateran Palace had its own observatories, of course. Someone must demarcate the lines of the world. Even the almighty Thalassojustice had in the past been willing to leave the skies to the Church. The irony of that was not lost on Quinx in these late days. He was certain it was no less lost on the Thalassocretes in Highpassage and elsewhere.

No matter his own initiation into their ranks; the Thalassojustice had always known who and what Quinx was, and whose creature he had been, body and soul. That Ion was dying now changed nothing of Quinx' loyalties.

He considered the *prohibitorum*, lying so carelessly open where the Gatekeeper had left it on one of the round room's several curve-backed writing desks. The book was open to a map of the Garden of Ganj, annotated only as the heretics of the Thalassojustice would bother to do. This particular volume was a first printing of the *Revised Standard Survey, Th. 1907*. Almost a hundred years old, and their color plates a century past were as good as anything the Lateran presses could manage even today.

Ion had left a scrap tucked in the center crease. Quinx plucked it out, his own hand trembling. It was a short note that must have been written before the Gatekeeper had come up to see him, in Ion's lifelong careful copperplate hand, rendered edgy and strange by the exigencies of age.

Dearest—

Do not let them elect you to the Gatekeeper's throne after me. And do not be afraid of what may be proven. Farewell. I regret that I must go before.

Always yours.

So he had seen truly into the Gatekeeper's face. And *Dearest*. They had not used that word between them in over five decades. Quinx carefully burned the note, then stirred the ashes. After that he trimmed his night lamp back to darkness, closed and sealed the *prohibitorum* with a black ribbon, and took a chair by one of the open casements to watch the stars wheel slowly until just after midnight when the Lateran tower bells began to ring their death knells.

When the great, iron bell of the Algefific Tower tolled last and slowest of all, his tears finally flowed.

Love is the sin that will not be denied.

—*Librum Vita, Wisdoms 7:23*;

being the Book of Life and word entire of the
Increate

The funerary rites for His Holiness Lamboine XXII began at Matins as the first flickering sweep of dawn glowed like coals in the eastern sky. In his role as Preserver of the Faith, and therefore fourth-ranking priest in the Lateran hierarchy, Quinx could have insisted on being the celebrant. The two men above him were already closeted deep in the electoral politics of the Primacy, those same delegates from

around the world having received the Gatekeeper's death notice by telelocutor for the first time in Church history.

Quinx had a sick feeling that he would soon grow very weary of that last thought: *the first time in history*.

Instead of celebrating, he chose to attend as a congregant, a man, a priest, a mourner. The Deacon of the Lateran High Chapel led the first round of services. He was a young man with a perpetually surprised expression, now properly dressed in a sweeping black cassock embroidered in gold and silver thread, though he'd begun the services in a nightshirt before being rescued by an acolyte with the right set of chamber keys.

Incense, again, and the familiar tones of the chimes indicating the order of service. As the deacon struck them in turn, Quinx tried to put the memory of the tower bells away. Not to forget, for nothing could be forgotten by a man in his office, but to be set aside.

Prayer was a valve opened to the comfort of the Increate, from Whom all things sprang and to Whom all things flowed. There were times when he could understand the attraction of the Aquatist Heresies, for all that their pernicious metaphors had nearly fatally tangled the Lateran Church in its own liturgies. There were times when he wondered what the Increate truly intended, as if They would speak directly to him in response. There were times when quiet refuge was the greatest gift They could give him. Quinx let the deacon's droning voice lead him from grief to some other place where his cares could wait on the attentions of his heart.

Somewhere in memory, two young men on a hillside scattered with sheep, goats, and bright blue flowers laughed under a summer sky and spoke together of all things great and small.

When fingers touched his shoulder, Quinx was briefly startled. He'd gone so far into meditation that he'd lost himself in the well-worn rituals of the service. *Become the liturgy*, as they used to say in seminary.

He looked around. Brother Kurts, his lead investigator, stood as always just a bit too close.

"Sir," the monk growled. A big man, one of those pale northerners who somehow never seemed to advance far in the Church hierarchy, Kurts carried far more than his own weight. The man was a boulder in a snowfield. Here, in the midst of service, his blocky frame and the dark brown rough-spun habit of his Sibellian Order made him a brutal shout against the soaring of the silk-robed choir who must have filed in to the loft while Quinx had been meditating.

"Kurts?"

"You must come, sir. We have an urgent dispatch from Highpassage. By air."

"By air?" Briefly, Quinx felt stupid—an unusual sensation for him. Of late, matters of great urgency were transmitted via telelocutor. His own office had approved such innovation only three years earlier, well after the undersea cable had been laid between Highpassage and the Lateran, crossing beneath the Attik Main. Matters of great secrecy were handled quite differently, and always with utmost discretion.

Sending an airship across the sea the night of His Holiness' death was tantamount to lighting a flare.

"By air, sir," Kurts confirmed. "Matroit dispatched the messenger."

Matroit. The man was the very model of probity, and no more likely to panic than he was to fly to the moon. But the timing of the thing . . . It stank of politics. Quinx felt briefly ill. "Was the vessel a Thalassojustity airship?"

The monk shook his head. "A racing yacht. I understand it was put about to have been sent on a dare by some of the young wastrels of the city."

Not an utterly unreasonable cover story, Quinx had to admit, for all that such defiance of the Thalassojustity was outrageous. *Outrageous* served as the stock in trade of a certain set in Highpassage. He set aside for later consideration the issue of how Lucan Matroit was connected to that set in the first place. For now, a dispatch this urgent would be a distraction to his grieving heart.

How welcome or unwelcome remained to be seen.

He did not bother to ask if Kurts had read it. The man would not have done so. In his entire life, Quinx had only ever trusted two men utterly. The first of those had passed on into the hands of the Increate last night. The other was here before him. Whatever Kurts' many flaws, the monk was loyal to the bone. *Blood and vows, vows and blood*, as they used to say.

Quinx gathered the skirts of his cassock and rose from the prayer bench. He gave an approving nod to the deacon, now well into the third iteration of the funerary mass and looking distinctly tired, before withdrawing from the High Chapel in the wake of his man.

They closeted themselves in a tiny dining room from which Quinx had by virtue of his office ruthlessly evicted four hungry priests. Plates of plain eggs and blackbread toast still steamed. He considered the contents of the envelope presented by Kurts. The seal had been genuine enough, to the best of Quinx' rather well sharpened ability to determine. For something that had come rushing over hundreds of miles of open water, the letter within was sufficiently sparse as to seem laughable. A single sheet of crème-colored Planetary Society paper, with that slick finish favored by the very wealthy, though it would take few inks. A rushed hand, script rather than copperplate, the pigments a curious green that was one of Matroit's affectations. And only a very few words indeed.

But such dangerous ones.

It was dated the previous day though no time was given. He realized on reflection that this missive must have been written before Ion's death could have been known, just by judging the miles the message had flown even at the speed of the fastest air-racing yacht.

Revered—

The Externalist heresy was proclaimed again today in the Plenary Hall. To my surprise, the Thalassocretes have taken custody of the young man in question, but I have secured his work for the nonce. There is a possibility of empirical evidence.

M.

Evidence.

Proof.

Had Ion known last night this letter was coming, known as he was dying? Or was it simply that now happened to be the world's time for such trials? The cloying smell of cooling eggs provided no answer.

Still, Quinx felt a swift trip to Highpassage would be in order. With their profound challenge to the roots of Lateran doctrine, Externalists were a far more troublesome heresy than the dissenters such as the Machinists or the Originalists. Putting paid to this renewed outbreak of Externalism before it had a chance to establish and multiply was an utmost priority. And that errand in turn would keep him safely away from the deliberations of the Assemblage of Primates, who would surely be meeting *in camera* the moment the Gatekeeper's body had been sufficiently blessed. Death was an unfortunate pause in events, but politics continued forever.

There was a young man to see, and a Thalassojustity to face down. *Again.*

Why people insisted on resisting the obvious and holy truths of the Increate was one of those mysteries of free will that a priest could spend his lifetime contemplating without any success. If all the saints of ancient days could not answer such a question, surely Bilious Quinx would be no wiser.

Questions he could not answer, but problems he could solve.

“Brother Kurts . . .”

“Sir?”

“Does the airship pilot perhaps await our pleasure?”

There was the briefest pause, then the slightest tone of satisfaction in the monk’s reply. “I have already made certain of it, sir.”

The advantages of the reflecting telescope over the refracting telescope cannot be overstated, and should be obvious to any thinking man. While the great refractors of the past century have multiplied our understanding of the Increate’s work amidst the heavens, the practical exigencies of glass-making, gravity, and the engineering arts limit the refracting mirrors to less than fifty inches of diameter. Advances in the philosophy of the reflecting telescope have produced designs by such luminaries as Kingdom Obasa’s son and successor, Brunel, for mirrors of a hundred inches or greater! Even now, the Planetary Society raises a subscription for such a heavenly monster to be placed upon Mount Sysiphe north of Highpassage, that we might enumerate the craters of the moon and count the colors of the stars to better understand the glories of Creation. A true union of Science and Faith can only prosper from such noble endeavors.

—Editorial in the *Highpassage Argus-Intelligencer*,
November 2nd, H.3123, Th.1997, L.6011

“Lesser Bench” was a misnomer. Morgan knew that. *Everybody* knew that. The Greater Bench met only in solemn conclave on the beach to hear capital cases, and certain classes of piracy accusations. Everything else that transpired in the Thalassojustity took place under the purview of the Lesser Bench.

The question was which of those benches.

The two Marines dragged Morgan into the interior of the Thalassojustity Palace. The main nave soared to the roof, some eighty feet above, and was lined with enormous statues of sea captains and Thalassocretes through the ages. The joke ran that the bodies remained the same and the heads were switched from time to time. Whatever the truth, the sculpture represented one of the greatest troves of Classical art in the world, with continuous provenance stretching back well before the onset of consistent recordkeeping.

Glorious, strange, and too large for the world—that was the majesty of the Thalassojustity, encapsulated in the dialectic of art.

At the moment, Morgan was feeling inglorious, ordinary, and far too small. Even the marble flags here were oversized, designed to intimidate.

He was scooted a bit too fast past the massive altarpiece at the far end of the nave, through a bronze door wrought with an overly detailed relief of some long-forgotten naval battle, and into a far more ordinary hallway that could have been found in any reasonably modern commercial building in Highpassage. Electricks flickered overhead, giving a reddish-yellow cast to the light. Entrances lining each side of the hallway were so mundane as to be aggressive in their plainness—dark brown, two-paneled doors, each relieved with frosted glass painted with the name of some bureau or official. Cocked-open transoms above each provided some relief from a warmth that must be stifling in high summer.

Only the carpet, a finely napped deep blue that Morgan could not put a name to, betrayed the true wealth of this place.

Well down the hall he was propelled into an intersecting corridor with doors set much farther apart. Larger rooms for larger purposes? The Courts of the Lesser Bench, he realized, as they passed a door where gold-flecked lettering proclaimed "EXCISE BENCH."

The door he was pushed through was marked "LOYALTY BENCH."

Morgan's heart stuttered cold and hard. *The treason court.* Where offenses against the Thalassojushty itself, or against the common good, were tried.

The door slammed behind him. No Marines. Morgan whirled, taking in the small gallery, the judge's podium, stands for witness and examiner, the interrogation chair, glass cabinets where evidence or exhibits might be stored.

And no one present. No judge, no advocates, no clerks of the court, no bailiffs, no witnesses, no one at all but himself. Defendant?

The walls rose high, two or three stories, though not as tall as the nave. These were paneled with inlays of half a dozen different colored woods to create a pleasing abstract pattern. Electric chandeliers dangled overhead. Their fat iron arms signaled their gaslamp history.

Morgan ceased gaping and sat down in the gallery. He had no desire to approach the front of the courtroom. As nothing seemed to be taking place, he simply closed his eyes for a moment. His heartbeat calmed for the first time since stepping to the podium back at the Plenary Hall of the Planetary Society.

Without sight, other senses sharpened. He smelled the furniture polish and floor wax of the courtroom, along with the faint ozone scent of the electricks. All of it masked the underlying accumulation of human stress and fear. Perspiration had left its indelible mark in the air.

The sounds of the room were similar: a faint buzz from the lights, the creak and sigh of old wood, the footfalls of someone approaching.

Morgan's eyes shot open and he stiffened.

The newcomer—no door had opened, had it?—was gloriously dark-skinned as any king of old, gray eyes almost silver in a cragged and noble face. His hair was worked back in prince-rows, each set with tiny turquoise and silver beads so that he seemed almost to be wearing a net upon his head. A silver hoop hung from his left ear, the conciscrux of the Thalassojushty tiny in his right. Barefoot, he wore a laborer's canvas trousers and shirt, though dyed a deep maroon rather than the usual blue or grubby tan. Despite the attire, this one would not have fooled any thinking observer for more than a moment, not with his bearing.

After a moment, Morgan finally registered how *small* the man was. Barely shoulder high, four foot nine at the most. That was when he knew who he faced—Eraster Goins, presiding judge of the Lesser Benches. *The Thalassocrete.*

"Pardon my state of undress," Goins said politely. "I was attending to some physical matters when I was informed of the requirement for my presence."

"I . . . Sir . . ." Morgan made the hand-sign of his lodge.

A crinkling smile emerged that was entirely at odds with the power of this man's word. Goins could summon fleets, lay waste to cities, claim the life of almost anyone, at his mere whim. "Of course I know that, Dr. Abutti. You do not need to demonstrate your loyalty or training at this time."

At this time.

"Wh-what, then, sir?"

"Well . . ." Goins cracked his knuckles, took a moment to find great interest in the beds of his nails. Morgan did not think this was a man ordinarily at a loss for words. "So far as anyone in the city of Highpassage is concerned, you are in here being

thrashed within an inch of your now-worthless life. This matter will be of specific interest to certain Lateran observers.”

Morgan was moved to briefly study his own hands. He was under threat, certainly. No one talked to Goins or his ilk without placing themselves at great risk. A single false word could misplace an entire career, or a lifetime’s work. *Or freedom.*

“This is about my speech at the Planetary Society, isn’t it?”

“Your perspicacity shall soon be legendary.” Goins’ tone managed to be simultaneously ironically airy and edged with a whiff of fatality. “Perhaps you would care to explain to me what you thought you were about?”

“Am I on trial?” Morgan regretted the words the instant he’d blurted them out.

“No, but you certainly could be.” Goins’ eyes narrowed, his smile now gone to some faraway place. “You would enjoy the process far less than you’re enjoying this discussion, I shall be pleased to assure you.”

“No, I didn’t mean . . .” Morgan stopped stumbling through reflexive excuses and instead summoned both his courage and his words. Proof was proof, by the stars. He couldn’t explain *everything*, but he could explain a great deal more than was comfortable. “I have new evidence concerning the Eight Gardens, and the origins of man.”

“I do not believe that is considered an open question. Are you a Lateran theologian, to revisit Dispersionism? That is a matter for our contemplative competitor on the southern verge of the Attik Main.”

Morgan made the sign of the Increate across his chest. “I do not presume to challenge faith, I just—”

“No?” Goins’ voice rose. “What precisely did you intend to present to the Planetary Society, then?”

He was sweating now, his gut knotted. This had always been the crux of the matter. The world was so *true*, so *logical*. Until it wasn’t. His newly summoned courage deserted Morgan, apparently to be followed by a fading sense of self-preservation. “A mistake, sir. I intended to present a mistake.”

“Hmmm.” Goins took Morgan’s attaché case from his unresisting hands, tugged open the flap. “A mistake. That’s better. You still haven’t answered my question, however.” The presiding judge leaned close. “What was the mistake?”

Morgan opened his mouth, to have his lips stopped by the single tap of his inquisitor’s finger.

“Heed me carefully, Dr. Morgan Abutti. We have no copyist present. No autonomic locugraphitor hums nearby. No clerks of the court labor at my elbow to give later inconvenient testimony. I do not ask you this from my seat of responsibility at the head of the Pirate’s Steps. I do not wear my robe and chain of office. No oaths have been sworn beyond those we both live under every day of our lives.” Goins leaned close. “At this moment, I am merely a man, asking a simple question of another mere man. Both of us stand before the Increate now as always clad only in our honor. After you have answered, we may make other decisions. Other testimonies may be required, each suitable to their intended audiences. For now, I only listen. To the truth entire as you understand it.

“So tell me. What was the mistake?”

“I believed something I saw of significance in the heavens,” Morgan said simply. “Though what I found runs against the word and the will of the Increate, and everything that has been taught to us in the six thousand years since They first placed man in the Eight Gardens and awoke us to Their world.”

“Mmm.” Goins stepped away from Morgan, paced briefly back and forth before turning to face him again. “I trust we are not so lucky that this mistake in the heavens was presented to you by an eight-winged angel with glowing eyes? Or perhaps the voice of the Increate Themselves whispering in your sleeping ear? I am going to assume that

your . . . mistake . . . arrived borne on the back of evidence derived from the latest and most pleasing artefacts of Dame Progress, objective and empirical in the hand."

Morgan stared at Goins, appalled. "Had an angel told me what I have learned, you could call me both blest and crazed. Almost all would smile behind their hands and carry on."

"Precisely."

"'Twas no angel, sir. No miracle at all, except that of optics, patience, and an emulsion of silver salts painted onto a glass plate to be exposed to the night sky before moonrise could flood the world with pallid light."

"Mmm." This time Goins did not pace, but stared instead at Morgan. "And what do you think this photographic *truth* signifies? Speaking in your professional capacity, of course."

Morgan's heart sank further. He was close to tears, torn. "I c-cannot deny the Increate."

"Why not? You were prepared to do so in front of seven hundred people in the Plenary Hall not two hours past."

"Forgive me. I . . . I did not understand what it was I was about." He wanted to groan, cry, shriek. It was as if he were being torn apart. "Is not truth part of Their creation?"

Goins leaned close. "What you *did* was take some photographs of the night sky, study them, and draw conclusions. You did this being the good scientist that you are, trained at the University of Highpassage and the New Garaden Institute. One of our New Men, concerned with the evidence of the world before them rather than the testimony of tradition. I don't want to know what the innocent boy who prayed to the Increate every night believes. I want to know what the educated man peering into the telescope thinks."

The words poured out of Morgan Abutti with the strength of confession. "There is something artificial at the Earth's trailing solar libration point. A small body, similar to one of the asteroids. I believe it to be a vessel for traveling the aether. I speculate it to be the true home and origin of mankind. Whatever I believe does not matter, for all will be revealed in due time. This artificial world has begun to move, and will soon be visiting us here in our own skies."

Goins' response shocked Morgan. "It has begun to *move*?" he asked in a voice of awed surprise.

Morgan's heart froze. The presiding judge's words implied that he'd already known of this. He fell back on the most basic refuge of his profession. "The stars do not lie, sir. We may misunderstand their evidence, but the stars do not lie."

Goins sat heavily, his face working as if he too sought to avoid tears. Or terror. "You have the right of that, my son. But we may yet be forced to lie on their behalf."

The racing aeroyacht *Blind Justess* was so new that Quinx could smell the sealants used to finish the teakwood trim of the forward observation cabin. Her appointments were an odd combination of luxurious and sparse. Like the airship's rakish exterior form, the interior of fine craftwork minimally applied stood in strong contrast with the lumbering, gilded monsters of the Lateran's small aerial fleet. Those wallowing aerial palaces served as ecclesiastical transports and courts-of-the-air for peregrinations to distant sees where the dignified estate of the Gatekeeper might not be so well honored.

Quinx had claimed the forward observation chair by sheer presence. The captain-owner of *Blind Justess*, one young gallant by the name of Irion Valdoux, was a scion of the Massalian aristocracy, and very much a traditionalist when it came to handling his own weapons and equipage.

And doubtless his women, too, Quinx thought with a distinct lack of charity.

Valdoux was as dark-skinned as any comely lass might hope for in a suitor, with a smile unbecoming a man of serious parts. He had bowed Quinx into the button-tucked seat, upholstery so well-stuffed that a horse could likely have taken its ease there. A glass-walled pit opened between Quinx' feet. At the time of boarding this curious portal revealed a view of dawn over the Attik Main, the ocean opaque with night's last shadows as they plucked at the tumbled ruins along the shoreline beneath the Lateran's airfield masts. Though his head for heights was excellent—Quinx had lived in a tower for some decades now—he found the open space beneath him a trifle unnerving.

"When we're racing for pips under Manju rules," Valdoux explained, "I keep a spotter here with the grips for the electrick harpoons." He cleared his throat. "Open class, no restrictions. 'Justity hates it, they does.'"

"I do not suppose the Lateran entirely approves either," Quinx replied.

Valdoux, who knew perfectly well that the word of the Consistory Office was quite literally ecclesiastical law, and that the word of Quinx was quite literally the word of the Consistory Office, fell silent.

"Long explanations wear on the soul," Quinx supplied a few moments later. "I shall oversee our progress from here." He favored Valdoux with the sort of smile that reminded some men of small bones breaking. "It would please me to examine your harpoon grips, however."

"N-not running under Manju rules here over the Attik Main, sir," Valdoux managed. "But I'll send the boy for'ard with 'em, sir. Will that be all?"

"No." Quinx withdrew his smile. "I expect you to break airspeed records bringing me to Highpassage. The Lateran will be most . . . grateful. As will my office. Brother Kurts shall assist you as necessary."

Valdoux wisely withdrew to the bridge, which was a deck below the observation cabin.

Quinx had managed a decent view of *Blind Justess* on the way up the airship's mooring tower. Her envelope was of very unusual design, more of a flattened vee shape than the usual billowing sausage of an airship. Though he was no engineer, he could appreciate the effort at linestreaming in a racing vessel. Some of the fastest water yachts shared that look. Likewise the high-speed locomotive that ran the express routes between the Lateran and Pharopolis far to the east, the largest city on the south shore of the Attik Main.

The gondola below the envelope was just as unusual, resembling nothing so much as a sleek wooden knife. She boasted a sharp keel that split the air, a fine array of viewing ports in smoked glass, and very few of the usual utilitarian protrusions so common on airships. Just before boarding, he'd noted a profusion of small hatches and ports along the outside of the gondola's hull—clearly this vessel kept many of her secrets from prying eyes.

Within was that odd combination of wealth and efficiency. The carpets felt thick and cool, of the finest wool and not yet showing any signs of wear. Grab rails and spittoons were brass polished to a painful brightness. Most furniture was gimbaled and latched away against violent maneuvers, or possibly just to save space. Her most salient characteristic was *narrowness*.

He wondered what to make of that.

Narrow or not, the great diesels encapsulated into nacelles along the lower curve of the gas bag coughed swiftly to life before growling deep in their throats. *Blind Justess* cast off from the tower smoothly enough, but within minutes she was moving faster than Quinx ever had done while airborne, nearly to railroad speeds.

Kurts had reported a promised velocity of over fifty miles per hour through the air.

Quinx had considered his man to be mistaken or misinformed, but as the Attik Main slipped by beneath his feet, his mind was changing.

How much progress had taken place in the factories and laboratories of High Passage, Massalia and the other great cities of the world while he'd spent his life laboring among books and sweating priests and accusations of error? A ship like this, any airship in truth, had been inconceivable when he and Ion were boys. That he could now fly with the speed of storms was . . .

A miracle?

Perhaps the Increate had always intended this for Their creation. Another generation would have to answer that question, Quinx knew. His was growing old and become too tired to look much further ahead.

Externalism.

His mind had avoided the point of this journey, dwelling on the mysteries of a machine in which Quinx in truth had no interest.

Heresies were for the most part quite boring, even mundane. And the Lateran of these later days was nothing like the Lateran of centuries past. His own predecessors in office had routed out sin and error with a vigor at which Quinx could only marvel. And sometimes shudder at.

Not that he hadn't broken more than a few men, some of them quite literally. But peculation and sins of the flesh seemed to be the flaws in his generation. Not the bonfires of the heart that had sent armies marching across entire continents in ages past, not to mention setting the Lateran time and again in opposition to the Thalassojustity.

No one *cared* so much any more. The role of the Increate in man's tenure on Earth was undeniable—even the poor, deluded atheists were little more than dissenters against a preponderance of evidence from scriptural to archaeological. The rise of science had only reinforced what the Lateran had always taught.

Except for the damned Externalists.

Every time that heresy had arisen, it had been viciously suppressed. Somewhat to Quinx' continued surprise, even the Thalassojustity had cooperated in the panicked months over the winter of L.5964 and L.5965, when he was new in his place as head of the Consistory Office and Brother Lupan had grown regrettably public in his insane claims of having found the Increate's Chariot on an island in the Sea of Sind.

There were a dozen theological problems with Brother Lupan's theory, but the most practical problem was that he'd had such a vivid, imaginative presentation of his claims that the human race, already birthed elsewhere, had descended from the skies in the hand of the Increate. People *listened*, at least at first.

Quinx still believed that the Thalassojustity had intervened in what was logically a Lateran internal dispute simply to protect their Insular Mandate. Trade flowed over the world's oceans under their protection. In return, unless otherwise ceded by treaty, islands belonged to the Thalassojustity. All of them, from the smallest harbor rock to the great, jungled insulae scattered across the eastern verges of the Sea of Sind.

Brother Lupan had been trespassing not only on theology, but also on the private property of the greatest military and economic power on Earth.

Quinx examined the electric grips the boy had brought forward. Huge things, built into oversized rubber gloves lined with some felted mesh. He wondered where the harpoons were, how one aimed. Was there a reticule to be used here?

It was a silly, juvenile fantasy, and beneath him as a servant of the Increate. No Lateran vessel had sailed armed since the Galiciate Treaty of L.5782, over two centuries ago. In that document the Thalassojustity had guaranteed the safety of all Lateran traffic, as well as the persons of the Increate's servants here on Earth. *Blind Justess*, not being a Lateran vessel, and practically papered over with the money re-

quired to build her, doubtless carried a somewhat more robust defensive proposition to accompany her rakish lines and inhuman speed.

Quinx let his thoughts go and stared into the wave-tossed sea swiftly passing far below his feet. Externalism was the worst sort of heresy, because it denied the very basis of the relationship between man and the Increate. That Lucan Matroit had seen it openly declared was frightening. From where did such evil arise, and how so swiftly?

Ever was that the nature of his office. To seek out evil and lay it to rest.

Still, he wondered what Ion had known. Now was not the time for a crisis, not with a new Gatekeeper to be elected and elevated and begin setting his own mark upon the Church of their fathers.

It is the considered opinion of this subcommittee that the study of astronomy and the related arts be placed under much closer supervision than has heretofore been believed advisable. The impressionable minds and irresponsible imaginations of some of our younger researchers may be influenced toward paths of thought not consonant with this institution's devotion to the spirit of scientific inquiry. A Review Committee is proposed as an adjunct to the Board of Governors, consisting of senior faculty, a representative of the Planetary Society, and by invitation if they so desire to accept, representatives from both the Thalassojustity and the Lateran. We may thus guide the research and observations of our more impetuous young faculty and students along lines fit for men of good social standing, character, and faith.

—Undated memorandum, University of Highpassage faculty senate

"Show me," Goins said quietly.

"Show you what?" A surge of recklessness overtook Morgan. "I thought you were forcing me to silence."

The judge grimaced. "Show me what you found. Because if you can find it, anyone can find it."

Morgan paused, attempting to sort out if he'd just been insulted. "I hardly think that just anyone could—"

Goins interrupted. "I cast no aspersions, merely indicate that you are not unique. Rather, a man of your time. Or possibly your technology."

"May I please have my case back then, sir?"

Morgan took the leather bundle from Goins, opened the clips, and slipped out the beribboned folder he'd meant to present for review at the end of his failed lecture. Such a mistake it had been to surprise the Planetary Society. His presentation had been posted as an overview of new observational techniques with attention to some exciting discoveries. Morgan had slyly left all the critical information out of both the proposal and the abstract.

He'd wanted his moment.

Well, now he had his moment.

"You are familiar with the idea of astronomical photography? That we can expose a plate coated with silver salts through a telescope to study the night skies?"

Goins favored Morgan with a flat stare. "Yes."

"Good." Morgan tugged the ribbon's knot loose. "Some astronomers study the planets and their satellites this way. Arguing over the true count of moons about Deiws Pater is very nearly a club sport among my colleagues."

"Yes."

Glancing at Goins again, Morgan saw something very flat and dangerous in the man's eyes. Here was someone who could start a war on the far side of the world with a mere word. Power was his beyond reckoning. "I am not stalling, sir. Rather, leading you to the point."

"Yes."

No more stalling, he thought. "I have been studying the Earth's libration points, both with respect to the moon and the sun. You are, ah, familiar with the concept?"

"First described by LaFerme in 1873."

Thalassocratic reckoning, of course. "I did not realize you were an astronomer," Morgan said, surprised.

"A presiding judge must be many things, Dr. Abutti. Not the least of which is a step ahead of the ambitious and rebellious men around him."

Which of those categories did Goins consider him to fall into? "Very well." Morgan held out a series of photographic prints. "The first two are the trailing and leading libration points in the Earth-Moon system, traditionally accounted the fourth and fifth positions. Each is sixty degrees in advance or in retard of the Moon. Note the photographs show only clouds of dust."

Goins frowned as he studied the images. "I shall have to trust your word on this. A man can only be so far ahead. With what instrument were these photographs taken?"

"The eighty-eight inch refractor at Mount Sysiphe," Abutti said, pride leaking into his voice.

"Of which you were one of the principal architects, is that not the case?"

A combination of natural modesty and self-preservation governed Morgan's reply even in the face of a flush of pride. The Mount Sysiphe project had been much of his doctoral work. He'd even put time in on the manufacturing of the mirrors themselves, as well as supervising the great instrument's initial installation at the site, beneath the enormous iron dome delivered by the shipwrights. "I would hardly say 'principal,' sir. Far more learned and experienced men than I sat as members of the project's Board of Governors."

A wry smile flitted across the judge's face. "I am aware of the distinction, Dr. Abutti. Carry on, please."

"Your question was important to understanding my . . . evidence. No one has ever seen the heavens so well as those of us with access to Mount Sysiphe."

"Which has been restricted these past three years." Goins' tone made it clear he was in full support of such scientific censorship.

"Yes. Even *my* access was challenged, as an associate fellow of the New Garaden Institute rather than a University faculty member." The very mention of the incident recalled all too vividly his stung pride.

"Still, you no doubt persevered in the face of great pressure."

Once more, Morgan found himself wondering if he were being mocked. "As you say, sir. In the end, the Board of Governors found it difficult to deny one of the principal architects access to his own work."

"Ever has common decency paved the way to uncommon folly. You are forestalling your revelation, Doctor Abutti."

"I show the Earth-Moon libration points in order to set the expectation. Of interest to orbital mechanicians, but consisting only of a few clouds of dust, and perhaps small rocks. Now, here are the Earth-Sun libration points the fourth and fifth." He handed another set of photographic prints to Goins, then fell silent.

The presiding judge studied the new images, then compared them to the first set. He was silent a while, but Morgan did not mistake this for confusion or hesitation. Eventually, Goins looked up from the sheaf of prints in his hand.

"The fourth libration point appears to me to be little more than dust."

Morgan nodded.

"A body is present at the fifth libration point." Goins' tone had gone dangerously flat again.

The man truly had known all along. "Yes."

"What can you tell me about that body?"

"Two things," Morgan said slowly. "First, that spectrographic analysis of its reflected light tells us that the body is a composite of metals and carbon compounds. A composition that is literally unique among observed bodies in the solar system."

"And second . . . ?"

"Sometime in the past three weeks, the body has begun to move in contravention to its known orbit. Without the influence of any observable outside force."

Goins simply stared.

Eventually Morgan filled the silence. "Under its own power, sir. Toward Earth, as best as I can determine."

"What does that mean to you? As a scientist?"

"That . . . that there is an artificial object at the fifth libration point. It has been there for an unknown amount of time. It is now coming to Earth."

"Is that all?"

"I . . . I have deduced that this artificial object is an aetheric vessel, a ship of space, as it were. Achman's Razor compels me to believe that six thousand years ago it brought us to this Earth. Otherwise I must conclude the Increate placed *two* intelligent species here in our world, ourselves and some other race to build this aetheric vessel. I find that even less likely than the deduction I reached from the evidence before me."

In the silence that followed, Morgan's own heartbeat thundered.

Finally: "And you were going to announce this to the Planetary Society?"

"Yes, sir. I told them we were not of this Earth, originally." He took a deep breath, and added in a rush, "All of the scientific evidence that points to the Increate just as logically points to my hypothesis. It is well established across many disciplines of science that humanity simply *arrived* six thousand years ago. The question is how. Created whole from the dust of the world by the hand of the Increate, or aboard this aetheric vessel?"

Goins studied him carefully. "You expected to leave the building alive?"

Morgan stopped a moment. "We are all scientists there."

"Of course." Goins shook his head. "You are what, a fifth-degree Thalassocrete?"

Taken aback by the swift change of subject, Morgan shook his head. "Fourth-degree, sir. Alternate Thursday meetings of the Panattikan Lodge here in Highpassage."

Goins made a flicking motion with his left forefinger and thumb. "Congratulations, you're now a thirty-second degree Thalassocrete. By the power invested in me as Presiding Judge I so declare. Someone will teach you the secret handshake later."

Morgan was stunned. "Sir?"

"There are some things you need to know, right now. Truths that carry the death penalty for those not of rank." Goins leaned close. "You are now of rank. Second-youngest ever to reach this height, I might add."

Still grasping at the change in the conversation, Morgan stammered the first question that came into his head. "Who . . . who was the youngest?"

"That is left as an exercise for the astute observer." Goins' swift, savage grin left no doubt in Morgan's mind as to the answer.

Though sea piracy has long been largely the stuff of legend, air piracy is a novel menace for which our society has not yet developed an appropriate response. The terrestrial powers are rightly jealous of their prerogatives with respect to the Thalassojustice, so the solutions that have long kept the sea lanes clear and active do not translate well to the requirements of this new century, where an enterprising rogue with some funds and a few good mechanics and sharpshooters may set up an illicit aerie in rough country, then cross national borders and Thalassojustice waters to raid shipping and towns with impunity. The White Fleet may not pursue our villain

overland away from the coastlines, while few nations yet have the resources to mount their own aerial response, or the willingness to allow their neighbors to pursue miscreants under arms across their own skies.

—Editorial in the *Highpassage Argus-Intelligencer*,
January 18th, H.3124, Th.1998, L.6012

Blind Justess approached Highpassage from west of south. They'd swung their course that way, Valdoux had explained to Quinx and Brother Kurts, to make best use of the shore breeze in their approach to the masts at the airfield.

All three of them were on the bridge now, which was crowded as a result. Admittedly, Brother Kurts was a crowd all to himself, with his looming height, muscled breadth, and glowering pale visage. Still, the man's loyal service to the Lateran and especially to the Consistitory Office made him a credit to his race.

Quinx studied the duty stations of the bridge. As a racing yacht, *Blind Justess* was designed to be operated with a minimal crew—as he understood it, the captain-pilot, an engineer up in the gas bag tending to the temperamental high-performance diesels on their wide-slung cantilevers, and a ship's boy to serve as runner and temporary relief.

Yet here were a navigator's station, a wireless telegrapher's station, two weapons stations, and the pilot's station. Compact, almost ridiculously so, but elegant in their gleaming brass instruments, the lacquered loudspeaker grills, bright bells and tiny colored electricks signifying the state of more parts and processes than he'd imagined one airship to have. Except for the pilot, all the stations had small leather saddles for their now-absent operators, presumably to economize on space. The pilot had a real chair, meant for long, comfortable occupation, though it was currently clipped back as Valdoux stood at the helm. His head nearly brushed the cabin roof as he made a great study of Highpassage from their position about two miles offshore.

"See," the captain said, pointing toward a cluster of multistory buildings connected by an aerial tramway, "since the Pharic Mutual Assurance put up that blasted office tower near the airfield, the approach has been tricky. It breaks the wind off the hills, and we sometimes get a rotten shear. Old Piney's widows are suing them over the crash of *Unfettered* last year."

Quinx had no idea who Old Piney was, but he vaguely recollected reading of an airship crash in Highpassage. There had been a scandal—that he did remember. He'd spent little time in this city the past few years, which might have been a mistake. If nothing else, it had grown taller.

Something still bothered him. *Why did a racing yacht have two weapons stations, in addition to the gunner in the forward observation cabin?*

The instrument and control labels were unmistakable. Forward battery. Aft battery. Long chasers. Port bomb rack. Starboard bomb rack.

There must be observers as well, to guide these releases.

"Highpassage is your home port?" he asked casually. Where had Lucan Matroit found this pilot? And with what had Valdoux been bribed? The man was clearly not one of the Planetary Society's operatives. His connection to the Lateran was nonexistent.

Quinx would have known otherwise.

"No, the Racing Society has got a private field a few miles up the coast. Well away from buildings and such."

He sat down in one of the weapons saddles and began to regret spending most of the trip in the observation cabin. There was more to be learned here. Quinx' blunt, manicured fingers caressed the port bomb rack release.

"Those don't do nothing now," Valdoux said without turning his attention from their approach.

"Then why are they here?" asked Quinx.

"Because when we run with a full load and all her crew, they do just what you think."

Quinx heard a hardness in the young bravo's voice. "Because sometimes you're racing for pips under Manju rules," he said softly. *Whatever that argot was intended to actually signify.*

"Exactly."

An air pirate didn't need a hidden mountain base, Quinx reflected. That made good copy in those scientific romances that sold so well at street corner kiosks, but the logistics of fuel and spare parts were improbable. All a pirate really had to do was keep an honest face. With that he could hide his airship in plain sight. Who knew, later?

Then they were pitching and turning to approach the mast. "Have you down in ten, sir," Valdoux called out.

"I want you to stay aboard," Quinx quietly told Kurts as the ship's boy laid out a narrow board to connect *Blind Justess* to the mooring mast. "At the least, I shall require a swift return to the Lateran, possibly quite soon, depending on what Matroit is able to tell me. I can imagine several other outcomes as well, for which a fast ship might be of service."

"Sir," Kurts said, quiet acknowledgement.

"And one more thing. Tell Valdoux that he can ready his ship under Manju rules. I may be playing for pips myself shortly."

"What precisely is a pip, sir?" Kurts asked.

"I'm sure I don't know," Quinx replied. "But it's something Valdoux and his set are willing to kill for. If Lucan hasn't already suppressed this outbreak of Externalism, we may be pressed for hard solutions ourselves."

"Yes, sir." Kurts stepped back into the cabin as Quinx left the ship for the platform.

He didn't bother to count the steps in the mooring mast. Far too many, to be sure. Quinx lived in a tower for several reasons—privacy had been the original, of course—but he'd long since recognized the value of having to ascend and descend one hundred and twelve steps every time he wished to do more than stare out the window or piss in a chamber pot. He didn't *think* he was old, but his body had other ideas after a sleepless night, a long day aboard a speeding airship, and now this.

Ion is dead, which is as old as one ever gets.

At least he was still walking. By the time he reached the soil, Quinx' heart was pounding like a fist inside his chest. His knees had become rubber. He rather thought he might be joining Ion soon.

Instead he found awaiting him a rat-faced young man with an unfortunately pale cast of skin, wearing an ill-fitting maroon suit. "Dr. Matroit sent me, your worship," the fellow said, bobbing about like a cork slipped down into a wine bottle. The motions made Quinx vaguely ill, which in turn reminded him that he'd not eaten all day.

He did not even have the energy to put this fool in his place. "Please take me to him."

The quadron led Quinx to a motorcar. The priest groaned inwardly. Those beastly things were never comfortable, and tended to break down as often as they ran. This one was an open-topped steamer, already stoked up from the sound of the boiler. It was pretty enough, he had to admit, with the deep blue lacquer on fenders, hood, and body, and a pleasing amount of brightwork for trim.

"Here, sir, in the back. I gave you some cushions. No luggage being sent down?"

"Just myself." Quinx carried a small satchel, but this trip had been so sudden that he'd brought no trunks or wardrobes. "Please, take me to Matroit."

A few minutes later, they rumbled off to the accompaniment of an ear-piercing shriek of a release valve. Quinx looked up and back at *Blind Justess* now shadowed in the encroaching dusk. She was just a shape in the last light of day, a hawk hovering over the city searching for her next prey.

Lucan Matroit had the good sense to arrange a meal for Quinx at the Plenary Hall. The foolish steamer driver had managed not to kill them or anyone else on the way, and kept the thing running smoothly enough to avoid destroying Quinx' appetite, so he tucked into the cold pickle and pudding as soon as possible after the basic pleasantries were dispensed with.

The matter at hand was so critical that they met alone, without the nigh ubiquitous secretaries, clerks, or servants. Quinx briefly regretted leaving Kurts aboard *Blind Justess*, but he'd wanted badly to keep Valdoux under observation. He also truly had foreseen several potentially critical uses for the airship and her equipage.

Lacking servants, the meal was sparse and strange, something that novices in the seminary might have prepared for themselves. Quinx had grown up on fresh cabbage, preserved peppers, and the occasional bit of goat meat, so even this was welcome. The cold pickle was a fairly ambitious tray of vegetables along with a few regrettable cheeses. The pudding was one of those curious northern dishes that had become popular in Highpassage the past few years, all chewy breadding around plums and bits of organ meat.

Still, he ate, and listened to Lucan's sadly incomplete story.

"... so I had Dr. Abutti shown out immediately," the Secretary General was saying. "In the moment, I was somewhat concerned for his safety, but far more concerned with settling the audience."

"Would they have done him a mischief?" Quinx asked around a mouthful of pungent eggplant.

"In the Plenary Hall?" Matroit shrugged. "Unlikely. But anything is possible. There have been three murders in this building since its dedication, and almost a dozen suicides. The Planetary Society itself is not ordinarily a risk to life and limb. Passions here tend to be more, ah, individualized."

"Three murders?"

"Surely you recall the death of Drs. Messier and Ashbless? They fought a duel on the rooftop over a dispute concerning the orbits of the moons of Mars. We had only the twenty-eight inch reflector back then, and observations were inconclusive."

"I take it both men lost."

"Or won, as it may be. Choice of weapons went to Dr. Ashbless, who unaccountably decided on carboys of high molar sulfuric acid fed into spray pumps."

"Never mind," Quinx said. "I believe I'd prefer to finish my dinner. Please continue your tale."

"Well, I quickly realized I should have detained Dr. Abutti rather than sending him out into the city. I sent two of our porters over to the New Garaden Institute, where they determined that Dr. Abutti had been taken away by Thalassojustity Marines."

Oh Increate, grant me strength now. "That would not be the outcome I might have prayed for."

"Nor I, sir."

If the Thalassojustity held Abutti, anything was possible. Their concerns were largely orthogonal to those of the Lateran—the two institutions had co-existed in varying states of competition for the better part of two thousand years, after all—but this was not the Externalist crisis of L.5964, when the Thalassojustity's interests had been directly compromised.

Presiding Judge Eraster Goins was in charge these days. The Consistitory Office

had little information on him, none of it sufficiently damning to serve as any leverage. And under his leadership, the Thalassojustity had showed some remarkable innovations.

Quinx' heart grew leaden at the thought of what innovations Goins could derive from Abutti's madness. "I am a Thalassocrete of the highest degree," he said, something very unusual for a Lateran priest, and in his case rarely spoken aloud. "I believe I shall have to pay my respects at the Thalassojustity Palace quite shortly."

His body cried for sleep, but his soul cried panic. Despite what Ion had told him, Quinx was very much afraid of what might be proven.

And by whom.

The quadroon managed to navigate the steam car from the Plenary Hall to the outer entrance of the Thalassojustity Temple, once more without actually inflicting material harm on Quinx or anyone else. The hour was nearly nine o'clock when they chuffed to a shuddering halt outside the tall, studded gates.

Prior centuries had brought more than one angry mob here. Not to mention a few armies. Though most of the old walls were long gone, replaced with timber lots and gardens of roses and blackberries, the fortified gatehouse itself still blocked the only public road connecting Highpassage to the Thalassojustity's territory. This was an international border, and by and large, casual tourists were neither welcomed nor wanted.

The Revered Bilious Quinx was neither casual, nor a tourist. And he was exhausted.

Staggering from the car over the protestations of the driver, he yanked on the bell pull beside the main gate. A pale, idiot face peered from a darkened window in the gatehouse proper.

"Public hours is closed!" the man shouted through the glass.

Quinx leaned close, gathered his fist inside his vestments, and punched out the glass. Cursing rose from within, as the priest leaned close and spoke in the low, calm voice that he'd used for delivering judgments these past forty years. "I am a thirty-second degree Thalassocrete on urgent business to the Presiding Judge. I do not have time for visiting hours, and I will have you swabbing decks in frozen Hyperborea if you do not open the gates now."

Scrambling noises emitted from within, followed by the distinctive whir of a telelocator. A few hushed words, then more scrambling, then the gates creaked open.

Resuming his seat in the back of the steamer, Quinx told the quadroon, "Drive on, boy."

"Yes, sir!" The man's voice quavered somewhere between horror and awe.

Their tires crunched up the crushed coral drive that led to the Thalassojustity Temple. The New Buildings lurked beyond, thousand-year-old fortifications that served as an office complex. Two more recent, taller structures rose past them. Those contemporary buildings were simply referred to as "the towers."

Know your friends; know your enemies better. The Thalassojustity had been both to the Lateran over the centuries.

Otherwise the grounds were as gardenized as any cemetery of the wealthy. Cypress trees spread low in the moonlight, hares and deer cropped, barely attending to the wheezing of the steamer as it passed. The sea lay to Quinx' left, its murmuring unheard over the racket of the steam car as the waters lapped at the bottom of a sharp decline down which a man might easily lose his footing. The crescent of Black's Beach, at the foot of the stairs from the Temple, gleamed pale ahead of him.

No one was around. Not a Marine, not a night watchman. The lights of the Temple portico were doused, and only a few stray glimmers showed from shuttered windows in the New Buildings or the towers.

Which was odd. Lodge meetings tended to run into the evenings. There were always late-working bureaucrats scurrying about, along with the servants who tended them. Quinx had visited the Thalassojustity Temple more than a few times over the decades, on a variety of errands from the deeply secretive to the bloodily public. He'd never seen it look so, well, abandoned.

The quadroon slowed his steamer to a halt where the drive met the Temple steps. Quinx climbed out of the car again, regretting his long walk down the airship mooring mast. He was desperately tired, he realized.

Where *was* everyone?

One step at a time. Up. And up. And up.

The great doors at the top, bronze castings forty feet high chased with elaborate friezework, stood open as they always did. Lore held that the doors would only be closed in times of utmost crisis. Quinx had always figured it for a problem with the hinges. A slight man in a crisp, dark suit sat just within the threshold on an office chair that very much did not belong in the nave. "May I help you?"

"I'm looking for Goins," Quinx said, too much of his irritation creeping into his voice.

"The Presiding Judge is not available. Who is asking?"

"Me." Quinx glared at him. "Get a lot of men in red and white robes calling late at night?"

"You are clad in the sartorial estate of a prince of the Lateran, sir, but I have not had the prior pleasure of your acquaintance, so for all of my knowledge you might be a lad about on a lark."

"With *this* hair?" Quinx had to laugh, his foul mood broken for a moment. "It's been fifty years since I could pass for a lad. And believe me, Eraster will talk to me once he knows I'm here. I am the Revered Bilious Quinx, and I am pursuing some very dangerous questions."

"Revered Quinx." The door warden gave the name some thought. "Your fearsome reputation precedes you, sir. If memory serves, you are also an initiate of our own Lodges, and as such should not be required to seek admittance at the public portals."

"I did not arrive by the hidden paths, and time may be of the essence." He moved his hands in the recognition signs of a thirty-second degree Thalassocrete. "And yes, I am the highest level initiate who also serves in the Church's senior hierarchy."

"Who is known to serve," the door warden corrected mildly, words that gave Quinx serious pause. "You were answering the Presiding Judge's call, then? I am afraid you are too late by hours. All of the available senior initiates sailed on the afternoon's tide, aboard Th.S. *Clear Mountain*."

"With Dr. Morgan Abutti aboard?"

"Of course." The man seemed surprised. "Who else?"

Quinx leaned close. "And where were they bound?"

"Thera, I believe. But rumors are often put out to obscure the truth of such missions as this."

Quinx' heart sank. The entire leadership of the Thalassojustity had just abandoned their headquarters. *Why?* Such a thing had never happened, even during the worst wars of the last century.

Whatever Abutti had found must have proven extremely convincing. Ion's prophesied proof was happening, almost before his very eyes. *Externalism* . . .

Even his thoughts failed. "I must to Thera, and swiftly," he said.

"*Clear Mountain* is very nearly the fastest of ships."

"Oh, *I* can travel faster."

Stumbling down the steps to the quadroon's steamer once more, Quinx wondered how difficult it would be to convince Valdoux to mount his weapons on *Blind Justess*.

The traditional association between vulcanism and the Eight Gardens is a folk myth not borne out within the received text of the Librum Vita. Neither do any of the Lateran's formal teachings support it. Yet like most folk myths, it likely arises from some transmuted memory of history. Each Garden is seen to be paired with a smoking mountain—Cycladia has its Thera, for example, Wy'East has the volcano of the same name. The Thalassojustity has been notoriously reluctant to permit full surveys of the relevant sites under their control, so most of what can be said about this association arises from ethnography and the study of more primitive folkways than the modern world can boast. Still, it does not require much speculation to see how the Increate's children, early in their tenure upon this Earth, might have associated Their power with the world's own fiery exhalations.

"Contemporary Survey of Myths and Legends Concerning the Eight Gardens"; B. Hyssop, F. Jamailla, A. Serona; *Ouragan Journal of Ethnographic Studies*, Vol. XCVII, Issue 7

Morgan sat in *Clear Mountain's* forward lounge, a gin fizz in hand, and marveled at the events of the past day. Goins had wasted no time in calling his entire senior hierarchy to witness this . . . unfolding? Apparently the Thalassojustity had been waiting for his revelation for a very, very long time. Ancient secrets indeed, to bring all these old, powerful men so swiftly to arms. Even this vessel was something between a warship and a royal yacht, as the wide, forward facing windows with their armored shutters testified.

The Attik Main by moonlight was dark as an old grave and restless as risen lust. He watched the sea move as if lifted by a thousand submerged hands, and wondered whether land or clouds occluded the horizon. Within, all was as lush as man might ask, better appointed than a fine gentlemen's club, but still with that certain rough readiness of any ocean-going vessel.

The Thalassojustity treated its leaders very well indeed. Even the upper halls of the Planetary Society were not so nice as this, and at the University of Highpassage one would have to ascend to the Chancellor's estate to find similar quiet luxuries.

He could grow accustomed to the privileges of a thirty-second degree Thalassocrete, if only he better understood the associated duties.

After their initial conversation, Goins had pressed Morgan to provide his evidence and theories to several more audiences. Almost all of the men with whom he spoke were as engaged as the judge had been. No one was shocked, or even surprised.

He felt like a prophet speaking in tongues only others could understand.

Still, it was not his place to ask. Not when serious-faced men with sword-sharp eyes kept questioning him about everything from the construction of refracting telescopes to the proper maintenance of spectrographic analyzers. Oddly, none of them questioned his basic observations, or his conclusions.

It was increasingly clear to Morgan that he was telling some of these men a secret to which they were already privy. *That* was frightening. The rest simply took in what he said, then moved on.

Within hours, the ship was readied, and his impromptu seminars on astronomy, photography, and light had moved aboard *Clear Mountain*. Then suddenly, shortly after dusk, they were done with him. Everyone retreated to some meeting room belowdecks. Morgan was left to drink alone, attended only by a handful of solicitous stewards who went conspicuously well-armed as they brought him drinks, canapés, and cigars.

He'd never even learned any name but Goins'. He did not know where they were bound, or why. No one had told him anything. Only asked him endless questions, which had swiftly become repetitive.

The experience so far was in many respects much like being an undergraduate. Goins finally found him, somewhere near midnight.

"We will make landfall shortly after dawn."

"Where?" Morgan asked, not particularly expecting an answer.

"Thera."

The name sounded familiar. "That's near the Garden of Cycladia, yes?"

The Presiding Judge appeared vaguely pained. "Yes. A volcanic island under Thalassojushty jurisdiction."

"If I may be permitted a further question, why?"

"So we can show you something."

"All of you? There must be three dozen senior Thalassocretes aboard."

"All of us." Goins sighed. "This matter lies at the heart of our historical purposes. It must be witnessed."

This time, Morgan heard the grim tone in Goins' voice. Had it been there all along? "So close to one of the Gardens," he began, then stopped. His thoughts were tangled by the lateness of the hour and the alcohol, but there was a next link in this chain of logic that was decidedly unpretty.

"You are a very intelligent man, Dr. Abutti. Pray that on the morrow you are wise enough for what will come next."

With that, Goins departed. Lacking a stateroom, or even a bunk, Morgan kicked off his shoes, propped his feet on the ottoman, and proceeded to drink himself into sleep.

Valdoux was at the base of the mooring mast, negotiating with a small whippet of a man who managed to look furtive while standing still and empty-handed. The moon had risen, lambent through a veil of clouds that rendered the night sky into a dark rainbow. The scent of water rode the wind as well, harbinger of a distant storm.

Reluctantly dismounting from the steam car, Quinx dismissed the quadron and his device. The whippet, who had ignored the vehicle's chuffing approach, turned to take note of the priest. The man was another pale-skinned northerner.

Quinx was too tired to wonder why the airship captain surrounded himself with inferior servants. "Valdoux, dismiss your man and take me aboard," he said firmly. Where was Brother Kurts? "We have urgent business to attend to." *And I need to lie down*, he thought. From lifelong habit, he would never confess a weakness before others.

Such confessions were something Ion had never seemed troubled by. Somehow his oldest friend had still managed to become the Increate's vicar here on Earth. Quinx swallowed a shuddering breath that threatened to become a sob.

Tired, too damned tired.

"I don't think—" Valdoux began, but the whippet raised a hand to silence the captain. "Do you know who I am, Revered?"

"No," Quinx said shortly. "Nor do I particularly care."

"Perhaps you should care," the whippet said in a quiet, almost wondering voice. "For I do know who you are. I am all too sadly familiar with the mission of the Consistory Office. Once I was a novice, Revered, before being turned out upon the path of what you call the Machinists' Heresy."

"Then I sorrow for you, my son, that you have strayed so from the Increate. But still, I must aboard with Captain Valdoux."

"You will not go without me," the whippet warned. "A man in your hurry is always in want of weapons. I am master gunner of *Blind Justess*."

Quinx, who had apologized to no one but Ion in at least five decades, held back his next words. What this Machinist deserved and what the priest was in a position to mete out to the man were far different things. He had his priorities. After a moment,

he found suitable alternatives. "That is between you and the captain, master gunner. My hurry is my own, and all too real."

"Speak, then," Valdoux said, finally in voice again. "There ain't nothing you can say that I won't tell to Three Eighty Seven here. He's got to know what it is I hire us out to do."

"You are already hired," Quinx pointed out.

"Not to push off into the sky armed and rushing." Valdoux's eyes narrowed. "East, I reckon. I've heard talk of who took ship today and where their course was laid to."

Enough, thought Quinx. There was small purpose in fencing with these two. And he was exhausted besides. If they crossed him over much, he could have them taken on an ecclesiastical warrant later. The Thalassojustity would simply laugh at such paper, but the government of Highpassage recognized Church writ.

"Yes, east. I must to Thera, and quite promptly. And we should fly under arms."

"Afraid of pirates?" The thrice-damned Machinist was positively smirking.

"Afraid we might need to become pirates," Quinx admitted.

"Sailing into the red under the banner of Holy Mother Church?" Three Eighty Seven touched himself forehead, mouth, and navel; the sign of the Increate. "We should ever be so honored." He turned to Valdoux. "Are you planning to take this commission? Ninety Nine will be here shortly, but I must go see to the armaments, unless you think the churchman here cannot afford your hire."

Valdoux laughed aloud. "The Revered here could buy me out ship, sail, and shoes, if he set his sights on that. The question is whether I figure to take his coin." He winked at Quinx. "Best go to your station, master gunner. One way or another, we'll be playing at the hardest game soon enough, I reckon."

The whippet grinned and trotted up the stairway that wound foursquare around the interior of the mooring mast.

"There are no pirates, are there?" Quinx said. "Just airships and more airships."

"The lines on the map ain't visible from up in the sky." Valdoux cocked his head. "But someone of your experience can't possibly be surprised at what is true being hidden in plain sight."

"No one raids the Gatekeeper's air fleet, so the Gatekeeper's minions do not attend so closely to such matters as others doubtless must," the priest admitted. "Besides which, we have been disarmed these many years, and would be required to apply to the Thalassojustity for relief."

"*Their* borders are perfectly clear from above. More's the pity. Ain't too many would make such a fight as a Thalassojustity crew trained and ready for action." Valdoux squatted. "You look like the death of a priest. Even the Grand Inquisitor must sleep sometimes."

"This is the hour I would pass over into sleep, yes," admitted Quinx. As if it were not too obvious from his face, surely. "But I need you to take me to Thera, swiftly. And I need to be certain you will attend to my orders, should that become necessary."

"You won't have no say over my weapons. No one does. But I'll take you to Thera. We'll fly armed and ready." Valdoux paused, chewing his lip. Something warred within. Then: "I will also listen to your counsel, should we come to be fighting."

"And . . . ? There is always an 'and' at the end of such sentences."

"More of a 'but', I reckon." This time Valdoux smirked, while Quinx pretended to misunderstand the jest. "But I got to know why you want to chase after the Thalassojustity's biggest brass. All hot up and ready to fight, at that. This ain't something a thoughtful priest would be doing. Or even a thoughtless priest."

"I fear a great heresy is about to be unleashed. Tonight. Or perhaps tomorrow. And it may sweep the world. If I can reach one man aboard *Clear Mountain* and stop him, I may be able to halt a rising tide before the damage is done."

"Ain't no one stops the tide," Valdoux observed. "That's why I fly over the waters. Let the Thalassocretes argue with the waves. Storms don't trouble the top of the sky." He stuck his hand out. "I'll take you for a single silver shekel. That seals a contract. Learning what comes next will pay your balance. You're a mighty strange man, Revered, on a mighty strange errand."

"A shekel it is." Despite the process. Quinx was afraid he'd somehow got the wrong end of the bargain nonetheless.

"Look at it from my bridge." Valdoux grinned again. "Either I'll get to see the beginning of a tide that floods the world, or I'll get to see a lone man stop the tide. History before my eyes either way, no matter how the play lands. Or maybe you're a madman. Even so, I reckon you're mad with the entire power of the Lateran behind you. Watching that should be good sport, likewise."

Ninety Nine loomed out of the darkness at those words. Quinx was startled again—from the name he'd expected another Machinist, but not a female. She was clad immodestly in a tunic and sailor's dungarees.

Valdoux bowed her wordlessly up the tower. She favored Quinx with one cold, inquiring glance, then clattered upward.

He stared after her a long moment, trying to sort his feelings from his fatigue, then surrendered the effort and began the slow, aching climb himself.

As Quinx mounted the stairs, Valdoux called after him. "We sail under Manju rules now, Revered. Be sure you really want what you're asking after."

Quinx slept the remainder of the night away while *Blind Justess* set her course and left Highpassage ahead of the impending storm. He awoke to a pearlescent pink dawn gleaming through the tiny porthole of his tiny cabin. Most of the available space not occupied by his bunk was filled with Brother Kurts, who snored gently while sprawled upon the deck.

He could not remember ever having seen the monk asleep.

There was no getting up without disturbing the other man, so Quinx lay still a while and watched the sky shift tone from pink to blue. They would be heading very nearly into the sun, he realized, and surely not so far from Thera now unless the winds had been notably unfavorable.

Tiny though the cabin was, it had been appointed with the same odd combination of frugality and luxury as the rest of the airship. The paneling was some wood he did not recognize, doubtless a rare tree from the waist of the world. Brightwork and electrics ran across the walls like veins. Even the sheets were silk, which seemed a bit perverse.

Soon he realized he must be awake and about. Valdoux was mercurial, likely to take any number of strange actions in the absence of his direction. "Brother Kurts," Quinx whispered.

The monk's head snapped forward with a gust of garlicky breath. "Revered," he said, his hand falling away again from something beneath his robes.

A weapon, of course, though such was forbidden by the Galiciate Treaty. Kurts worked for Quinx, not the Thalassojushty. The Consistitory Office had its own requirements, for all that he must at times pretend to a long lost innocence as to means and methods.

"Everything is well, Brother Kurts. I must have some coffee, and mount to the bridge to consult with our fair captain."

"Six others aboard, sir," Kurts replied. "Two of them Machinists. The captain, his ship's boy from before. An engineer and his boy as well. The heretics serve as gunners and artificers, best as I can tell."

"I met one of them last night. He styled himself Three Eighty Seven."

"The master gunner." The monk nodded slowly. "Gunner's mate is a female name of Ninety Nine."

"I briefly saw her yesterday evening." Somehow Ninety Nine's dubious femininity seemed doubly blasphemous by the light of day, though in truth, Quinx was rapidly losing his capacity for surprise at what might transpire aboard *Blind Justess*.

"I doubt she will challenge anyone's virtue. She is both offensive and unlovely."

"And what do you know of a woman's loveliness, Brother Kurts?" Quinx asked with a small smile.

The monk was not amused. "As little and all as the Increate allows a man of my vows."

"Fair enough. I apologize for troubling you. But I must find my way to coffee before I become more trouble."

They slipped into the short companionway on this upper deck. Brother Kurts led Quinx the half dozen steps to the tiny galley. This was indeed a racing yacht, not intended for full meal service. Or really, any other full service. The coffee machine, however, was an elegant marvel of brass and copper, festooned with a maze of pipes and valves and small, decorative metal eagles screaming for their freedom.

It smelled like a slice of heaven.

"Truly the Increate did bless mankind when They caused the coffee bean to grow," said Quinx.

Kurts grunted, studying the machine for several long moments before launching into a rapid set of seemingly random manipulations that shortly produced a steaming cup of coffee so deep brown Quinx thought he might be able to see the reflection of last year's breakfasts in it.

Five minutes later, fortified by caffeine and a rather stale sticky bun of dubious provenance, Quinx headed for the bridge on the deck below. He was trailed by a bleary-eyed Brother Kurts.

"Good morning to you, Revered." Valdoux seemed as chipper as if he'd just had a week at a Riveran resort. The ship's boy was present, as well as another lad whom Quinx took to be the engineer's boy. To his profound relief, neither Machinist was on the bridge.

"Captain, the pleasure is all mine." Quinx slipped up to the fore, where Valdoux piloted *Blind Justess* with a wheel and a set of levers. Gauges were arrayed to either side of him, but before and sweeping down to his feet was a wall of curved glass. The pale green of the Attik Main loomed vertiginously below, the ripples of waves like crumpled foil.

An oblong island with a sharp-peaked central mountain lay before them. A small settlement nestled on one shore—the south?—dominated by its docks. The rest of the island was heavily forested. Clearly not settled, beyond whomever lived there to service the sea traffic.

"Thalassojushty territory," Quinx observed.

Valdoux made a tsking noise. "Ain't no airship masts. They're behind the times, our naval friends."

Quinx glanced sideways. "You hold no brief for the *Pax Maria*?"

"What do I care for the sea? The air is my place. They can't make neither peace nor war in the skies. And they ain't made no real effort to claim what power might be theirs up here."

"Where one grasp fails, another will reach," muttered Brother Kurts behind them.

"Exactly," said Valdoux. "And here is Thera, Revered. We overflew a fast ship on the water late in the night. I reckon they'll be here by midmorning."

"*Clear Mountain?*"

"I didn't figure on stopping to ask. But that does seem to be a sensible thing to assume."

How to proceed? Quinx badly wanted to confront this fool Morgan Abutti before more damage could be done, but the man had spent almost an entire day closeted with the senior Thalassocretes. A more focused assemblage of the powers in the world he had trouble imagining, short of another Congress of Cities and States being called.

How much harm had already been levied? Was the Externalist heresy loose for good and all? Or had the Thalassojustity seen through the madman and contained him?

Valdoux's voice interrupted Quinx' whirling thoughts. "No."

"No? No what?"

"I can't land you in force aboard *Clear Mountain*."

"That was not my . . ." Quinx let his voice trail off. He didn't know what he should do next. He thought quickly. "I would meet them at the dock. Brother Kurts will guard my back."

"With *Blind Justess* circling overhead? Or standing off?"

That took a long moment of consideration. Aerial force was not a strength of the Thalassojustity, especially not in this place. "Overhead. Awaiting my signal."

Valdoux reached down to the bottom of his wheel column and unclipped a fat-barreled pistol. "Fire this. I'll come down hot and fast, guns at the ready."

Quinx looked in wonder at the weapon in his hand. He'd never held a firearm before, any more than he'd ever held a viper.

Brother Kurts reached around and took it from him. "A flare gun," he explained. "But you can still harm yourself with it."

"Or someone else," Valdoux offered cheerfully. "A shot to the chest from that won't likely kill nobody, but the other fellow might wish it had."

"Give me back that flare, Brother Kurts," Quinx said, suddenly tired all over again. "Only I can decide when to use it."

The monk looked unhappy, but he returned the weapon.

It fit awkwardly within Quinx' robes. "Take me down," he told Valdoux.

"I can't land here. You got to go down by rope. I'll send Ninety Nine along to look after your safety."

Quinx' fatigue shifted to a sense of nausea, or perhaps outright illness. He would be confronting heresy under the protection of a female Machinist. Any priest who came before the Consistory Office with such a story would spend long months under the Question, or at the very least in quiet confinement to pray over his errors of judgment and resultant sins.

The expression on Valdoux's face made it clear the captain was testing Quinx. And Quinx knew that here and now, he held no leverage.

"Let us do this thing," he gasped, forcing out the words before the last tatters of his certainty vanished.

Holy Mother Church was infinitely patient. There was always a later. Even for a man such as Captain Valdoux.

Especially for a man such as Captain Valdoux.

The Thalassojustity has served for centuries as a check upon the powers of the Lateran. Church history documents a much earlier era when the Gatekeepers asserted economic, political, and even military dominance over many of the societies of the Earth. The aggressively secular founders of the Thalassojustity held no patience for the divine right that many of the kings and princes of Earth claimed for their power; and less patience for the generations-long schemes of the Lateran to con-

vert or subvert them. Indeed, there is considerable evidence that the establishment of the secret societies of the Thalassocretes was precisely a countermove against Lateran infiltrations as well as more overt cozenings of their rivals. For make no mistake: this tension between lords spiritual and the lords of the sea is two thousand years in the making, but neither of them has ever misunderstood who their true competition is. Should a significant number of the land-based states around the world ever achieve meaningful confederacy, the power of Thalassojustice and Church alike would be undermined much more deeply than anything either rival could do to the other.

From the introduction to *Common Interests, Uncommon Rivals*, P.R. Frost,
University of Massalia Press, M.2991, Th. 1994, L.6008

There was a great deal of excitement aboard *Clear Mountain* as they approached Thera. Morgan was not sure what the fuss was, as no one had paid him much attention since he'd finished explaining his thesis the night before, but he eventually padded out to the foredeck to find a number of the Thalassocretes staring at the clouds above the island.

Goins wordlessly handed him a set of field glasses. "See for yourself," the Presiding Judge growled. "Watch the cloud formation that rather resembles a camel."

Morgan scanned the sky, not seeing anything he would consider a camel, but pointing his instrument in the direction everyone else was looking. He caught a glint and sense of motion.

"Bastard's hiding in the cloud bank," someone else said, then cursed in a language Morgan did not speak, though the intent of the words was clear enough from the tone. "Airship?" he asked.

"Anyone care enough about you to chase you out here?" Goins made the question sound casual, but the rapid silence around them told Morgan quite clearly what was at stake.

"Not even my own mother," he said. "Not this place."

"Hmm." Goins sounded unconvinced. "The area is under absolute prohibition."

"Can you not force them down?"

"We don't even allow our *own* airships here."

"Mistake." That was someone behind Morgan.

"The question will be re-opened, you may be sure," Goins said loudly. "Unless it has been rendered irrelevant in the meantime."

"Why are we here?" asked Morgan. "Why do we care about an airship?"

Goins reached up to grab Morgan's shoulders. His fingers were vises, his eyes drills. "I am about to show you the deepest, darkest secret known to mankind."

"Me?"

"It is a puzzle, to which you may have found the key."

Morgan only knew one secret of his own, and he'd already shared it. "My photographic plates. The aetheric vessel at the libration point."

"Precisely."

"Precisely *what*?"

Another senior Thalassocrete snatched Morgan's arm even as Goins released him. "Precisely shut your yap and see what is to come," growled the other man.

It took Morgan only a moment to realize these very powerful men were all frightened.

Clear Mountain approached the dock at Thera at dead slow. Waves slapped her hull, while mewling gulls circled overhead. Someone waited at the end of the pier, but beyond them was a puzzling scene. Several people sprawled at the head of the pier, while two more stood guard, their backs to the sea. A smaller crowd clustered

inland, at the village, in a standoff with the guardians.

A fight had taken place, though Morgan could not imagine who would fight here, or over what. Not in this place. Presumably anyone here was in on Goins' great secret.

A great racket arose around him. Crewmen rushed to the teakwood foredeck with rifles. Two set up a Maxim gun on a pintle at the bow. Several relatively junior Thalassocretes were directing preparations for a possible offense.

Morgan debated going below, or at least retreating to the lounge where he could fortify himself with alcohol and be out of the line of fire. But Goins was at his side again. "This is *your* fault," the Presiding Judge said with a growl.

"Mine?" Morgan was astonished. "What does this have to do with me?"

"Everything." Goins gave him another of those long, hard stares. "What did you think would happen when you presented your evidence?"

"I dreamt that my reputation would have been made," Morgan said sadly. "The spirit of scientific inquiry is one of the most powerful forces known to man. With a bit of luck, I could have launched a generation of research."

"Fear is one of the most powerful forces known to man," retorted Goins. "And nothing inspires fear like attacking people's faith. Doesn't matter what kind of faith—faith in the order of the world, faith in themselves, faith in the Increate. And you, Dr. Morgan Abutti, are attacking all of those faiths."

Amid a swash of saltwater, *Clear Mountain* growled to a slow, rolling halt by the pier without any gunfire being exchanged. Goins didn't look to shore, just kept staring down Morgan.

"I . . ." Morgan's voice faltered. "No. People are better than that." His heart fell. "The Increate did not put us on this Earth so that we could pretend away the natural world."

"You, sir, have averred that the Increate did not put us on this Earth at all," Goins said. "And though everyone will cry you down for saying that, the damndest thing is that you are *correct*."

He turned and looked over the rail, at the man on the pier. Abutti looked with him to see a priest waiting. Two dozen rifles and the Maxim gun were trained down on the Revered, who seemed unperturbed. He stared back up at them, clearly identifying Goins as the authority aboard ship.

"If it is not the Presiding Judge," the priest called up.

Goins appeared positively sour. "Revered Quinx."

"*Quinx!*?" hissed Morgan. "The Inquisitor?"

"The Lateran refers to that as the Consistitory Office," Goins told him quietly. "And I know what that oily little bastard is doing here. I just don't know how or why."

Morgan nodded. "The airship your people were looking at."

"Do you have a Dr. Morgan Abutti aboard?" Quinx called up. "I am very much fain to speak with him if so."

"How—" Morgan began, but Goins cut him off. "Don't be an ass, man."

"Ah, I see you have him with you," Quinx said. "I would be much obliged if you'd set the doctor ashore for some private discussions with me."

"On whose authority?" Goins waved the riflemen to port arms.

"I could claim the authority of the Lateran, but our writ does not run here."

"No." This time Goins grinned. "Have a better offer?"

"Remember your history, Judge. Brother Lupan died not so long ago."

Goins shook his head. "This tale does not fly on wings of madness, Revered. It creaks atop the edifice of science."

"Are they truly so different in the face of the Increate?" Quinx stared at Morgan. The man's eyes were like steel, even from this distance. Morgan shuddered at the thought of being alone with him in a small room, under the Question.

"I . . . I have never denied the Increate," he shouted. "Nor did I intend to."

Goins jabbed Morgan in the ribs. "If you are so eager to treat with the Revered, I can put you ashore. *Alone.*"

Courage seeped back into Morgan's heart like the tide rising beneath a sandbar. "Bring him aboard."

"What?"

"You made me a thirty-second degree Thalassocrete. That means I have voice in this floating conclave. Bring him aboard."

"Well, well," said Goins. "Who realized you would have such backbone, Dr. Abutti? No, despite your entreaties, I believe we shall put you ashore. But in company. We did come here for a reason, in all good haste. I do not propose to abandon our mission for the sake of a chaffer with a single churchman, no matter how highly placed. As he is also a thirty-second degree Thalassocrete, the Revered may accompany us up the mountain and amuse himself in discourse with you along the way."

"Where?"

"To where the stars do not lie."

Abutti followed Goins down the gangplank. A line of armed men observed from *Clear Mountain's* rail, but no one among the assembled Thalassocretes or ship's crew objected when the Presiding Judge ordered them to stand down and remain aboard.

Morgan couldn't see how one priest would be so immediately dangerous, even this one. Still, people were sprawled at the head of the pier. Injured? Dead?

"Bilious," Goins said, shaking hands with the priest, then embracing him.

"Eraster." The Revered wore a grudging smile that bespoke the bond that only two ancient enemies could share.

"You know one another?" Morgan asked.

The priest turned to him. "The most powerful man in the Thalassojustity and the most feared man in the Lateran? Of course we know one another, Dr. Abutti." He extended his hand. "The Revered Bilious Quinx."

"Revered," said Morgan, shaking the man's hand. Though rather larger than Goins, Quinx was still a small man, in that compact way that suggested strength, even at an age that must be approaching seventy. His eyes were sea-gray, set deep in a face dark-skinned enough for any debutante's ball in Highpassage. He wore a cassock, faded with wear and laundering, but highly serviceable. A small silver Lateran orbicrux hung around his neck. He was otherwise unadorned with the Earthly riches that Morgan associated with high churchmen. "And now I am acquainted with the both of you."

"To our great mutual pleasure," Quinx said in a tone of voice that promised quite the opposite.

Goins nodded sharply, glancing down the pier. "Enough. We are on an errand of some urgency. Call off your men down there, and you may accompany us. If you simply must interview Dr. Abutti, feel free to do so on the march."

"Amid your mob?" Quinx' voice dropped to a very soft, easy threat. "I am far more accustomed to my own chambers, and *tools*, for such interviews."

"This island is *my* chamber, Bilious," Goins snapped. "I'll thank you not to soil it with my colleague's vital fluids."

"Oh, we gave up soiling with vital fluids generations ago," Quinx replied. "Our tools are more subtle now. The arts of the mind are powerful."

"Call off your men, or the arts of the mind will be powerless this day."

Quinx nodded, then walked up the pier toward his guardians.

"He's mighty energetic for such an old man," Morgan said.

"That old man is the sharp point of a very long blade. We do not fear him, but we have immense respect for his power."

Morgan thought for a moment. Then: "I am too young to remember Brother Lu-

pan. But I have read of him."

"They teach that in history classes now?" Goins sounded surprised.

"Not in public school, or even when I was working to my baccalaureate. But in my graduate days, we covered him in a seminar on science, myth, and the public mind. The book about him was in manuscript. It had not yet passed before the censors."

The Presiding Judge snorted. "I marvel that you learned nothing from that." Ahead of them, the priest had reached his deadly minions. Goins tugged on Morgan's arm again, a habit that was quickly wearing in its novelty and charm. "We go now."

They walked up the pier, followed by a parade of Thalassocretes and servants. Approaching Quinx, who was deep in hurried converse, Morgan was shocked to see that his servants were a pair of white people—a hulking, brutish male and a hard-looking female.

She glanced up at him. Her eyes were reptile cold, and seemed preternaturally alert. *Danger*, they said, though Morgan had never thought to encounter such menace in any woman born.

His capacity for astonishment had been played out. "Strange company the Reverend Quinx keeps, for a priest."

"Oh, the Lateran is blind to the color of a man's skin." Sarcasm ran thick as mud in Goins' voice. "But I cannot possibly explain the woman, given the Church's view on their proper role in society." His hand dropped, flickering through a quick series of motions signaling someone behind them.

"What of your people?" Morgan pointed toward the bodies beyond.

"There will be a reckoning," Goins said. "Quite soon. But not in this moment."

The priest and his servants hurried ahead of them, so that Morgan was the first of the Thalassocratic party to reach the downed men. They were four, two with broken necks and the pallor of death upon them already, the other two groaning and bloody.

He bent to look, but a squad of sailors pushed past him, a pair of them medics with canvas bags bearing the Red Orb.

Morgan straightened again and followed Goins.

Fuming, Quinx fell into step beside the heretic Abutti. They were already well above the tiny dockside village, following a path that was not much more than a goat track up the slopes of the island's central mountain. He could do little about whatever foolishness Goins had in mind. The closer they came to the top of the mountain, the closer they were to rescue—or brute force—courtesy of *Blind Justess*. Brother Kurts and the woman were under close guard behind him, but the Thalassojustity party did not seem to be armed.

When this business was over, all he needed was a shot from the flare gun. And perhaps a convenient fall for Dr. Abutti.

"Revered," said the heretic. Polite but nervous.

Quinx had a lifetime of working with those cues. "Dr. Abutti." And to hell with the listeners crowded not so subtly close around them.

The path ahead narrowed to little more than a foot's width, rising sheer on the left and dropping sheer on the right. A chain was fastened to the rock, to which the party clung as they climbed. Almost thirty of them, strung out like flies on a wall.

"H-how may I be of service to you?"

Quinx took the matter by the knob. "This is a complex affair. Much history and passion is caught up in what I understand you are even now pursuing. I would have liked to invite you to present your findings at the Lateran before making your thesis public."

"I am not yet so public, Revered." Abutti sounded oddly sad. "I was ejected from the Planetary Society. And, well, these Thalassocretes are not so indiscreet with their confidences."

Honeyed words flowed from Quinx' lips. "So you are saying we could put this affair to rest without widespread comment?"

A moment of rough breathing and dizzying fear as they crept around a bulge in the side of the mountain. Then Abutti responded. "Would that be a permanent rest for me, Revered? I saw those men at the dock. I know who you are in the hierarchy."

"No fool you," Quinx replied. "To be blunt, you have poked your telescope into matters much better left undiscussed. Externalism is no trifling affair."

"So I've been told." Abutti's breath huffed a bit. "Should you wish your thugs to shove me off a cliff top, Revered, I surely cannot stop you. But I am not the only astronomer on Earth with a telescope. The facts will out. Even your Increate cannot deny this truth written in the skies."

"My Increate?" Quinx was both amused and frustrated by the assumptions embedded in that phrasing. "And yes . . . I can hardly ban telescopes across the world. Regardless of whatever you think your truth is."

Abutti stopped, turned back to Quinx, clinging to a stanchion as pines whispered in the wind hundreds of feet below him. "Do you not know what I have found?"

"Not precisely, no," Quinx admitted. "And in fact, it does not matter. You seek to unseat the holy truth of the Increate and reinstate the Externalist heresy. That is enough for me."

"You accuse me of ecclesiastical crimes when all I pursue is the objective truth!"

"Move it along," shouted one of the Thalassocretes from behind them. Abutti turned and hurried along to where the path widened to a ledge, then waited in ankle-high grass for the priest to catch up.

Quinx did, breathing hard as much from the stress of the heights as anything. "Do you not fear I will toss you off myself?" he asked, glancing past Abutti at the slope beyond.

"No. Men like you do not toss people off cliffs. You have people tossed off cliffs. That's why you have that monster monk and the dreadful woman." Abutti paused, obviously chewing on his next words. "Not so long ago, you would have had a tall stake and a hot fire awaiting someone like me."

"Holy Mother Church never burned anyone," Quinx replied, stung.

"No, you merely passed sentence and had the secular authorities carry it out. I have trained in logic, Revered. I know who holds the responsibility there."

A line of Thalassocretes pushed past them, though both Brother Kurts and the woman were pulled aside by their guards rather than go ahead of Quinx and Abutti.

"When one raises rebellion against the Increate, one bears responsibility for one's penalty."

"Rebellion against the Church is not rebellion against the Increate," Abutti grumbled. "And I raise neither. Only truth."

Quinx had no answer to that, but he knew he had the measure of this man now. Smart but weak. Too willing to be turned aside.

Still, the astronomer had the right of it. There *were* more telescopes in the world.

"What did you find?" he asked as they began following the line of march again, finally drawn back to the question despite himself.

"Evidence of an aetheric vessel." A stubborn pride swelled in Abutti's voice. "The Increate's ship of space, that brought us to this world."

"I do not believe you," Quinx replied. "Simply not possible."

"Then why are we tramping up the side of Thera?"

They both looked ahead, to where Goins was long vanished at the head of a receding column of Thalassocretes variously in their blue-green robes and khaki excursion wear.

Archaeology represents one of our greatest challenges in unraveling the mysteries of the

human experience. Geology tells us much about the age of the world, and through the sciences we understand that the Creation narrative of the Librum Vita is a grand metaphor for the natural processes of the universe. Yet archaeology shows us a literal view of the Increate's placement of human beings upon this Earth. How to integrate the inarguable inerrancy of the Increate's word with the interpolations of the geological sciences remains one of the greatest doctrinal challenges of our century, and perhaps centuries to come.

—His Holiness Lamboine XXII, Posthumous Commentaries

Morgan drew away from the priest as the group summited the crest of Thera and began clambering down into the crater within. Quinx' retainers, for all that they were under guard, frightened him. He was certain that at a word from the Revered, the two would tear free of their bonds and throw him from the cliffs.

Goins gathered his group in a sloping meadow a few hundred feet below the rim. Already the Presiding Judge was talking, urgently and low. Not an exhortation. Morgan hurried to catch up and hear. They knew *his* evidence already, everyone who had been in the lounge of *Clear Mountain* the night before.

Whatever Goins had to show them here fit with Morgan's own work like a ratchet into a gear.

"... passed into our trust with the foundering of the Bear Cult at Truska."

Thalassocretes nodded in return.

"Only certain among you know anything of this secret. None of us, not even me, have ever come to this place. Even those who maintain the upward path along the outer face of the mountain are forced to spend their lives on this island." His voice dropped. "Until Dr. Abutti's telescope opened the heavens to our eyes, this was without doubt the deepest truth upon this Earth. Brother Lupan had the right of it."

"The Increate's Chariot?" Quinx stepped up next to Morgan. "A ridiculous fantasy embedded in a foolish heresy."

"A truth, embedded in the heart of each of the Eight Gardens," Goins replied, his voice booming now. "I give you the Chariot of Cycladia."

He turned, walked across the meadow, and began tearing at the vines that draped a grove there.

Quinx reached into his robes and pulled out a firearm. A fat-barreled gun. Morgan stared a moment, incredulous, then tackled the priest as he raised his weapon and fired it into the sky.

The next few moments were blinding confusion. Something hissed high before popping—fireworks? Shouting echoed around Morgan as the enormous monk and the woman with him broke free of their guards as he'd feared. Morgan stumbled back to his feet, fleeing the priest and the lopsided fight behind him toward the dubious safety of Goins and the Thalassocretes who were tearing down plants to reveal a mottled wall of . . . something?

Engines strained overhead as an airship circled low in the sky. He looked up to see a narrow bag with a knife hull beneath. Copper lances protruding from the hull crackled with visible energy.

Morgan ran toward the Chariot. "Judge Goins, we are betrayed!"

Goins turned, stared into the sky a moment, watching in apparent disbelief as lightning forked across the heavens to ground into the trees behind him with a series of explosive cracks. He began to laugh as smoke rose. Now his voice boomed like a parade sergeant's. "Quinx, you are a greater fool than even I thought. Do you doubt the Increate's Chariot can defend itself?"

Another bolt lanced from the airship, striking down half a dozen shrieking Thalassocretes in a groaning mass. Quinx scuttled toward Goins, trailed by his dangerous guardians. Above them, the airship strained lower, barking bullets that sprayed across

the meadow in a scythe of flying dirt that somehow claimed no lives on the first pass.

The flash of light erupting from the trees blinded Morgan for a moment. A sizzling noise followed, which terminated in a thunderclap. He rolled over, rubbing his eyes, to see the airship aflame and lurching toward the other side of Thera's crater. Quinx was still on his feet but stumbling. The monk was down, while the woman howled at the sky a long moment before rushing toward Morgan and Goins.

"You are all mad," the doctor shouted. "All of you!"

The woman headed straight for him. Her eyes glowed with a death-madness that Morgan had never before witnessed, having only read of such things in his scientific romances. Goins simply stood, staring down a hundred and fifty pounds of racing anger. Above them, something exploded aboard the airship.

Still running, the woman caught up to Quinx, grabbing the priest by the arms. She continued to sprint toward Morgan and Goins, carrying the shuddering Quinx over one shoulder. Instead of plowing into them, she pulled up short, her breath a bellows.

"Show me the Chariot," she demanded. Her voice was a deep, threatening growl. Behind her, the monk arose and stumbled toward them.

"Who are you to ask?" Goins asked.

"A Machinist." Her voice was a growl. "This is my future. The future of my faith."

"The past," Morgan said, correcting her. "The future is coming in the sky."

Behind them, the mottled wall whirled. He turned to see a section slide upward to create an opening. Faint crimson light glowed beyond. The airship crashed in the distance with another whoosh of flame and heat.

The Machinist continued to stare them both down. "My lover is dead, as is my captain. You allowed them to die. You owe me this."

The monk caught up to her, tackling her from behind with his hands spread wide to catch her eyes and the edges of her mouth. The woman dropped Quinx, who bit off a scream as he hit. Then she bent to seize the monk and wrestle him to the ground in front of her.

He bounced up, obviously rattled, but ready to engage. Goins tugged Morgan's arm. "Back," he hissed. "This is not our fight."

"None of this is *my* fight," Morgan growled.

Goins tapped the wall of the Increate's Chariot. "This is one of eight aetheric ships here on Earth. You have found their origin, the great ship that is their mother. You were right all along. Do you now doubt that our history is coming home in the sky, from your libration point?"

"No, I do not doubt." Behind them, a screech. The monk and the Machinist were circling dangerously as Quinx staggered to his feet.

Strangely, Goins was ignoring the battle, focusing his entire attention on Morgan. That in turn drew Morgan's gaze back to the judge. For all his curiosity, he was terribly loath to step within. He hadn't wished to be *this* right, to confront the meaning of his discovery so personally. "But I did not summon it."

"Then who did?" the judge asked impatiently.

That, in a moment of inspiration he could answer. "All of us. With our telelocutors and our airships and our engines, sending rays of energy into the aether as surely as if we'd lit a bonfire in the night. If this Chariot knows enough to defend itself, doubtless the mother ship can watch our Earth for us to rise high enough to see it in return. We have had electrification for a generation. It can see that."

With a flicker of his eyes, Goins drew a gun of his own and shot past Morgan in one motion. Startled, Morgan turned to see the monk falling to the ground, his face bloody. The woman was on her hands and knees. Quinx lurched slowly toward the two of them with a slightly unfocused look on his face.

The Presiding Judge handed the pistol to Morgan. "You choose. The past, or the future."

Morgan promptly dropped the weapon into the grass. He'd wanted the truth, by the Increate, not such a mess of power and violence. "I am a *scientist*. I do not have people thrown off cliffs."

Quinx reached for Morgan's hand. "Ninety Nine," he gasped. "Brother Kurts. Please . . . Stop it. You didn't need to do this."

The Machinist shuddered to her feet. One eyeball was gouged loose, and her mouth bled. Morgan glanced at the dying monk and wondered just how tough a human being could be.

Her eyes were no longer mad. Instead, they were haunted. "Stop," she said, echoing Quinx' words.

"Go," Morgan replied. He had just lately learned the measure of his own courage, and was not sure he could step into the chariot himself. "Go into the future. It cannot be stopped. The stars do not lie, and they are coming toward us."

"They are my stars." She stared at them with her remaining eye. "Ours. Not yours."

The woman stumbled weeping through the opened door. Quinx turned away from Morgan. "It cannot be," the priest gasped. "I must go where Ion has already led." Face twisted in some inner agony of the spirit, he followed after her.

"And you?" asked Goins. "Do you choose the future as well?"

Afraid, he stood unmoving a moment. Then: "I would have thought to . . ." The doctor's words ran out as he marshaled his thoughts. "No. I've come to understand that the future is here with us. Whatever comes, comes."

Morgan Abutti looked up at the smoke trailing into the blue sky from the ruined airship. Goins squatted next to him, pistol still in hand. The door into the Chariot had slid shut.

"What next?" the scientist asked.

"Surely the Increate knows," said Goins.

"Quinx would have said that the Increate knows all." Morgan thought about those words. "It seems to me that They do not think to warn us of the truth."

The remaining Thalassocretes gathered around. Some tended the wounded and the dead, others discussed the advisability of sending a party to look into the crash of the airship.

The Chariot began to whine, a low hum that built slowly in volume. Goins rose, gestured for a general retreat. It seemed wisest.

Morgan was slow to move, staring at the chance of greatness that he'd abandoned. He was the first to see the Chariot break from the trees and rise into the sky. The rest stopped to watch as clouds of dust and steam spiraled beneath it.

"Good luck, Revered Quinx," muttered the doctor.

Goins tugged at his arm. "The choices are made. You were correct. We must go."

"You have it almost right," said Morgan. "*His* choices are ended. *Ours* are just begun." His courage returned to him once more, like a whipped dog coming home. "This is what I get for uncovering the truth. What I had declined to see clearly before. There are great consequences to be accounted for." He glanced away from the departing chariot. "Are you ready to face those, Judge? I am."

"Remember, your aetheric vessel was coming anyway, whether or not you had seen it first. You did not cause this." Goins paused a moment, searching Morgan's face as if for some truth. "Science finds the path where the light of faith has shown the way."

Morgan could not tell if the judge meant to be ironic or not. That did not matter. He patted the other man's shoulder. "Let us go, then. There is work to be done."

Above them, the future rose ever higher, shedding six thousand years of mud and plants and tradition as it climbed to meet the oncoming stars. ○

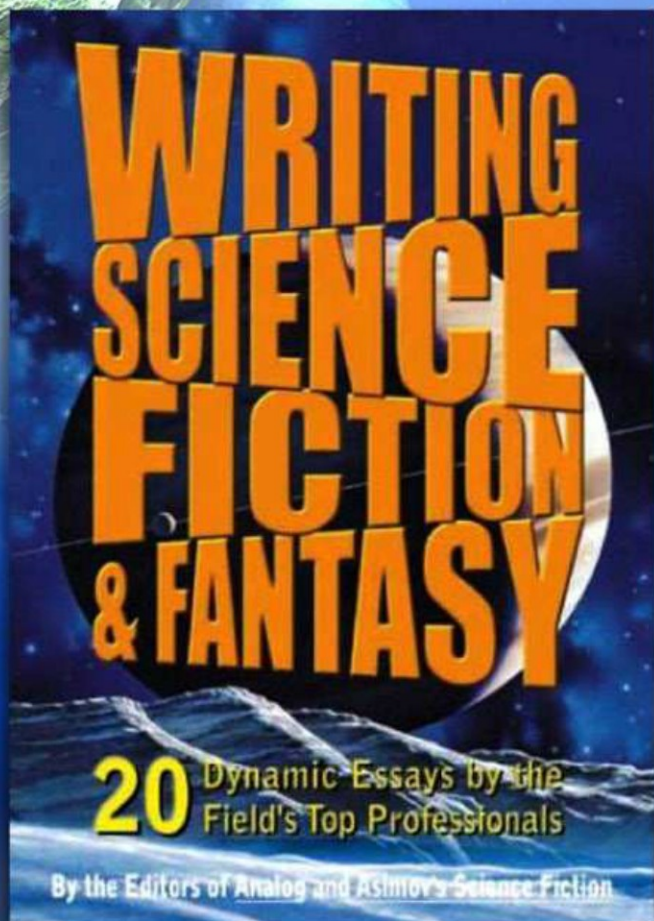
Copyright © 2012 Joseph E. Lake, Jr.

From the editors of *Asimov's* and *Analog Science Fiction*

Practical writing advice for writers of all levels...

**BUY YOUR
COPY TODAY!**

[CLICK HERE](#)



MEETING THE OTHER

THE NIGHT SESSIONS

by Ken MacLeod,

Pyr \$17.95

978-1616146139

THE RESTORATION GAME

by Ken MacLeod,

Pyr \$16.00

978-1616145255

THE GAMES

by Ted Kosmatka,

Del Rey,

\$25.00

978-0345526618

BODY, INC.

by Alan Dean Foster,

Del Rey, \$15.00

978-0345511997

THE HUMAN BLEND

by Alan Dean Foster,

Del Rey \$15.00

978-0345511980

Decades ago, I was invited to dinner at the house of Theodore and Wina Sturgeon in Los Angeles with Marvin Minsky, whose life work and passion was and still is the creation of Artificial Intelligence, and inevitably the table talk turned to the subject thereof.

Minsky was convinced that sooner or later he and his team at the MIT Artificial Intelligence Laboratory or others working in the field would succeed in producing a program running on a computer that would not only achieve intelligence, but eventually intelligence that would surpass that of homo sapiens. That yes, we could create an intelligence greater than our own that would supercede us as the crown of terrestrial creation.

"But Marvin," I asked, "why would we want to do such a thing?"

"Because," he said, "it's consciousness that counts, not the physical matrix."

Minsky would go on to develop a complex theory called the Society of Mind that may or may not be a convincing explanation of how the pattern of patterns we call the "mind" arises in the physical matrix of the brain. He even wrote a science fiction novel with Harry Harrison called *The Turing Option* about an "intelligent" robot.

And Vernor Vinge and his scientific and science fictional acolytes, following in Minsky's footsteps, have championed the concept of the Singularity.

The idea being that we will inevitably create an Artificial Intelligence within the physical matrix of a computer that not only supercedes humanity's level of intelligence and speed of thought processes but is capable of then creating a second generation Artificial Intelligence superceding its own with even faster thought processes. Which in turn does likewise in creating the next superceding generation, and the one after that, and so on, and so forth, faster, and faster, and faster along an upward asymptotic curve approaching infinity as a limit, until the so-called Singularity is reached, in which Artificial Intelligence transcends "physical" reality and exists in a hypereality that mere humans can neither enter nor comprehend, and we either go extinct or become the pets thereof in virtual realities created for the purpose.

But why would the human race, after the end result of starting such a process has been so puissantly explicated by the devotees of the Singularity, set it in motion in the first place?

The only answer they seem to have, when they have any answer at all, is

more or less the same as that of Marvin Minsky—because it's intelligence that counts, not the physical matrix.

But why?

Can an Artificial Intelligence existing as an immaterial energy pattern in a material matrix be a "being" or never anything more than an emulation thereof?

Is "intelligence" "sentience"? And is "sentience" "consciousness"? And is "consciousness" . . . "soul"?

Well, the AI scientists and engineers are making some baby step progress in creating software that can learn and create decision-making processes from inputted raw data that in some respects are superior to our own, such as the stock and derivative trading programs that make trades and moola in nanoseconds.

Intelligence, all right.

But can such intelligent programs, no matter how intelligent, become *sentient* in the manner that a dog, or a cat, or even a lizard or a fish or a snail is sentient—that is, possessed, of sufficient sensory awareness of the environmental surround and sufficiently sophisticated tropisms to react to it "emotionally"?

And even if such sentient programs can exist, can they become "conscious," "self-aware," meaning aware that they *have* "selves" to be aware of? And even if they are self-aware, can they be self-motivated, meaning making choices on the basis of emotional wants and/or moral judgments?

Meaning possessed of at least some degree of free will, rather than being deterministic machines of the bits and bytes.

Meaning "beings" with . . . "souls"?

What does all this have to do with science fiction?

Ask not what these questions have to do with science fiction, ask what science fiction has to do with these questions, and the answer becomes obvious. Such questions have always been central thematic material of science fiction, and more and more so as the literature evolved more and more sophistication in philosophical theological depth and the literary skill to tackle them, and as science and technol-

ogy have progressed in bringing them more and more front and center in the current real world and the real world to come.

Aliens. Mutants. Robots. Androids. Monsters. Virtual intelligences of the bits and bytes. Surely nothing has been more central to the thematic heart of science fiction than the confrontation of the human consciousness with the Other, and the question of whether the Other is or can be a self-aware moral being like Us.

Dr. Frankenstein's creation, Mary Shelley's fictional character in *Frankenstein*, cobbled together from bits and pieces of dead humans and brought to life by science, is a physical monster in human eyes and even in his own. And yet in the novel, and even the better of the endless movies, he struggles to become a moral being, fitfully capable of love and wounded by rejection, possessed of sufficient self-awareness to be tormented by his own horrid ugliness in human eyes and the rejection as the Other it engenders, and ultimately driven into evil and self-hatred by it.

Brian Aldiss has made a good case for *Frankenstein* as the first true science fiction novel, and in those terms it is. However, dumbed down, stripped of its moral complexities and subtleties, its sympathy for the Other, its ultimate tragic theme, it has become a schlockmeister template for over a century's worth of bug-eyed monster, tentacled alien, evil and/or deformed mutant stories, whose lack of its sympathy for the Other is the antithesis of what Mary Shelley's original is about.

But toward the second half of the twentieth century, at least, the knee-jerk equation of the physically ugly Other with the morally and spiritually repugnant Other has pretty much gone the way of racism and sexism in anything but the most simple-minded schlock.

In works like the first two novels of Alan Dean Foster's "Tipping Point Trilogy," *The Human Blend* and *Body, Inc.*, the physically alien are not the Others, they are entirely Us.

I must confess that prior to reading *Sagamanda*, which I reviewed enthusi-

astically in these pages, I overlooked Alan Dean Foster as a serious novelist. This was mainly because of the novelizations of media properties he had written and for which he was therefore most widely known, even as I am most widely known for writing the iconic classic *Star Trek* episode "The Doomsday Machine" in certain circles, twenty-five or so published novels or not.

But something about *Sagramanda* drew me into it. Reading it opened my eyes in regards to Foster's literary and extrapolative skill when he got serious, so I read *The Human Blend* as soon as I received it, somehow overlooking the fact that it was the first novel in a trilogy until fairly close to the end, when it was too late.

Too late because I loathe being sucked into a story that I find engaging only to be left hanging in mid-air with a case of the literary blue balls, and having to wait months or even years for the next installment, and again for the conclusion, assuming there is ever going to be one.

Nevertheless, *The Human Blend* hooked me. While in *Sagramanda* Foster had demonstrated his impressive ability to immerse a western reader in the extrapolated future of an "alien" civilization, that of India, in the relatively near future of *The Human Blend*, and even more so in the sequel, *Body, Inc.*, he does much the same thing for the multicultural globalized world civilization.

In this relatively near future, global warming has transformed the climate, the geology of the seacoasts, and so forth, but not in an apocalyptic manner beyond the ability of human civilization to adapt. Foster, a seasoned world traveler, does a masterful job of creating local geography, physical environment, and street level culture, thereby cleverly evoking the complexity of the whole, in Savannah, USA, in various locales in Southern Africa, in who knows where in volume three.

This is a future not that much different from our present in most aspects; powerful multinational corporations and their machinations, big gaps between wealth

and poverty that differ locale by locale, modestly advanced technology, popular cultures not disconnected from their ancestry in our present, and so forth.

A rather familiar and comfortable future for the contemporary reader of science fiction. Except for one technology not uncommon in the literature that usually makes the contemporary reader queasily uncomfortable and is usually meant to, namely extreme body modification, via which we have not only met the Other and they are Us, but we have made ourselves so.

Now this sort of thing has been a staple of science fiction for at least a decade or so, and you need only wander certain precincts in modern cities or the hotel halls of science fiction conventions to see that tattoos and piercings have become far more commonplace than they were before the final decade or so of the twentieth century—and, at least when it comes to piercings, a lot more extreme. So it would seem inevitable that science fiction, and particularly science fiction of the (anything) punk variety, would extrapolate from this to voluntary mods of the human phenotype itself for utility, fashion, and the hell of it, and that's what Alan Dean Foster has done here.

In this not-too-far future, the human body itself can be modified almost limitlessly, given the organs, limbs, tentacles, skin, hair, fur, scales, dentition, whatever, of any animal, or the previously nonexistent. And not by genetic engineering that would have to be done prior to birth, but to pre-existing adult bodies, and not once, but as many times as you wish, as long as you can afford the additional mods.

How this can be possible is pretty rubbery science, and Foster wisely doesn't try to get too deeply into it. But this is, after all, science fiction, and there's no real problem with taking it as a given.

The two protagonists and viewpoint characters of *The Human Blend* and *Body, Inc.*, and no doubt of the third novel to come, are Dr. Ingrid Seastrom, a "Natural"—that is, one of the peculiarly

conservative minority who eschew body mods even when they can easily afford them because they sort of find them icky—and Whispr, a street thug and very petty wheeler-dealer who has paid for extreme thinness and a tinkered metabolism, but would like to be able to afford more.

Through various schticks of story and fortune, Ingrid and Whispr come into mutual possession of a mysterious item purloined from SICK, a powerful and unprincipled transnational corporation. This item's use is unknown and its quantum physical nature should not be possible. The quest for understanding of it motivates Ingrid, while the ruthless lethal means being used in attempts to retrieve it convinces Whispr that it must be worth mucho dinero.

So the first two novels of The Tipping Point trilogy—and by the cliff-hanger ending of *Body, Inc.* probably the third—are about fugitives on the road of flight, fleeing from those after what they are holding while seeking to find out just what that is, from Savannah to various venues in South Africa, wild, urban, and in transit. They are ultimately pursued by Napun Mole, the stone-cold hired hitman of SICK whose mission is to retrieve the item, upon which retrieval his pleasure will be to kill them.

A series of teaser partial revelations, chases, and escapes has been the plot structure of two novels thus far, and their weakness. Particularly of *Body, Inc.* since *The Human Blend* benefits from the complexities of the set-up, whereas the second novel reads something like *The Fugitive* (the TV series, not the movie).

And story devolving into formula is one major generic weakness of the trilogy, let alone the open-ended novel series that trilogies tend to devolve into. The other major weakness of the novel series is a paradox that is impossible to avoid, nor does Alan Dean Foster avoid it here.

How can he? How can any writer? It's a paradox as implacable as Napun Mole. The longer a novel series goes on, the

more back story it accumulates, the more back story one has to shoehorn into the ongoing narrative in order to make it comprehensible to anyone who hasn't read what has gone on before. Doing so not only bogs things down for those who have, but makes it harder and harder for the character-based aspect of the story to evolve.

So why is it, you may well ask, that despite all that, I found the reading of *The Human Blend* and *Body, Inc.* frustrating but enjoyable, and will no doubt read the third novel, too?

Because those are the flaws of the novels, but the strengths of the novels lie elsewhere and are considerable.

For one, Alan Dean Foster, the world traveler, is wonderfully inventive and wonderfully entertaining at rendering realistic and vivid the entirely three-dimensional futures of varying specific cultures, and their relation to their natural surrounds. And Foster the hardcore hard SF craftsman when he wants to be is quite formidable in making the tech, the architecture, and the gizmos surprising, but credible in retrospect.

World-building this is called, of course, and when the fictional world-builder is a seasoned world traveler like Alan Dean Foster, who is thoroughly and enthusiastically familiar with the cultural, ecological, and geographic multiplexities of the real world in realtime, the depth, detail, and emotional connection of his fictional one becomes something special.

And for another, Foster is doing something different, or at least quite rare, with the emotions and esthetic reactions evoked in the reader by all these extreme body mods. Science fiction presenting bodily modified humans in a positive light has not exactly been unknown, but it has usually been portrayed as done for practical adaptation—to zero gravity, to breathing water, to the surfaces of alien planets and moons, to hard vacuum, and so forth—and it usually results in homo sapiens branching out into a clade of different species, for better or for worse, and more often than

not with alien consciousnesses and cultural agendas.

"We" become collections of "Others."

But here, though body modified humans are more common than Naturals in Foster's fictional terrestrial future, and the mods are often enough done for career, work, or other practical purposes, just as often body mods are done for reasons of style, personal obsession, or fashion, much as people in today's real world choose their clothing, bling, tats, and piercings.

And by making them ubiquitous, Foster eventually shifts the bod mods into the background, makes them seem mundane and ordinary, makes Whispr and the various minor physically alien characters seem like just plain folks, *Us*, rather than *Other*.

Or rather, perhaps, the other way around? Perhaps by making these physically *Other* beings possessed of quite familiar brands of consciousness, and personalities, he is making a point, which may be a central thematic point of the trilogy.

Namely, a strictly protoplasmic version of Marvin Minsky's declaration that it's the consciousness that counts, not the physical matrix. That it is a monstrous *consciousness*, a *moral* monstrousness—an *evil* consciousness in plain blunt English, that makes a monstrous being monstrous, the *soul*, if you will, not the body.

Philip K. Dick told me that in the process of doing research for *The Man in The High Castle*, his alternate history novel in which the Japanese Empire and Nazi Germany won the Second World War, he came upon a letter a Nazi concentration camp guard had written home to his wife complaining that his sleep was being disturbed at night by the cries of children. Not *emotionally* or *morally* disturbed at all, but the sounds were quite a nuisance.

"There are creatures walking among us who look human, but are not human at all," said Phil.

They look like us but they are really the *Other*.

If you actually ran across Whispr in the subway, or any number of the bit players, you would probably regard them as quite alien creatures, but actually their personalities and consciousnesses are generally ordinary and familiar.

But while Napun Mole, the relentless pursuing nemesis, is modified to the gills with internal weaponry and sensory equipment, his outward appearance is deliberately that of a somewhat doddering and harmless old man. And Foster has made this antagonist his third viewpoint character, so that the reader knows what all too many of the characters he encounters do not know until it is too late, that hidden within plain sight is a sadistic psychopath, a hideous moral monster.

Am I reading too much into the first two installments of Alan Dean Foster's trilogy? Maybe on one level I am—something neither I nor any other reader can know until the story is completed. And let us hope that *The Tipping Point* *will* be a trilogy with a proper denouement, not an open-ended series.

But after all, on another level, you can't be reading too much into a work of fiction if you might be getting more out of it than the writer may have intended. *Au contraire*. Speaking as a writer of fiction myself, that's not a presumption on the part of the reader, that's a success devoutly to be wished for on the part of the writer.

Maybe as a critic, I'm about to do it again, with *The Games*, a first novel by Ted Kosmatka. But speaking as a critic, is it really an insult to the writer to get something out of his novel that he just might not have intended or realized was there? Isn't assuming that you know more about what he was about than he did a cardinal critical sin?

The Games opens with a short prologue from the point of view of Evan, a seemingly autistic-cum-dyslexic young boy with certain vague mental prowesses being tested and evaluated and eventually taken from his mother for specialized institutionalized upbringing. Then the novel proceeds to Part I, Chapter One,

Distant Thunder: what appears to be, and in a certain sense is, the build-up to a fairly conventional monster movie in prose fictional clothing.

"They conceive trouble and give birth to evil; their wombs fashion deceit," Kosmatka quotes from the Bible.

Yes, they do.

In this near future, a Gladiator competition has become the feature attraction of the Olympic Games. Nations use advanced recombinant genetic synthesis technology to create monsters as their champions. These things really *are* monsters and forthrightly intended as such, and the more powerful, bloodthirsty, vicious, and hideous, the better. The only rule is that no human DNA may be included in their genomes. They are quite literally evil incarnate, genetically programmed to have no other motivations but to feed and to kill.

The Gladiator Competition is literally a process of elimination, a protoplasmic demolition derby. Bout by bout, these National Monsters fight to the death until two of them reach the final and fight to the death for the Gold Medal, after which the winner is slaughtered.

The lead male viewpoint protagonist is Silas Williams, the scientist in charge of creating and preparing the American Gladiator for the latest Olympic Games. The lead female protagonist and viewpoint character is Vidonia Joao, the xenobiologist called in when the American Monster proves far more uncontrollably monstrous than bargained for. The heavy viewpoint nemesis is Stephen Baskov, the ruthless head of the US Olympic Commission.

The threadbare excuse for creating these monster Gladiators to battle to the death in a latter day Roman arena is that it advances the genetic technology needed to create them, which serves the cause of medical advances. Actually, of course, it's really about national chauvinism, like World Cup soccer, and corporate greed.

But hey, these monsters are just mindless protoplasmic killing machines,

unable to reproduce, the sole survivor done away with after winning the Gold Medal. So who gives a damn, no problem, right?

Well, of course, wrong. You pretty much know early on that Williams & Co. are going to create an uber-monster that's going to be more than the best-laid plans of mice and men can handle, that it's going to escape and do a Godzilla act, that Silas and Vidonia are going to become an item during their perilous quest to destroy it before it can destroy humanity, and so forth, and that doesn't turn out to be exactly wrong.

However. . . .

While these bare bones of the plot line may be all too familiar, and while the characters may seem a bit generic, Ted Kosmatka is first-rate and quite sophisticated when it comes to the genetic engineering and science involved. And the science itself is not only central to the action of the story but also to its characterological aspects, and in the end to a surprising and suddenly much deeper moral and philosophical epiphany and turnaround at the denouement that I am going to find difficult to discuss without giving away too much.

But I'll give it a try.

Gladiators are synthesized by copying genetic sequences from various savage beasts as computer data, resequencing the DNA to produce the desired monster, and then cranking out the genome that will produce the desired phenome on a chromosome synthesizer, a process not all that far advanced from real cutting edge technology today.

The American monsters have been winning the Gladiator Gold since the competition was added to the Olympics because they have been designed with the aid of the world's most advanced supercomputer.

Evan Chandler, the boy from the prologue, now a grossly fat, socially isolated, geekily brilliant, but emotionally frustrated and depressed adult, is the human interface with this computer, via a virtual reality communion with it that is

not exactly elucidated by Kosmatka with the admirable scientific and literary clarity of the genetics and biology.

Evan bears a hateful grudge against humanity in general, of which he does not quite believe himself a part, and lacks anything that might be deemed a moral sense. So he somehow creates a sort of alter ego—or rather alter id—virtual child within a virtual reality within the supercomputer who grows stepwise into a kind of god of the machine, in turn becoming the creator of the reality within it, all-powerful, but not all-knowing, omnipotent within its own realm, but not omniscient, and, like his human “father” only more so, lacking not only a moral sensibility, but the very concept of morality itself.

Evan, the pathetic moral monster, creates an all-powerful but amoral personality for the supercomputer. And the god in the machine when called upon to create the ultimate Gladiator pumps out a genome sequence that is not a recombination of any that have ever existed before, but an entirely synthetic sequence that when run through the chromosome synthesizer produces the ultimate Gladiator as a champion not only of the United States but of Evan's inchoate vengeance against humanity.

This monster is overwhelmingly powerful physically, and of course it escapes. Against the Olympic rules, it is all too capable of reproduction. It is intelligent enough to speak. But it has only three motivations, or, better, call them tropisms—kill, eat, reproduce.

So a morally crippled human creates an amoral virtual god that creates an ultimate monster possessed of intelligence and sufficient sentient awareness of its surround to plan an escape, execute it, hide its “eggs” in order to reproduce, but probably lacks self-aware consciousness and certainly the moral dimension of “soul.”

And this is where I had better leave the telling of his tale to Ted Kosmatka. Because he is going to spring two very major surprises on the reader who fol-

lows it to the end, one a piece of stone-cold literary bravery that ends the personal stories in a brutal but ruthlessly logical and realistic manner, and the other a contrastingly tender moral turnaround from a quite unexpected source that unexpectedly touches the heart.

It might not be going too far to say that Kosmatka is hard case enough not to be so enamored of pleasing expectant readers with the compulsory sappy happy ending for heroes and heroines as to shy away from dramatic tragedy, but not such a hard case as to be incapable of leaving them with the possibility of scorn for the Us and sympathetic understanding for the Other when that is where the story leads.

Ken MacLeod does something like the latter in *The Night Sessions*, and something like the former in both that novel and *The Restoration Game*, only even more so. MacLeod really *is* a hard case, and I mean that as a compliment.

He is also a fully matured major writer of politically sophisticated and hard-nosed science fiction, more politically sophisticated, educated, and non-ideologically hard-nosed than any other science fiction writer I can think of, uh, myself included. How I could have failed to learn this before now is either a question of my dereliction of duty or the uh, quiet way this Scotsman has been published in the United States, and probably both.

And I'm not committing political incorrectness by mentioning that he *is* a card-carrying Scotsman. Because MacLeod, in these two novels at least, makes no bones about being a localvore, since both these books are rooted one way or another in his home town of Edinburgh, though both of them range as far afield as New Zealand, the business end of a Space Elevator, and the former Soviet Empire, not to mention a virtual Roman Mars, and always with a kind of medium-boiled logical realism.

The Night Sessions is a near future police procedural, at least in form, built around the investigation of the murder of a Catholic bishop in Edinburgh by De-

tective Inspector Adam Ferguson and his sidekick Skulk, both of whom are viewpoint characters, with Ferguson dominating most of the narrative.

But Skulk is a “leki,” a robot designed for police work; the Catholic Church, like all religions in this aggressively secular post-apocalyptic world, while not quite underground, is officially unrecognized; and there is a secondary narrative set in New Zealand in a kind of creationist theme park cum-rogue-robot sanctuary centered on another viewpoint character who preaches Biblical truth to only semi-legal conscious robots.

The Night Sessions is indeed a murder mystery, but the murder is the McGuffin around which exfoliates a complex deeply sophisticated political novel—a political thriller one might call it if that weren’t too superficial—involving a religiously motivated plot to destroy a Space Elevator spearheaded by an operative who may be a robot masquerading as a human or may be a human masquerading as a robot.

Isaac Asimov’s Three Laws of Robotics do not apply here! Skulk, and lekis like him, are programmed to be self-aware and conscious, and have genuine “personalities”—to the point where Ferguson has what can only be called a real friendship with Skulk—but not necessarily a sense of self-preservation. Military robots are programmed to kill. Robots can lie when appropriate. Rogue robots, that is robots programmed to be fully self-aware conscious beings, arguably have souls, and indeed are proselytized by Christian sects. The “souls” or “personalities” or “consciousnesses” of robots exist on chips that can be transferred from one body to another, backed up, duplicated. Robots can and do sacrifice themselves, or iterations of their selves, for perceived higher goods.

The Night Sessions is ultimately a cool political novel at its core, more descriptive and analytical than politically committed. But it also applies the same evenness of approach to what otherwise would be deeply metaphysical disputa-

tion as to the ultimate nature of these varied levels of robotic entities, and indeed the world MacLeod creates more or less does the same.

Intelligent? Sentient? Conscious? Clever machines? Full beings with souls?

Any of the above, depending on the software. It’s the programming that determines the AI state of being here, and while it can get out of control, turn inimical or immoral, so can and do conscious humans. And so too can conscious souls, in protoplasmic or metallic matrices, also attain moral nobility.

The Restoration Game in form, in ambience, and in rich detail, is a political espionage novel, also set partly in Edinburgh, this time in the near past, but dominantly in the post-Soviet so-called “Near Abroad” Eastern Europe in the fictional pocket republic Krassnia, which does and does not exactly exist, and in several more or less immediate *pasts*, not futures. And aside from a four-page prologue that seems to be a description of a video game set in an imaginary Mars where you play a twenty-third century Roman Centurion, it doesn’t turn into anything like a science fiction novel until revealed as such at the very end.

And now I find myself in much the same sort of quandary as I did with the denouement of *The Games*, only more so, unable to discuss the thematic epiphany of *The Restoration Game* without ruining the novel for the reader, but having to try to do it anyway. . . .

Lucy Stone, the first person narrator, grew up in Soviet Krassnia, where her mother, and her grandmother too, had been spooks, and maybe for more than one agency at the same time. Present tense, she works with a gaming company in Edinburgh, working on a video game called the Krassniad. She is recruited to go to Krassnia to uncover the secret atop a tabooed mountain there that, whatever it is, scared the living shit out of Joseph Stalin and Lavrenti Beria, and what she finds there is—

I should say no more, so I won’t.

Except that the novel comes full circle

round, and in the end, does reveal the sense and nature of the prologue. For the rest of the novel this has seemed irrelevant, but in the end it is revealed as absolutely central, and demonstrates why this is indeed a science fiction novel—an excellent one concerned with Artificial Intelligence, the Singularity, and the nature of “our” reality itself.

Enough! Hopefully not more than enough.

I had better close by repeating a

mantra I repeat any number of times in my own novel *He Walked Among Us*, if only to contradict it. Don't worry, you won't know why unless and until you read *The Restoration Game* for yourself.

“What is, is real.”

But what if it isn't?

What if it is virtual all the way down? ○

Copyright © 2012 Norman Spinrad

SF CONVENTIONAL CALENDAR

After the twin Labor Day blowouts (the World SF Convention and DragonCon), the schedule takes a couple of weeks off before the fall season begins in earnest. For something less hectic Labor Day, try CopperCon. 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

AUGUST 2012

30-Sep. 3—**Chicon 7**. For info, write: **Box 13, Skokie IL 60076**. Or phone: **(973) 242-5999** (10 am to 10 pm, not collect). (Web) ChiCon.org. (E-mail) reg@chicon.org. Con will be held in: Chicago IL (if city omitted, same as in address) at the Hyatt. Guests will include: Mike Resnick, P. R. Sapienza, Rowena Morrill, Jane Frank, Story Musgrave, John Scalzi. The World Science Fiction Convention.

31-Sep. 3—**DragonCon**. **(770) 909-0115**. dragoncon.org. Various downtown hotels, Atlanta GA. Nye, Stirling, Wurts, Yarbro, Zahn.

31-Sep. 3—**CopperCon**. coppercon.org. Phoenix AZ. Author and game designer Ari Marmell. "The Year of the Dragon." Fantasy.

SEPTEMBER 2012

21-23—**FenCon**, **Box 701448, Dallas TX 75370**. fencom.org. Addison (Dallas) TX. C. J. Cherryh, Peter David, D. Giancola, J. Anealio.

21-23—**Can-Con**. can-con.org. Ottawa ON. Hayden Trenholm, Tom Fowler. Canadian-content SF and fantasy. Aurora awards.

21-23—**Roc-Con**. roccon.net. Rochester Institute of Technology, Rochester NY. Vic Mignola, Lois Gresh. SF, comics, anime.

21-23—**TitanCon**. titancon.com. Europa Hotel, Belfast, Northern Ireland. Author GoH: Ian MacDonald. SF and fantasy.

21-23—**FoolsCap**. foolscapcon.com. Marriott, Redmond WA. Joe & G. Haldeman, L. Dowling, F. Cirotto. SF/fantasy literature and art.

21-23—**Intervention**. interventioncon.com. Twitter: @interventioncon. Hilton, Rockville MD. "Your Online Life, In-Person."

21-23—**Fantasy Con**, c/o 10 Haycroft Gardens, Mastin Moor, Chesterfield S43 3FE, UK. fantasycon2012.org. Brighton UK.

28-30—**Vampire Ball**, 148a Queensway, London W2 6LY, UK. (+44) 07930 319-119. seanharry.com. Renaissance, Heathrow UK.

OCTOBER 2012

4-7—**BoucherCon**. bouchercon2012.com. Cleveland OH. E. George, R. Cook, M. H. Clark, J. Connolly. Mystery fiction's WorldCon.

5-7—**ConJecture**, **Box 927388, San Diego CA 92192**. 2012.conjecture.org. Town & Country. Wrede. Emphasis on written SF/fantasy.

5-7—**GayLaxiCon**, 5541 Clinton Ave., Minneapolis MN 55419. gaylaxicon2012.org. Doubletree Park Place. For LGBT fans & friends.

12-14—**CapClave**, c/o Scheiner, 1518 N. Edison, Arlington VA 22205. capclave.org. Hilton, Gaithersburg MD. Written SF/fantasy.

12-14—**Archon**, **Box 8387, St. Louis MO 63132**. (636) 230-9481. Collinsville IL. Elonka Donin, Joe Haldeman, Vic Milan, G. Lillian.

13—**Monster Fest**, c/o Library, 298 Cedar Rd., Chesapeake VA 23322. monsterfestva.com. Central Library. Horror.

18-21—**AlbaCon**, **Box 2085, Albany NY 12220**. albacon.org. Best Western Sovereign. Czerneda, Jody Lee, DeCandido, Rogow—& ME!

19-21—**ConStellation**, **Box 4857, Huntsville AL 35815**. (256) 270-0092. con-stellation.org.

19-21—**Con*Cept**, **Box 196, Ste. Julie QC J3E 1X6**. conceptsff.ca. Hotel Espresso, Montreal QC. Bilingual SF media con.

27—**Goblins & Gears MS Fantasy Ball**. teamwench.org. Michael's 8th Ave., Glen Burnie MD. Horror/steampunk dinner/dance.

28—**Roc-Con PA**. rocconpa.org. Holiday Inn West, New Cumberland PA. Lois Gresh, Alan Kupperberg. Comics, anime, SF/fantasy.

NOVEMBER 2012

1-4—**World Fantasy Con**, 2 Farm Greenway, Toronto ON M3A 2M2. wfc2012.org. Sheraton North. E. Hand, J. Clute, G. K. Wolfe.

2-4—**OryCon**, **Box 5464, Portland OR 97228**. orycon.org.

2-4—**ConVolution**, **Box 60279, Sunnyvale CA 94088**. (650) 503-4266. Hyatt SFO, Burlingame CA. S. Jackson, Tayler, Brust, Beagle.

9-11—**PhilCon**, **Box 8303, Philadelphia PA 19101**. philcon.org. Crowne Plaza, Cherry Hill NJ. Valente, Foglio. The oldest SF con.

9-11—**TusCon**, **Box 2528, Tucson AZ 85702**. home.earthlink.net/~basfa. S. M. Stirling, Ed Bryant, David Lee Summers.

9-11—**Anime USA**. animeusa.org. Marriott Wardman Park, Washington DC. "Cavalcade of Whimsy & Riotous Otaku Excess!"

AUGUST 2013

29-Sep. 2—**Lone Star Con 3**, **Box 27277, Austin TX 78755**. lonestarcon3.org. San Antonio TX. The World SF Convention. \$160+.

PuzzleNation™

Play the web's smartest puzzle games!

Thousands of
quality puzzles
including classics
like Word Search,
Sudoku, and
Crosswords



Plus exclusive
new games like
Diggin' Words
and GuessWorks

Try FREE games today!

puzzlenation.com

Explore the Universe!

Visit www.analogsf.com
&
www.asimovs.com

Home of the world's leading
Science Fiction magazines



Log on and enjoy:

Award-nominated stories
from the genre's leading authors



Readers' Forum



Excerpts of current stories



SF news and events



Book reviews

Asimov's
SCIENCE FICTION

ANALOG
SCIENCE FICTION AND FACT