

# **Witches of the Pinspecked Void**

**a novel by Ran Prieur**

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*The Aeon is a child at play with colored balls.*

-Heraclitus

# 1

*I met her in a forest glade  
Where starbeams grew like trees*

-Hawkwind, "Infinity"

It was in a trashy fantasy sim in the Quercus 6-11-L5 station that Captain Quintillion Furlong heard of the bounty. He was hanging by his fingertips from Princess Fellaetia's window after hearing her father storm up the stairs.

"Who is it?" the King bellowed. "Who is the man who has defiled my house and my family? The Queen won't tell me either, but now you shall. His name, or I throw you in the dungeon!"

The Princess, stricken, glanced at the window and then beckoned the King over. "I would sooner the rats sharpen their teeth on my bones than reveal his name. I love him!" And then she leaned and whispered his name in her father's ear.

"Let it be proclaimed!" The King walked to the window under which the Captain's avatar was hanging, and leaning out he shouted, in his impossibly loud voice, "Let it be proclaimed to the kingdom, a bounty of one million pieces of gold, for-"

Then he looked down, right into the Captain's perspective, and his voice changed to something less like a great bell and more like a swarm of mechlocusts. "META: The Sifrexan planetary chain has declared a bounty of one trillion cogs for the lost colony ship Go Long Be Still."

The naked adventurer looked up. "META: Exit."

"Are you sure? This is getting good."

"Pull me out."

The King reached down and grabbed his hair, and the tug became the fiberoptic cabletips withdrawing, the glowing mane condensing to a snake and coiling back into the simworld console.

The man who sat up from the tub was half-grey and long-jawed, with an impish spark that shone through his weariness. He wore sturdy steel grey and rust fatigues, his captain's patch nearly hidden by a pocket flap.

As the seediest station in the clean-green Quercan chain, Q6-11-L5 was the Captain's favorite place in Chainspace, and whenever his money ran out, he came here to sample experimental cannabinoids and ogle streetwise dryads. Shaped like a mature white oak, the station balanced on the Lagrange point, trailing the planet by 60 degrees on the



ecliptic, and slowly rotated, its great green glass leaves lazily waving in the solar wind and harvesting the light or reflecting it in dappled shards that graced the translucent skins of the stems and branches.

The stemtunnel outside the simworld pod was barely over the Captain's head, but it widened out into a branch node like a crossing of tunnel paths in a dense wood, lit green and gold by shifting lightshafts beckoning trunkward. He scanned up the other stems for a particular color, not expecting to find it, and followed the fractal bramble four nodes down to a mossy junction busy with the errands of stationfolk: a stocky surface Glimmer shouldering a barrel, a sauntering pack of Caxiletan teens, a dour Brumvolzin courier, a pair of Aquans regal in blue robes, a daydreaming Scroll elf time pilot, a flamboyant Na-il mercenary, and everywhere the Quercans in their layered outfits like unraveling quilts.

Then he saw it, barely registering in his cheap spectrum-sense eyemod: the flickering purple of a

Flow temple far skyward.

Seven levels up he followed the light to a stark node on the verge of space, where erratic simgrav painted ripples of dust and made the flat floor feel like a saddle. The five stems held only a derelict jalopy and the temple stempod.

From space, the little pod was a mere bud on a branch whose lower span was laden with acorns. The Captain ducked under the near-ultraviolet spiral icon and descended the stem to a dim round room, its ceiling a bizarre cartoon of local constellations, its walls a wraparound tapestry of filigree hieroglyphs.

The priestess sat sleeping at the table, her head leaning sideways on a pillow dampened by a trickle of drool. At the Captain's entrance, she roused.

She was the creepiest woman he had ever seen. Most Flow initiates looked like they had never bathed, but she looked like she had bathed too much and then suddenly stopped. She wore two

dresses layered, one trashy and one insipid, and her dirt colored hair hung limp over a pasty freckled face with archaic zoom-glasses that seemed to sprout from a nose like a bent dagger. Tiny sharp teeth ventured from thin lips as she spoke, in a jittery voice like a cobblestone race, the standard line: "What brings you deeper?"

"Priestess," the Captain bowed his head, "I've just had a level four synchronicity."

She looked skeptical. "Go on."

"I received a bounty notice while in a simworld, and it came from a character who just at that moment was announcing a bounty."

Sounds like a level three, she thought. "Who was the character?"

"The King."

"Who was the subject of the simworld bounty?"

"Me."

"And what was the bounty in our own world?"

"From the Sifrexan chain, one trillion cogs for the lost colony ship Go Long Be Still."

Somehow her face got even more pale. She hurried to the door in her ratty slippers and closed it and darkened the sign. "That's pushing level five. Do you know what planet the Go Long Be Still left from?"

"I have no idea."

"You've spent some time in the dead chains, haven't you?"

"How could you tell?"

"I read your aura."

"Come on."

"If I insisted in knowing how I know, I would be as cog-hobbled as an Aristan philosoph. Have you ever heard of a chain called Atolia?"

"Never."

"That's how old that ship is. It left Atolia Prime when its only name was Earth. The gravity drive hadn't been invented yet, let alone the counter-clock drive."

"So it's not even in Gridspace." The Captain boggled at the difficulty of the mission. "It's in Atolian Primespace. You'd have to go way into the dead chains to even find the planet, and then with Primespace physics, all the gaps are stretched."

She said, "The Sifrexans might not even want the ship. This could be a tactical play to move wildcard craft out of Chainspace, or to raise the commodity value of crew and engines that can ply the starlit deep."

"But that won't work unless there's a reasonable

belief that the ship is out there, and worth the bounty. How could that be?"

She peered over her glasses and muttered, "Deus Ex Kathreftis."

"...God from the...?"

"Atolians were late discovering warptube tech. They went a long way into their own space, with slow colony ships and no headfreeze. So they needed simworld tech that could reliably keep people dreaming, but not going mad, for a thousand years... or possibly much longer."

The Captain shook his head. "There's no way..."

"Kathreftis means mirror. It's a fanciful theology that you might expect from the Glimmer or the Scroll, although edge-tube Sifrexans can get crazy faeward. The idea is, if consciousness reflects itself long enough, under the right conditions, you get a new universe."

"A universe inside a ship. A trillion cogs is not

enough."

She leaned closer, "What are you going to do?"

"Go get it."

"Yes!" She balled her hands into fists, showing blood-colored knuckle tattoos of the eight phases of the moon. "My name is Torisa Rosaluna, level three priestess of the Flow."

"Quint Furlong, Captain of the freeminer Moonwinnow."

"You'd have to winnow a million oceans to find that ship, but I can gauge your chances, and tilt your odds, by dredging the ocean beneath space."

She drew out a deck, the standard 96 card Flow Tarot, and swept the dampened pillow to the floor. The backs of the cards flashed starlight mandalas as she shuffled and hovered a card face down.

"I'll start with a three-card reading: situation,

action, result. This is your situation."

Torisa's handmade illustration was saturated watercolor outlined with fine calligraphy. Under a starry sky, an old man drifts in a battered boat down a slow reedy river. He looks sick and yet curious, and one finger trails in the water.

"This is the Nine of Space," she said, "and the number nine is not obvious. It's his other nine fingers, the ones not in the water. He looks weak but his strength is hidden. This is actually hopeful."

She laid the second card and gasped. From a rosy pile of coals, a white-hot spark jumps a dark gulf toward the card's edge. The dense oilpaint showed every brushstroke. "A fire trump," she said, "the Seed of Fire."

"What does it mean?"

"Risk," she muttered. "Opportunity... It depends on the third card."



It felt like an explosion on the table, and the Captain knew it. "The Supernova!" he said. "Catastrophe and renewal, revelation and genesis."

He continued staring until Torisa covered it with her hand and then slid it under the other cards. "Revere and then retreat. Of this card, the memory is enough. Or did we dream it? We are the dream of the night, and we tarry in its debt until we have dreamed a star."

He bowed his head. "I'm greatly in your debt for this reading. What do I owe you?"

She reached out and took his two hands in hers, and her fingers, which looked like two nests of ice worms, were soft and warm. "Captain, you owe me a place in your crew, and then I owe you everything."

## 2

*Between heaven and earth,  
How like a bellows it is!  
Empty and yet inexhaustible,  
Moving and yet it pours out ever more.*

-Tao Te Ching, Ellen Chen translation

On a tower by the sea, Princess Cataria Meerscham said goodbye to her uncanny homeworld. Fingers gripping the white stone parapet, she leaned back and looked a hundred

miles up at the opposite rim of the Scroll — a hundred miles down on pinwheel-ridged peaks and glacier tentacles verging into mist, and then the sea-sky that curved to meet the sky-sea behind her.

Down from the mountains, over deep crinkly canyons and grassy bluffs, down bronzing hills of garden forests to the dewy bottomlands and the windswept seaplain, she lowered her gaze. The same geography rolled out for thousands of miles to left and right, the Scroll's great trough vanishing curveless into the blue.

The sun, whose angle was capricious even this far eyeward, happened to torch the river at the stone bridge where the wedding army was crossing, a great caterpillar whose backprickles were the armaments of amory: painsabres and fuzzmuskets, throbcains and jangleduffs, plunderdrums and double-blow blissbombs. From the battlements, trembling defenders slung spizzdarts at their impudent enemy, and casualties exploded in compulsive dance that carried the whole garish

regiment over the verge.

Cataria was the bride. Her dress was strip-layered billowy airsilk mimicking the short axis of the Scroll, blue sundress to green body to rocky pauldrons patched in white. On her feet were coral blue toe-curving pirate ship slippers, and her hat was an inverse mermaid, a cross-legged maiden with a seashell breastplate, two octopus arms, and the winking head of a shark.

Her face was pale and wide, with a crisp white scar from eyebrow to dimple. Her upturned nose was like the toe of a boot, and where the scar crossed the eye was a deep vertical slit pupil.

She would not be getting married.

Down from the turretsnail spire, across the great sunbleached circle of the palace roof, she bypassed the open staircase that coasted to the great atrium and the ceremony, and opened a little door at the seaward edge. There she whirled down spiral winders to the third floor landing, and through a

low arch to the library.

"Not so fast, Princess!" Her black-haired cousin Shadrach stepped in her path, and pointed to her feet. "Not in those shoes — you'll slip on the carpet." He held out her boots. "Here. Let it be known that I aided your escape."

She slapped him so hard that he bounced off a table and knocked over a chainglobe. "What are you doing in my story?"

He bowed his head. "I, too, regret this crossing of our paths. But only such a high and subtle crime will carry me to the level of the dungeon where my treasure waits."

She stamped her foot. "Of course this is about her. I give notice, if you follow me into space, the law permits me to kill you both, and I'll do it. Now piss off."

She pointed to the far door and Shadrach slunk out. Then, finally, she kicked off her slippers,

dropped her dress and hat, and put on the survival suit and boots that she had already laid out.

Behind her stood a long curve of bookcases, arranged by date of publication and going back so far that the oldest books were crumbly heaps that would be whisked off the shelves to rotate the cycloid and make room for shiny new volumes.

Below her, out the wide window, lay the delta where the old river met the sea. It was autumn, and the fleece ferns bloomed with purple spores while the wingnut trees turned from red to green as they reduced their ferrous burden and dropped their eponymous fruit, later harvested by magnets and forged into steel, except the most perfect specimens which the harvesters saved on strings around their necks and gifted in the misty uplands in spring.

From the oldest shelf, Cataria drew a book of fragments translated so many times that their meanings were lost in forgotten metaphor, and read: "The Captain gestured from the high window

to the mirror in the hole."

From the newest shelf, she drew a book of trashy symmetric poetry, and read:

*Lay it where horizon dreams to grey  
Of shades from blank to black, from blue to white  
To fades obscuring nascency of night  
Of nascency obscuring fades to white  
To blue from black, to blank from shades of grey  
To dream's horizon where it lay*

Then she lifted her pack and took the stair down to her little skiff among the reeds, and away.

~

In the atrium of the Barnacle Monolith Palace, on a balcony overlooking the assembled regiments, King Paracelsus Meerschaum stood in a cluttery costume of musselshells and bottlecaps, and began his speech.

"Birthdays and weddings — bring your changes, o Scroll, as we expose our sleep to the long years of this dream."

He put on his ceremonial hat, a quilted model of the palace, with fabric-sewn flames and dryer lint smoke billowing from the black windows, and a dark figure jumping. The young Queen nudged him and he looked up at it.

"Sorry, wrong hat!"

The new hat was divided into two great cones. One showed a grey road rising from a blue-white fringe through patches of green and yellow to a tree branch drooping with ripe fruit. The other cone was glittery black, tipped by a diamond trailing tinsel.

"My daughter, the Princess Cataria, was born 18 years ago, at midnight, directly under the eighth moon split by the shadow of the Scroll. With the same moon rising tonight, she has made her decision:



"Whether to merge with the Prince of the uplands, deepening our ancient alliance..." The crowd clucked like a flock of sunfowl. "Or whether to flee, to seek adventure in the outer dark." The crowd keened like a lance of moonbats.

"Of course she fled. It was all she ever talked about. 'I want to go to space,' and 'I want to dance with the nebulae in the field of time.' She said that when she was four. As a baby she turned away from her nursemaid's breast to play with her jangle-steel necklace. At the harvest festival, when other girls wore costumes of fruit, she was a knife.

"And then all the creepiest boys came after her." He waved to a few in the audience. "That's one thing she and her sister have in common.

"Anyway, you'll all be happy to know that the groom also has good reason to decline this marriage." Over in his family's gallery, the Prince beamed and kissed his boyfriend.

"It would have been really awkward if she had

stayed. And by ancient law, with no wedding... there must still be a party!" The crowd roared and humptrumpets honked.

"But first, we have an anomaly. Another player has made a move."

The crowd stilled and murmured.

"The first son of my second sister, with full awareness and intention, trivially and unnecessarily aided the Princess, mortally insulting her competence and forever staining the purity of her flight. We think it's part of a scheme to free the wicked princess Pareidolia from the dungeon. But the law is unequivocal."

Two guards brought Shadrach out in chains and he grinned crookedly as the crowd hissed.

"Shadrach Schmerzgluck," the King roared, "you are exiled off the eyeward end of the Scroll to the Lonely Planet, your memories sealed, there to dwell in deathless pain until unaided

rehabilitation.

"Or probably," he muttered, "escape."

Shadrach winked and exalted in the fury of the crowd.

# 3

*Where windows, like mirrors, look out at the sky  
And open to show you beyond time*

-Rex Holman, "Come On Down"

The Captain and Torisa crossed the delicate petiole to the stem where she had parked her jalopy. Behind them, hummingbird buzzdrones were already stripping the empty temple. They were so far up in the tree that stars in the simwindows were dizzy in the sway.

They paused in the stem and stared each other down, the Priestess at first awkward, and then curious and amused as the Captain got flustered.

She burst out laughing. "I know you don't have a ship."

"I do, it's just in hock to the Ch-Kung, in a garage at K6-11-L3. A half million brakteats will get us free and stocked."

"Is that all?"

"Can't you use your cards to find money?"

"I could, but if the Flow gives you money, it's only to lift you up and then drop you like a sadistic child. Anyway the cards have spoken. Look." She waved the stemwall transparent, and on the hull of her tiny spaceship, underscored by a streaking meteor, was its name: *Seed of Fire*.

The stemtunnel shrunk to cuff the open airlock, and they emerged under an ovate dome like an

iron spiderweb. The floor was a jumble of dark laundry, occult books, art supplies, esoteric musictech, and vintage teledildonics. In the green glint of the station's high leaves, it looked like the bottom of a tropical lagoon filled with trash.

The Captain shook his head. "The Moonwinnow's bridge is bigger than this. It's your whole ship."

She pointed to the four symmetric doors that flanked the entry. "There's a water room, a utility room where you can keep your tools, and you can have one of the bunks. I like to sleep out here."

Up front, where he would expect a handflight console, the Captain saw a droopy floor mattress heaped with blankets. It was overhung on one side by a crooked black iron treebranch, and spooked on the other by a lifesized sprightly graffito of a sullen doomchick.

"To travel Gridspace," he said, "let alone Primespace, we're going to need more crew. We don't need full info sync, but at the very least we

need an ethertech who can send a distress call."

"I'm ethertech level zero."

"That works." He nodded. "And for batwarp we'll need a timepilot."

"You don't want to use grindwarp?"

"Too slow, especially in deep Primespace where there's hardly any paradox. Even level one batwarp will be faster."

"I agree." She nudged him. "Maybe the time elf will bunk with you."

"Dammit, don't tempt me."

"This is a model 3.6.5, the most bombproof Jalopy."

"That's true." His eyes traced the air. "And the second most customizable after the 3.6.8, which looked like shit."

"I think the Na-il have destroyed every last one."

"With those engine racks, we could mount two level three multidrives. That's a power-mass ratio that could dodge a bulletship."

"You can pilot a level three?"

"No, but I can strip and rebuild one. We'll need a better pilot."

Torisa pulled out her cards and whisked the clutter off a table. "Let's find him. Three attributes." She laid the first.

A stark line splits the card, an empty beach receding to infinity. One half is black and speckled with silver stars, the other half silver and speckled black with sand. In the foreground, a fox has dug the line into a puddle where it stares at its own reflection.

"The two of Ether," Torisa said. "This is actually one of the less creepy Ether cards. Our pilot likes to



live at the edges of things, or maybe he's just introspective. As long as we don't get another silver and black." She laid the second.

On a blank mirror-like plane, twelve swords stand erect in a circle, their cross-hilts marking the hours of a giant clockface. In the center a rat battles a crow, and their shadows stretch into the two hands, 11:55, and the small hand is pushing the big hand back.

"Double Ether," Torisa whispered.

"What does it mean?"

"There are so many meanings. He could fear the passing of time. He could be very old. He might do a lot of timepack sims. He might actually be our timepilot and not our spacepilot. There's also a spiritual practice, 'Stop the big hand with the small one.' It means to prolong moments of the Divine."

"Good, let's see the third one."

Torisa snapped, "This is not a box of chocolates!" Her hand trembled. "I feel that the next card has consumed the deck. It now holds all potential positions. Shuffling will not help us."

"Then let me draw it."

"No! We're playing Brumvolz roulette with a four-shooter. It has to be my hand that tips the spark."

She could already feel what it was as it separated from the deck, not only its ominous meaning, but its texture on her fingers, the slippery metallic and matte black paints. It seemed to burn her hand as it tugged and flipped itself into the magnetic logic of the spread.

In a black void, a child stands at a warped mirror, the entire bowl filled with the image that fascinates him: his own enormous eye.

"It's the Ace of Ether." She threw her head back and laughed. "Unholy mother devour us all."

"That other one is also looking at its reflection."

"Yeah, those two cards together, that's too creepy to ever happen."

"He's probably just a solo-sim addict."

Torisa's eye was drawn into the eye of the card. "Or it could refer to our mission, the lost colony ship."

"So how do we find this guy?"

"Trixie! Have you been listening?"

The wall painting now revealed herself as the 2-D avatar of the ship's simbrain Blip.

"Yeah," she said in a bored contralto, "I know who he is."

"You've got a correlator." He looked skeptical. "But how does it know."

"She's level four."

The Captain looked like he had swallowed a bug.  
"That's overkill! Only a Sifrexan dreadnought would have a level four linkBlip. How could you possibly need that many cogs?"

"Such are the depths at which we work. It's what brought me to this rabid squirrel's nest to run into you. Trixie, who is he?"

"Age 54, born on a wretched farm on Lodi 7-26, orphaned at-"

"Not the Captain, silly. The pilot!"

"His name is Foxle Spindrift, midscroll sea elf. I don't know how old he is, but his records go back at least a hundred years. Last seen entering a fivefold simworld at Brumvolz 5-7-L4. Oh man, that is so twelve of Ether."

"Wait," the Captain said. "How can she be so sure? Correlators always say something like eighteen percent this, seven percent that."

Torisa shrugged teasingly. "I don't like numbers."

"But what's your algorithm? Don't tell me you're just taking the highest number. That would be throwing away a whole level. We could trade down for a level three and buy back my ship."

"Orphaned at thirteen, enlisted on a dead chain wastepicker, the Moonwinnow. Became captain by default in an accident that still haunts his every microexpression."

"Trixie! Be nice. We're not going to sell you." She patted the Captain's hand. "I'm sorry. And you're right, rounding off would be crass. Probability is the shadow of ignorance, and we'd just be jumping into the larger shadow. Don't worry, I have a method."

"As a Priestess, I'd expect you to settle the numbers by rolling percentile dice and drawing the Flow from chance."

"I've sort of fixed that."

"But a Blip can't channel the Flow, only a full biological person." He eyed the second bunk.

"I'm sorry, Captain. I should have told you sooner." Sheepishly she turned the next card. It was an Earth trump, the Raven. The style was thick conterminous outlines and bright colors, like a stained glass window, and the bird was huge on the card, perched on a half-seen branch, yellow and orange leaves blowing about him.

Over at the bunk, she opened the door, and the fourth crew member stared down at them from an ancient railroad tie still wafting creosote. On one end was a shiny nest of broken clocksprings, fiberoptics, and pillowfill. On the other end was a level two foodfab bearing a tray of dead mice and succulent spiders, under the peckmarked ten-key where he assisted Trixie.

"Captain Furlong, meet Nimrod."

The raven's bright eyes studied the Captain and it squawked at Torisa, "New man, for what?"

"New game."

"You probably say that about all the guys you bring back here."

She laughed. "'Game' is much more serious."

"What are his mods?"

"Luck, we need. Brain, she wants."

"Funny bird," Torisa said. "Brain, luck needs."

"I've never heard of a luck mod."

"It's... kind of my own experimental thing."

The Captain knotted his brow. "Confirm me, you've uphacked a level four divinatory correlator by training a lucky bird?"

"Confirmed."

From Nimrod's ass, a sticky brown-white turd

dropped and was worried over by an erratic cleaning drone.



# 4

*There are some lines that can't be crossed  
But sometimes those lines get lost*

-Ike Reilly, "Duty Free"

Out on the delta, Cataria paddled her skiff as the wet hot night closed in. Away in the dusky saltmarsh, clouds of golden fireflies buzzed clouds of blue sparkflies to stoke their glow.

She reached out and stripped a spray of sticky

seagrapes from a laden bush and drew them to her mouth. "Before space," she said to the moon, "a last sweet taste of home." But the berries were sour.

"I'm having trouble hearing you," said the eighth moon. The pockmarked sphere wavered as if over a bonfire, then resolved into a face like a fat old barncat. "Have we met?"

"My name is Cataria Meerschaum," she said, "and I'm surprised to be already talking to the moon."

"The' moon? I can assure you that I am impeccably subjective. Up on the Scroll, you by the sea and your lover in the mountains would see the same moon, but here--"

"I've had no lovers except space itself, which flummoxes your metaphor."

"Oh, you want to talk philosophy? I once had a pair of eyeward scientists, a man and a lady, look at me with their cheeks pressed together, left eye to

right, looking for the place where the two moons became one. I turned them into a hermaphrodite. Ha Ha Ha Ha Ha!"

She was now crossing the edge between water and Faewater, here at its most eyeward reach before the great seawall, now looming craggily to her left. Behind her, fleece ferns and fireflies sublimed into mist, and her skiff slid on a tapestry of starlight patterned in fanciful schematics of the Scroll.

"If you want my advice," said the moon,

*stay close to land  
keep it in your sight  
and when your mind of the eye is right  
then other lands  
known or unknown  
will fly by winds of skies unflown  
to stitch your mind in a rickety seam  
joined in this land of dream*

Cataria was already rowing out. "I'm going straight across to the City."

"In that case, I look forward to keeping you company through long months of drifting, finally guiding you to the precise insanity where you can join my lunar tribe. Because of all the shores on this sea, the Potential City is the most elusive and — oh, there it is!"

From the mist above, rusted girders poked like spines on broken cacti, and ahead the Faewater filled wrecked foundations and lapped weathered rubble.

"My apologies. You look so young, but I see that you have made this crossing many times."

"It's my first."

"Ha Ha Ha Ha Ha!" A girder popped him like a bubble.

Cataria grounded her skiff in the Fae-flooded waste of a dreamplay factory where great brass gears and splines slanted up from the starglaze.

It was like a moonlit night minus the moon. She tied the boat to a grommet the size of her head, and scaled a pile of rubble to street level, where gold-veined wet-black cobblestones led among jagged wallfronts toward the night glow of a million cities.

The light changed — the great luminous bulge flickering in brightness and hue and profile. As Cataria paused her feet, the light stilled, and it stilled again as she paused her mind.

Now it was sky blue piling up, now dull red spreading out, and the red felt welcoming. Then, imagining her intentions beyond the city, her adventures in space, the red light moved with her thoughts like a windblown fire.

From the street margin came a chorus of purrs and gasps. Faint lights like flaming swampgas resolved into glowing cateyes trailing lithe bodies like smoke. The densest one drifted forward and cocked its ears.

"Only in the legends of our predecessors has anyone learned the city edge so fast. The philosopher-queen Bathilde Seeth, of the Zirconium Panopticon, came chasing pirates who had kidnapped her son. It turned out he had faked the whole thing to run off with a midscroll trollop, but having tasted wandering, Bathilde never settled. Some say-"

"Who are you?"

"We are called the damned souls of those who died in this uncanny transit, but really we just like it here."

"And you're all cats?"

They chattered. "That image comes from you. Cat-toy of the saltiest sea, battlewitch of the Barnacle Palace, you are prognosticated. We would wish you luck on your journey, but that would be wishing rain on clouds."

The little eyes blinked out.

Cataria's mind continued stalking its potential. The city before her would be dignified and decayed, echoey and rumbly, languorous fire and earth. There she could move in shadows or walk in the open while she found a path to space — its star-encrusted galleries but also its back passages, its forgotten rooms, its deepest basements and loftiest towers. And outside?

With this intention, the great glow settled to a smoky orange-red with an almost concave top — an old city in the Pitcairn chain — and she could smell it now, cinnamon and hot tar and pools of water in stone.

She walked, and at every corner were new details: the distant roar of a furnace, the creaking wheel of a wayward foodcart, and now a moth as big as a bird, swooping down on grey and red wings to circle the first single light, a vacuum-filament streetlamp that dimmed and brightened as the city's powernet smoothed the center by throwing wobble to the edges.

She briefly thought, if I were to look at the flicker of this light as I looked at the light of the million cities... but she was tired. Down an alley she found a moonlit courtyard — no moon of home but a hunchbacked lump of chaff from the forging of the planet — and in a deep corner, under a bush like an old gnarled hand reaching from the earth, she gathered a bed of the many seasons of leaves and trash, and slept.



# 5

*The stars burned with a lidless fixity and they drew nearer in the night until toward dawn he was stumbling among the whinstones of the uttermost ridge to heaven, a barren range of rock so enfolded in that gaudy house that stars lay awash at his feet and migratory spalls of burning matter crossed constantly about him on their chartless reckonings.*

*-Cormac McCarthy, Blood Meridian*

With hisses and pops like tiny fireworks, the Seed

of Fire broke from the treestem and lifted from the ecliptic. When they were high enough to view the whole illumined oaktree unzoomed in the dome, the fiery ion drive sputtered to life and launched them at 10G toward the place high over the planet where the warptube zeroed to Gridspace.

Halfway there, the ship flipped to slow, and the dome's simwindow spin went full 180, the planet rising and growing like the green hull of a ripening walnut above the bronze blast of the engines.

They swung downward, and the planet fell away toward the back of the dome while below them rose the ridged white underbelly of a blue whale. The ferry was the same scale as the station, longer but not as fat, with a tiny tail and a cartoonish extended head whose jaw hinged perpendicular to expel and admit the diverse warpless craft of the masses.

"I hate these whale ferries," Torisa said. "They're both pompous and vulgar."

"Your feathers," said the raven from his bridge perch.

She looked down at her two layered dresses.  
"These are dignified and mysterious."

The Captain held his tongue and winked at the bird.

Under the whale's great left eye, the jalopy found a spot within the snug curve of a Chthon gatorfreighter. A few last ships dashed in as the mouth closed, and then the ferry shuddered into its massive minor gravdrives, which bouyed it up to the moonsized lightwobble of the warptube node. There, silent and invisible, the warp engine's astral sails caught the hum of the tube, and the whale blew away like a feather in the wind.

~

The Pitcairn spaceport was a colossal cooling tower from a geothermal steam plant which aeons past had powered the whole city. Now it channeled a

lukewarm vent to a hot spring fountain by the southern gate, a round arch with a capstone the size of a house, below which the carts and carriages of the station's human cargo moved like bugs.

The smaller north gate wore its annular observation deck like a halo. Cataria stood on the outside, and leaning on a hand-lathed iron rail, she watched the great ingots roll down the firechute from the mines of the north. All up the edges, the ends of horseshoe magnets jutted from orange-glowing steam, and farther up a great boulevard spanned the chute on a single long arch.

Within the station's mountainous atrium, shuttles of many chains spiraled around the central elevator, where cables like limber tree trunks raised ingots counterweighted by space icebergs that cracked and rained and then broke off in the central reservoir that watered the city and washed its waste to the steamlands.

In a shop near the east gate, to a tiny merchant

with bulbous Ladbroke bugeyes, Cataria traded three iridium seashells and her biggest piece of magcoral for a level three Glimmer spacesuit. Across its smooth chest, linking its sinuous arms, she painted her family crest, which could be two in-leaning purple waves, or a sunset-framed moon, or the upraised wings of a bird.

They both thought it was an incredible deal. At home, she could gather shells and coral of this quality in a lucky afternoon, and he knew a shop on G6-3-L4 where he could trade them for a gasplanet divesuit.

He eyed her with little gold dots, as alive as original eyes, moving in the inky hemispheres. She was clearly a Scroll elf on her way to space, and he knew she was high class from her proud bearing, eyeward from her cool focus, and sea-edge from her ability to distinguish the very shells that the ocean loved the most.

"For another shell," he ventured, "I can get you passage on a Ch-Kung shuttle to a luxcruise on the

fourline."

"Thank you, but that's not how I play it."

He understood. "Spacejumping is strictly forbidden... but practically permitted, and only difficulty level one."

She tipped him a featherfish scale that at home they would scrape into the trash, and his pupils threw gold ripples.

After nightfall, timing her move to avoid the single lazy searchbeam, Cataria dove into the reservoir and grappled an ingot just as the elevator's segmented tentacles lifted it from the churn.

Up the belly of the tower it rose, and she sat on top and watched the great city unfurl over the rim, a zigzag maze of alleyways and courtyards under a crumbling stickpile of viaduct avenues. Patternless streetlights and chimney flames flashed reflections from half-exposed substreet canals, and solitary traincars rode railines that threaded from the

hub, bringing ingots of nonferrous metals and spreading the bounty of space to the old city, Altimbor on Pitcairn 5-4.

When Altimbor had shrunk to a glowing coalbed in a haze, she could see over the horizon the golden blaze of Neuimbor, riding the peak of its geothermal clockspring.

Raising her eyes, three ingots up she spotted a titanium, whose value would get it moved faster. Snatching the frays of the beanstalk cable, she shimmied up and mounted the precious express nugget.

Above, the orbital terminal took the cable's handoff and flung the ingots still higher, each velocity and vector targeting a particular boxcar in the non-geostationary trainyard.

Cataria scabbled the suit's claws on the lump, but they found no purchase on the hard metal, nor, of course, could the magfingers. So, holding only with sticky foot and handpads, she judged the spin of

the handoff-and-fling to stay topward in the G, and rode a high exosphere arc, balanced on the slippery tip of the bullet.

The pillbottle boxcar, catching up from planetward, angled its opening to snag the ingot, and Cataria found herself in a dazzling trashbin of silver and tungsten, platinum and pre-adamantine, stuck on the walls like gum from the spin-G. She shot to the rim and beheld the stars.

Space! On the planet her cosmoduodenum had gone hungry, and she had fed on the raw Divine only by foraging the most feral courtyards for sour apples, whose white fiber she spat up in husks. But now she could feed on the electromagnetic and transpolaric, the zero-point and null-spectrum, the astrae and aether of the fecund void.

The Scroll had its own spectrum, like the sweet air of the valley, but this was the cool resin scent of the high forest. She drank the waves and watched the stars, and wondered what mysteries hid in the noise of their twinkling.



An hour, a day, a week later she awakened from a brainwave spectral symphony to the first jolt of the car's motion as it maglatched to the trailing tail of the snaketrain.

Like riding a carnival scrambler, she spun on the inner curve of the rim as the train threw loops and spirals to string its load. Then it rose like a whipsnake from the orbital swarm and merged gently with the Pitcairn warptube.

The stars drizzled and spilled, and in their place rose a new light, shining down a tunnel-hall of mirrors: the smoky red-orange glow of all seventeen planets — counting both Prime and Zed — pinning the harmonic nodes of the Pitcairn fiveline.

Above, a brighter glow burst briefly as a ship with mirrorcrack tech dropped out of the fourline, and then burrowed dimly into the six. This close to the great junction at Pitcairn 2, she could see no reason to take such a shortcut except to avoid the law.

The light of the Heart Node grew like a rising sun, and finally there it was. The mirrors dissolved, the lines merged, and the train joined a parade of craft angling down into an orbital hurricane that dwarfed the little cloud of P5-4.

The planet, old and cool, now glowed with the light of commerce, its color more symbolic than functional, a tracery-carved pumpkin in the night.

A black iron spider, its legspan the size of a stadium, snatched Cataria's bottlecar, but before it could toss it to lower orbit for sorting, she was out and magrunning up its leg, past tireless hydraulics whose service drones buzzed her curiously and judged her harmless.

Up on the spider's back she could taste the radiation from its microfission reactor, acrid and nauseating. She sprinted down another leg, curling and uncurling her toes to grip and release the magfeet, and latched to an unboxed bundle of drillshafts just as the spider threw it to a new train.

As she hoped, the drillshafts were needed by some hot young planet, and the train entered the warptube on the sevenline. In that murky shatter she beheld the light of all 65 nodes of the Pitcairn chain, many of them dim and unpopulated — the high frontier.

The train passed 7-17 without exiting, and then, halfway to 6-9, at the antinode peak, it mingled with two other chains: the Glimmer Aqua Pitcairn convergence.

When the spacetrain hit the tubeflower, the mirrors exploded into shards and chips which resolved into craft, a glassy dance of baubles from every chain, but mostly natives: Aquan dinghys and liners, Glimmer skims and cavebats, Pitcairn pugs and freighters, that might have been here in the last few hours, or the next.

Releasing the suit's magnets and bracing on the cool cylinder of a shaft, Cataria jumped.

The train fell away like a toy, and as she left the

nimbus of its stories, she passed into Arbitrary space.

Here, to further hijack the charm of indeterminacy, ships were de-invested of identity even past the point of being ships. Matter and mind were stripped down to skewed perspectives of the pre-Consensus multitude, bubbling about her like drowning breath.

A tourist would die here like a mountain child in a tidepool. The cause of death would not be thirst or exposure, but daze, following the light so close to the Space Mother that she reached out and seduced you into pre-existence.

Cataria reached out and caught a bubble, and her fingers grasped the finfoil of a Glimmer skimship. It was black, highlighted in cold purple-green of Krypton lamps, and shaped like a sleek bat whose folded wings seemed to add speed. In some rich nebula the wings would unfold to gossamer umbrellae, harvesting rare elements and humours for the Glimmer's phosphorescent alchemy.

Now the ship banked and skittered into the eerie tunnel of the Glimmer warptube, dim and glistening with the ghostly light of the planetary atria, boreholes as wide as cities and so deep as to cheat gravity.

Already the Blip was sending a tendril. Like a purple mushroom stretching its stem, it opened from umbo to trumpet and enfolded her, and then like a drying dewdrop withdrew into the ship.

# 6

*Hornswoop me bungo pony, a dogsled on ice*

-Blue Oyster Cult, "The Red and The Black"

The Seed of Fire rode the Quercan sixline ferry zedward to the QBC convergence, the locus in Arbospace where the Quercus, Brumvolz, and Chthon chains came together — according to mathematicians — like a soap-bubble tetrahedron whose fourth bubble was Consensus.

The great whale sprung its mouth, and the Captain and Torisa stood on the bridge and watched as Trixie guided them out into the discoball jungle. The Quercan and Chthon craft were of similar green hues, but the Quercans were pastel leaftips and windstream crests, while the Chthons were saturated slithers and lumps. The Brumvolzins, brutalist and chrome, slashed through the foliage like machetes.

"Shiny want!" Nimrod squawked.

Torisa opened her hand. "Shiny eye, shiny have."

"Gullshit!"

"He tests my faith, Captain."

When the three colors were in balance, she said "Trixie, pull over."

The ship fell from Blipmax to Arbitrary drift, and where they had been flowing with the other craft like windblown seeds, now they hovered at the

center of a paddleball hailstorm as the story-stripped motes tumbled over themselves at the doorstep to spacetime.

Torisa tilted her head back and took off her glasses.

"Shiny, follow."

"Chill! I'm reading." She drew a mosquito stim and plinked her arm.

"What are you using?"

"Eleven Hydroxy." Already she was starting to sway, and she handed the Captain a packet labeled "Space Candy concentrate, half off." He stuck one through his sleeve.

Gradually, it made sense. Gimcrack opals trailed tracers that zigzagged as he turned his head, revealing an iridescent runic cursive that beckoned madness.



Torisa said, "Someone in the dead chains is buying cogs. Aristo is fortifying the serious-fun boundary. Thanans are moving into Gridspace. There's an eruption coming in threeline Chthon."

"Shiny follow!"

"Are you just being annoying," the Captain said, "or are you doing your job?"

"Job."

"Torisa." He nudged her out of her trance. "Your lucky bird says we have to hurry."

"How fast can you drive?"

"It depends. Do you have a scrub?"

She gave him another packet. He set his teeth and plinked the same spot on his arm, and fell to his knees screaming.

Torisa, still cogmodded, fumbled the handflight

upface as the Captain raged through hyperacute stimslash.

"The world was made of pillows," he said, "and now it's made of knives."

"World, same."

"Dammit, crow." He staggered to where Torisa was raising the little chair, and slumped over the wheel. She plugged in a cablesnake that meandered over the floor to the console, and he tested the wing and thrust. She threw another snake on his head and the tiny cables squirmed into place.

The view shifted back to tubeflower standard, and then the Captain launched, grimacing, into the dizzy rush of raw pilotry.

Torisa touched his shoulder. "It's supposed to be fun."

"You want to drive?"

"Oh, no. In this condition I'd get so many discredits for near hits that they'd take away my interface."

With a hard bank, the Captain followed the direction light on the dome, a permitted Blip assistance, as it flashed to high left and he shifted to a stream more silvery.

The stream widened, his mind rose sober from the scrub, and he thrilled at the little ship's agility as he throttled past slower pilots and under the closing garbage can lid of the Brumvolz ferry.

Inside the ferry was a zero-G beehive. Great slabs thrust from the floor, the ceiling, the walls, all dirty white and divided on both sides into hexagonal docks for ships of every size. Trixie backed them into a 20 meter hex in a remote corner. Torisa gazed through the dome as they settled.

"Uh-oh."

The Captain paused guzzling his water bottle and

looked up. Opposite them, a vacant 40 meter cell was now being taken by a wasplike light warship of the Na-il.

"That ship doesn't need a ferry," he said. "They must have marked us outside."

"We are so busted." She reached for her pocket. "I'd better take that scrub."

He held up his hand. "You should stay zonked. The Na-il will take it as a show of submission."

Already the warship was opening its foreports. Official Na-il colors were black and red, but as aesthetic overlords they decorated their ships however they chose from their own inscrutable tastes. This one was porcelain white with a symmetrical pattern of red spray crosses and black caltrops.

Four shock troops in xenon blue armor jetted from one port, and from the other, crossing the gap slowly on legspring, came two officers in their

personal avant-garde uniforms, the larger in front. As he approached the airlock, even through his suit, they could see him shudder.

Na-il commander Barouk Lumbago had to crouch to follow his soldiers through the ass-tube of this loathsome jalopy. In terror of the toxic decor, he focused his gaze on the muddled dweeb-goth owner and her mechanic, but they were hardly better.

"The aesthetics of this craft are so bad," he announced, "that it's almost like you are a design genius who perversely does the opposite. You have debased a classic frame into a wingèd nightmare of discordant kitsch. The neo-Minoan struts of your engine and the fruity curves of your feelers are strangling each other across the universe. Your colors are so timid that I can't even identify your chain reg, your font is like Aristan poetry, and your logo is a projectile turd.

"And the inside, if it were not a private space, would be enough to have you shot."

Nimrod flew from his perch and dropped on Torisa's shoulder. "Your suit." He glared at the Commander's fuzz-edged orange lines and white stone fittings. "Cat toilet."

"Your bird," Lumbago said, "is the one thing I like. I declare him your aesthetic second in command, should something happen to the first."

"Commander..." The officer behind him, smaller and thinner than the others, was still as big as the Captain. Her suit was clean slanted stripes of pink and grey, like a Ladbroke glampunk. "You wouldn't."

"The official penalty," he continued, "for style level minus three, is confiscation. I think it will be best for everyone if we call it a minus two."

The other officer shook her head. "Please sir, not this ship."

"The penalty for style level minus two is aesthetic commandeering by a Na-il officer. Step forward."

Stunned, she stood next to him and removed her full helmet. Her puckish brown face sported a finger dreadlock bowlcut with subtle zirconium sparkles.

"Take off your suit."

Fumbling the magrivets, she shook her suit to the floor, revealing pointy-toed high-laced boots, a seven-pocket black leather kilt, and a grey and purple checkered jersey from some obscure 2-D hockey team.

"Your dissonance," the Commander said, "continues to exceed your perception, despite repeated warnings, by an ever wider margin. You knew this was coming."

He turned to Torisa. "Crew of the Fart Catapult, I present your aesthetics officer, Captain Desdenova Solarin. She has full control of all elements of style inside and out, which by the Treaty of Menkalinan may be backed by force up to the edge of tempdeath."

He turned to Desdenova. "Your term will last until this ship, inside and out, achieves style level plus three."

She reeled as if punched in the face. "Sir, the customary threshold is level zero. Six levels..."

"Is unprecedented, but within my authority."

Suddenly she understood. This was not a tragic injustice but a calculated assassination. "You see me as a threat."

Barouk Lumbago bellowed with laughter.



# 7

*She had in her the magnet, the maelstrom quality of drawing everything which came inside her circle of consciousness into her own being and making it one with herself. It was a capacity, he thought, which had very likely been a characteristic of the martyrs, and which may well have aggravated the Great Inquisitor, and even the Emperor Nero himself, to the brink of madness. The tortures, the stake, the lions, they made their own, and thereby conveyed to them a great harmonious beauty; but the torturer they left outside.*

-Isak Dinesen, "The Monkey"

The inside of the Glimmer skimship, like their homeworlds, was cavelike, the main chambers rough-hewn and the small rooms smooth-molded out of simstone. The ceilings shed purple from shaggy lichens and the walls dripped green from ripply strata and glowed sepia from shelf fungus sconces.

Cataria folded back her helmet and faced the crew. Framing the airlock were two thick-muscled men shorter than her, and ducking under an arch came the lithe, lofty Captain.

"I'm curious." She looked down at Cataria. "You're the first arb jumper we've caught. How do you do it? Pick something physical out of pre-physical space?"

Cataria examined the Glimmer Captain's face, her spoonlike chin, her thin nose and big eyes, her defiant bearing of the default gravity. The question was a test, but she was not lying about being curious. Anyway, the answer was easy.

"The skill is not to reach with your hand. The eye reaches, the spirit reconciles, and then when your hand closes, it's there."

"Reconciles..." She pretended to consider. "Does the traveler alone move, to reconcile with the ship, or might the ship move to fit the traveler?"

"That's untestable," Cataria said, "because Fate happens but once. But I believe ships are moved."

"In what proportion to the movement of travelers?"

"In proportion to the power of their stories."

"And what gives a story power?" She floated the question like a ponderous balloon, and Cataria answered it like a dart.

"Rawness and precision."

The Captain stepped back so quickly that she almost bonked her head on the arch. "What? I'm

sorry, I'm a level two intersubjective philosopher, and I've never heard of that. The standard answer is the mass of recursive Fate, the lives that will be changed resolving counter-timeward. Some say there is also the power of ancestors, and some say it's a matter of will, or charisma. Your answer is just strange.

"And yet you caught my ship, and now our stories are entwined." She held out her hand. "Captain Twix Limbus of the Glimmer skimship Moonbat."

"Cataria Meerschaum, eyeward sea Scroll." Their hands clasped briefly and their gazes locked.

"I have to think about this." She turned to the young man beside her. "Subcaptain Izzy Otrando will introduce you to the ship."

They walked down a sloping tunnel to the bridge, Izzy striding beside her, Twix turning spider-like down a side tunnel, and the stocky men bouncing. The wide upper bridge held websaucer chairs facing glowscreens of busy red lines on black.

As they descended, gravity lessened. Cataria and Izzy almost drifted into the cozy lower bridge whose concave ceiling simwindowed the warptube.

Izzy said, "Primeward or zedward, can you tell?"

Cataria plumbed the jitterbugging gleams for some signal in the noise. "Zedward?"

"Good guess. We are, but there's no way you could know."

"Primeward planets are usually more conservative, and the colors of the lights are growing slightly more diverse."

Izzy laughed. "That's not how it works. Individual lights may come and go, but they never change. Do you think a whole planet is suddenly more colorful?"

"Now the lights are getting more saturated. Can't you see it?"

He snorted. "Impossible."

"Subcaptain!" From the upper bridge, the voice of the Blip was like a great stone oboe. "I've detected an anomaly. Warptube spectra are varying in a pattern with probability against chance rising exponentially."

Izzy gaped at Cataria.

With a metallic shriek, the ship skewed and wheeled across the tube and thudded into some star-speckled field.

Still in her suit, Cataria had her helmet mugged before the gust of venting air sucked them both toward the midship crack. Her hand snagged a webchair and her other hand secured her grip as Izzy flew past her and out into space.

Already the jagged walls of the breach were flinging wire and reeling shut. The hull groaned and the great wound oozed sealfoam as liquid cave air jetted and ballooned to fill the interior.

Cataria took off her helmet. Captain Limbus, half-uniformed, wobbled in and fell into the big chair.

"Subcaptain Otrando?"

Cataria pointed to the crack.

"The ship will reel him in. He'll survive, probably."

From the other side of the bridge came a click-clacking. A fist-sized white skull skittered out to announce, its jaw matching the syllables:

"Remaining crew of the Moonbat, by the treaty of Faltramador we claim your flotsam, and by insertion of this token through a hullbreach, we claim the right of force against your ship. We await your surrender."

Twix hissed, "Thanans!"

"Did they crash us?"

"In-tube sabotage is not a known skill of the Thanans. Their skill is to use dark Flow

Prognosticators to be present for near death."

The red glowscreen went full spectrum to show the Thanan ship, space-black with shiny white bones like the candy-carved skeleton of a dragon. The long wingbones were sinuous pickers now harvesting flotsam, and they watched as one of them snagged Izzy and popped him into the mouth.

"They don't know about you!" Emerging from the uptunnel, a grizzled man in a mossy robe pointed his long finger.

"Cataria Meerschaum," the Captain said, "meet Ming Findred, our ethertech."

"You don't exist to them. Not just in their thoughts, but in every way. Because you hopped in Arbspace, where info is blackbody, even their Progs are beclouded."

Cataria said, "Don't they have thruhull feelers?"



"All they see is a warm body." He fingered his wispy beard and appraised her like a treasure in the trash. "They don't see you. If you want to act against them, you will have perfect surprise."

"Are they so weak, that surprise is enough?"

"Surprise is their weakness. They are so confident knowing the future that they don't watch the present. Thanans are like worms, eyeless feeders. You could be a bird."

## 8

*Her little chambers drip with flower-like red  
Her girdles, and the chaplets of her head  
Her armlets and her anklets; with her feet  
She tramples all that winepress of the dead*

-Swinburne, "Laus Veneris"

Their hands bound in tacky black spidersilk, the crew of the Moonbat came down the Thanan throat-tunnel which grav-twisted into the chest cavity chamber, its great rib bones like the arches

of a dark cathedral, its vertebrae rendered in mosaic as a bright promenade.

Before the altar stood a girl even younger than Cataria, firmly plump in black full-body stretchfiber with her true skeleton rendered subtly in silver threads. Her mask was a real human skull — her own, which she now lifted to reveal her living face, red-lipped and smirking like a wicked child.

"I am Princess-Captain Kunigunda Angst. You are my prisoners. You have three choices.

"Your first choice: Death! Sudden, awakening from your homeworld savepods, with perhaps eventually some memory of this humiliation." She licked her lips.

"Your second choice: Death! Perpetual, to join the Thanan chain, renouncing your homepods and seeding new pods on this ship or any Thanan ground, from which you will emerge fresh each day to feast on the roasted flesh of your

yesterdays. Or if you prefer, raw.

"Your third choice: Death! Delayed, to remain our prisoners while we seduce you into death perpetual.

"What do you choose?"

The Glimmer captain stepped forward. "All but one of us choose death, delayed."

Captain Angst had already been drawing her blade, anticipating the slaughter of the customary first death. She turned to her top Prognosticator, young-bodied like all Thanans, but mentally aged and frowning like a dyspeptic owl.

"That was unexpected," she said. "Do they know something we don't?"

"Impossible. They have simply been overtaken by whimsy."

She turned back to the Glimmer captain and drew

her blade, tickling the hilt. "And your one exception?"

Cataria stepped forward. "I choose death, perpetual."

The blade clattered to the bony tesserae. "Never in our annals has not one member of a captured crew chosen the first death." Again she turned to the Prog. "Who is this?"

"She is insignificant."

"Well, she doesn't look insignificant." Kunigunda circled this strange creature, yellow-haired and stern-faced, her dilated pupils seemingly searching infinity. Her ill-fitting suit was standard Glimmer crew, with the insignia of an apprentice ethertech.

"Tell me," she said, "what does it mean when the bubbles are foamy?"

It was an easy question, begging for a pass. "It means I lack focus."

The girl reached out her finger and barely skimmed the invisible hairs on Cataria's cheek. The bone structure was hard but exquisite, the ear like a sand-polished cockle shell. And too hot to touch, every Thanan's secret dream, that scar!

She whispered, "I want to see your skull."

The Princess-Captain's chamber was a spotless white ovule smelling of savepod chems and old blood. Kunigunda led Cataria inside and the door glid shut.

"Take off your suit."

Under the rumply spacegear she wore a standard-issue utility suit, neutral grey, perfectly fit and stained with dry sweat that smelled like rank honeysuckle.

Kunigunda drank it with her eyes and almost stammered. "To seed the pod, you will have to strip completely."

"No."

"You have committed." She drew her blade.

"Switching to first death now will no longer be sudden, or painless."

"I have a challenge."

She snorted. "Make it then!"

"We fight to risk of death, here and now, you with the blade and I with my own body. If I win, you release me. If you win, you may have your way with me."

"I already have my way. You are merely asking for an unruly first death."

"I have no savepod."

Kunigunda's red mouth hung open.

"Look at me. I am Scrollkin. We do not save."

How had she missed it? The small wild ears, the flowery scent, and obvious now in the bright room, the vertical pupils. She trembled. "You are offering me your eternal death."

"Or to own me as podslave. Or I win, and you lose nothing but my binding."

"And if I refuse?"

Cataria shrugged. "I will violate chainlaw and fight you anyway."

Instantly the blade lashed at Cataria's forehead, trying to draw blood into her eyes, but she snapped her head back. A few golden eyebrow hairs drifted down.

They circled each other like dancers.

"Taste my pain, rogue!" Kunigunda cried, and slashed deeper. Cataria ducked and closed, and with the startled face at her mercy, she gave it a slap and backed away.



"Bitch! Don't toy with me." Captain Angst came in a flurry, slashing, thrusting, leaping, spinning, kicking. Her off-hand grazed Cataria's throat with a fingernail and a red welt rose.

"I draw first blood!" she exulted. "Yield to me now and I will be merciful. Continue to resist, and I shall make you watch, elf, as I dissect your vestigial rectum!"

Cataria spat in her eye. From three paces back it was hard enough to sting. While she stood blinking in shock, Cataria spat in her other eye. Half blind, and all blind with rage, she plunged shrieking into the fray.

It was like fighting the air. Chasing her about the room, flailing sloppily and panting like a dog, Kunigunda finally slipped in a floor-splatter of her own sweat and sprawled. Cataria pinned her and snatched away the blade.

"I beg you," the Thanan gasped. "Before you go free, may I ask a favor?"

"Ask."

"It would be my greatest pleasure if you would gut me like a squealing pig. I want to feel the front of my spine rattle with my own blade."

"I do not serve your pleasure."

The Princess-Captain pouted, and a tear rolled down her cheek.

"But I might, if..."

"Ask anything."

"I will serve your pleasure for one hour, for every crew member of the Moonbat that you free, and their ship."

"All of them! Attention!" she cried. "Ship and crew of the Paisley Bonedrake, the ex-prisoner and I have made an arrangement, which by long custom weighs the ecstasy of one over the comfort of many. Release all the Glimmer and their ship, and

quarantine my chamber for hours equal to their number, whatever that is."

The Blip answered with a voice like a stone slab sliding in a tomb. "It is done."

"Now." The Princess-Captain squirmed. "As it serves my pleasure, do as you will."

Cataria tore the micromesh down to Kunigunda's waist. High on her chest, with a touch so delicate that it tickled, she cut a circle with an open top, like an inverse Omega, and then down from the points she cut two curves flattening under each arm.

Blood oozed and the Thanan's body shuddered. "What have you done?"

"My name is Princess Cataria Meerschaum, that is my family crest, and you will wear its scar for the rest of your days, should you live a thousand years."

"Don't be silly. I'll have a new body tomorrow, and another the day after that."

"And have only a ghostly memory of today?  
Jettison your savepod, you will not be using it.  
While your people live in future dreams and the pleasures of now, you will raise a palace of hard memories on this foundation: you will not want to forget one moment of this."

The knife hovered like an updrafting falcon.

# 9

*The spindrift raveled wind-ripped from the crest of the wave*

-Sylvia Plath, "Suicide off Egg Rock"

The orbital shuttle was a rigid prehensile airship colored chartreuse below and turquoise above, matching the glossy ocean and glass balloon walls of the floating city on Aqua 5-5.

It strained against its mooring at city center, a

conical tower of weather-greened copper sculpted into curlicued kelp. Released, the craft swelled and shot hyperbuoyant, stirring clouds in its rise to the crest of the troposphere. There its shell shrunk to streamline its thrust, and it accelerated to arc the stratosphere and then skipped like a rock to the belly of the orbital station.

The station looked like a bloated sanddollar, half as thick as it was wide, holding the entire bottom bell and the clipped top bell of a squat hourglass gravity engine. The flat planetside, now rippling with the passage of the shuttle, was a mirror membrane of cryptomercury, which reflected the world below in perfect resolution, but with key details changed.

In ancient legend, when the planet was young and small, the station hovered in geosync over the capital city, so close that the King commissioned a great telescope to watch his kingdom in unreliable reflection.

One day, snooping on the Queen out in the city, he

saw her meet a lover! But zeroing on the man's face, he saw his own. The whole next day, up in his tower, he followed her every move — and again she met a lover, differently clothed in a different quarter, but again with the King's face.

On the third day, when the damnable mirror taunted him with his own face on a third scoundrel, the King called the Queen to the tower, and she revealed that the man out there was the actual King, playing at being a secret lover for his and the Queen's pleasure, and the King who watched from the tower was a membot. The lesson: sometimes when the gaze seems to show most false is just when it shows most true.

After the shuttle, the next ship to pierce the mirror was a chrome-edged steel blue gem with seaspray highlights, squidlike feelers, and no engine. Flying only on surplus simgrav, it had taken a full day to come down from the ferry, and inside the station it flipped awkwardly and fell upward to settle on the concave floor of the port, so near the edge that the low mirror blurred its likeness. Its name, in

parentheses promising a change, was the *Seed Of Fire*.

Dez lay on a couch centered under the dome, examining the shifty image. "It looks like something in the trashbin of a spaceport gift shop."

"I think you did a great job." Torisa was standing on an upright harmonium, hand-brushing poppyseed paint on the crescent crawlspace balcony that now gave the ship's only real room a toy upper deck. On a table, a tray of sequins awaited placement.

"I just never thought I'd be designing Aqua."

"I never thought I'd register Aqua, but if the Captain hadn't found those nautilus feelers, we'd still be going up and down Brumvolz."

The Captain pulled the last strut from the fabricator and snapped it home in the balcony structure. "The junk tug had it tagged 'dead



Gridspace locator', as if the Consensus triangulator was bismotered, when all it needed was a time belt."

Trixie said, "Here comes the inspector."

Out on the deck, they followed him around the ship. "Level two!" He beamed at the Na-il. "You show deep knowledge of our style."

"Thank you," she said. "Aquan aesthetics are... welcoming."

"The scanBlip reports integrity level two, cog level, that must be a mistake, and outfit level minus one. I'm sorry." With a pained expression he turned to the mechanic. "We can't let you leave here with no engine."

The Captain nodded solemnly. "I have warned my crew of that probable judgment."

"We welcome you to Aqua registry. Your style-size ratio qualifies you to park on the flight deck

indefinitely, if you remain in the outer circle."

"If we're only here a month," the Captain said,  
"could we-"

Torisa cut him off. "The Flow remains always in the  
outer circle."

The Captain and Desdenova were deckwalking to  
the gravbell ringwell, and the upcurve eyetricked a  
climb, when really it was up-G flatwalking.

"A month? In this conch-infested kiddie pool?"

"You'll love it," the Captain said, setting his bones  
against the rising gravity.

"The inspector said I have deep knowledge. Aquan  
aesthetics are not even shallow."

"We'll be out in a week and you'll want to stay."

"You'll probably be getting us arrested."

At the ring of the hourglass, the floor fell away like cresting a tiny saddle ridge, and at nearly 2G, they bore the double weight of themselves through the angel's corset to topside.

The upper station was a hotel tower turned inside out, rooms and balconies ringing an epic atrium rising twenty stories to a true window on space. In the upper cathedral, gravity was so close to freefall that silhouette jumpers crossed under the stars.

"They have cushions," Dez said, pointing at the pillowy balcony facings, "and a net!" The black threads were barely visible between floors three and two. "In Na-il gravbells, you just look where you're going or crack your head."

"On my planet they retired a station and left it out in the dead fields of the high plains. You could see it for a hundred miles. The top was open, and the bottom was full of water. We would climb to the top and freedive, and the gravbell residue would lighten us before the splash." The Captain gestured from the high window to the mirror in the hole.

Torisa lounged under the dome and watched their reflection as they came to the ring and through, and a minute later as they emerged on their balcony and waved to her. The alignment was not coincidence but station design, old enough to have spawned a parable: "The longer the walk, the shorter the climb; the longer the climb, the lighter the walk."

"Trixie," she said, "let's talk about that pilot we're chasing, Foxle Spindrift."

"I don't remember any Foxle Spindrift."

Torisa sat up. "Back in Quercus, we read the cards, triple Ether, remember?"

"I don't remember any triple Ether. In a location spread, you drew the Jack of Space with the Jack of Fire, which has to mean a Brumvolz Jackstar. Nimrod pecked a five and a seven, so we headed for the cluster at B5-7-L4."

"Trixie, are you in the Captain's room?"

"Yeah."

"Open sound. Captain!"

"Here. Open vid." He was in a massage tank with blue foam rollers on octopus tentacles working his back.

"Our story has become split."

"Who from who?"

"Do you remember the cards we drew, looking for our pilot?"

"The scary silver and black ones?"

"You're with me. Trixie remembers differently. Nimrod?"

"Machine forgot."

Torisa said, "So the Blip is split."

"But isn't she synced to Consensus?"

"Yes. That means our memories, eyewise, are no longer true. We rode a spur faeward."

"But we were in Quercus. Even on a six node, that's too weird."

"I know," she said. "Something is afoot. Trixie, show me a 2-D chart of anticonsensus density, centered on Aristo 2."

The screen turned to a white square with an exploded birdsnest of thread-thin black, and green fuzz at the edges.

Up in the room the screen showed the same thing and Dez, steaming in a scallop shell bathtub, flung soap bubbles. "Those colors burn my eyes! Purple-black background, gold filament chainmap, and red to yellow topographic influx."

Now they saw a clockwork in a pool of ink in a fire, and Torisa said, "Show change over the last

month."

Into the ink, the fire was throwing a pinwheel.  
Torisa gasped.

The Captain squinted. "That's not normal?"

"That's a level four Fae hurricane. Trixie, amp the lines and give me two slash three D. I'll hand-spin."

From the ink rose a straw moon turning in purple space, its stray stalks kinked and frayed, getting hammered by an asteroid. Torisa rotated it to judge its angle and strength.

"Mother of Space, it's headed straight for the center."

"Who else knows about this?"

"Probably no one. Trixie's two levels above any other correlator following anticonsensus destiny."

Trixie said, "You mean density."

"That's what I said."



# 10

*how do you like your blue-eyed boy*  
*Mister Death*

-E.E. Cummings

From the eye of the dragon, its bubble lens so fine as to taunt space, Cataria looked out on the wreckage of the warptube. This pixel of Gridspace was now a boneyard of broken stories picked over by Thanan carrionbirds, dreadvermin, and drone bottomfeeders. The Paisley Bonedrake had

shouldered into the feast on a Devonian gene ark, richer pickings than the Moonbat, now finishing refit off the port wing.

Izzy sat down beside her, fresh in his Thanan podbody and plain-boned uniform.

"Why didn't you save me?"

"You were tagged as flotsam. The others were still ambiguous in third death."

"You could have bargained for me."

Cataria shrugged.

"Why didn't you save me before?"

"What, you mean when you sneak double-tested me, when you derided my keener eye, and when you failed to get a handgrip in your own ship?"

He looked at the floor. "I know you're better than me."

She studied him, until finally he raised his head.

"You're better looking," she said.

"What's your point?"

"Your strength is the fulcrum to raise your weakness."

Up the optic nerve from the bridge came Captain Angst, her whole body mummy-bandaged and spotted brown with leaked blood. Her face glowed as she took Cataria's hand.

"I seem to have become another kind of corpse, but where mummies preserve the dead, these bandages are a chrysalis for my metamorphosis from dead to alive. You have reversed time! I only wish you could loop it so I could relive our hours together, forever."

Over Kunigunda's shoulder, Cataria continued to gaze out at space. "Someone probably already did that," she muttered, and then looked in her eyes.

"You will be lonely here. As your people refresh their bodies without you, you will be weaving a tapestry of tight-spun memories, while all around you is blowing lint."

Suddenly the Captain laughed, and then squeaked out, "We have a crewman named Lint." She snorted. "Lint Johnson."

"When you laugh," Cataria said, "you are half as beautiful as the stars."

The Captain beamed and drew out a bundle the size of Cataria's forearm, wrapped in black silk. "A gift for you."

"A blade," she said, not accepting it yet. "Surely not the one..."

"No. That one is part of my story now. And it's only a level three. This is a five."

Cataria took it. Under the silk it was like looking through a broken window into the night. "This is

worth more than your ship."

"It's worth more than my planet. One cannot set out to make a level five blade. They only happen when an attempt to turn a three into a four goes wrong in just the right way. The Reaper has given us only seven, and none in the last ten thousand years.

"Its name," she said, "is the Edge of Space."

"Of course. What else could it be?"

"Its edge is so fine that a thousand years ago, when one of our scientists tried to view it through a microscope, he went blind. It is thought that in the right hands, it can cut the zero-point weave without leaving a mark.

"You understand, I'm not giving it out of mere gratitude, but because the blade yearns to be in the right hands."

Cataria closed her fingers on the hilt, and the

normally invisible force-scabbard flared electric blue and climbed her arm.

"Ooooh, it likes you."

"My gratitude is beyond words. May it not be beyond action." She stowed the blade and took the Captain's hand. "But back to your story, I have a thought. To relieve your loneliness, you need companions who have taken the same journey."

"But how? The way you did it? I could never."

"I think you can. It's only a matter of running your mind over it enough times. You have hard memories now, but not so hard that you can't imagine it even better than it was."

Cataria turned. "Ex-subcaptain Isandro Otranto has volunteered to be your subject."

"What? No!"

"His reluctance," she continued, "is precisely his

value. You are learning to coax pleasure out of pain, and the highest level teacher is the one who most fears pain."

"Can I make no mistakes?"

"You surely will." Cataria grinned. "But there is always tomorrow."

The Princess-Captain leaned in to examine Izzy's grav-trained military body, his quivery poise, his face like a decorative axeblade.

Cataria said, "You must promise me one thing. Do not break him. At least leave him... better."

Kunigunda tickled a bandaged finger along Izzy's cheekbone. "I accept."

Baffled and horrified, he gaped at Cataria. "Why?"

"I just saved you."

On the crossing from the Bonedrake to the

Moonbat, Cataria caught a glimpse, through a rift in an Aquan freighter hull, of a blue dream, a tiny ship whose wavy feelers tickled her eyes to its sleek widening, its radial grid bubbledome and trident-barbed stabilizers. The freighter's drifting spin closed the crack to an azure crescent and then it was gone. Thumbing her gravbelt, she shot across the space and commed back, "Don't wait for me."



# 11

*The Incarnate maintains all things in order surely; and the theologians say light is his shadow. Must it not be then that in darkness order grows ever less, flowers leaping from nothingness into a girl's fingers just as by light in spring they leap from mere filthiness into air?*

*-Gene Wolfe, The Shadow of the Torturer*

Back in the ship, Trixie had puffed the map to true 3D, a balloon of tangled lightstrings that Torisa turned in the dark while the others watched.

Trixie said, "This is the default light of information discord, and now this is the Faestorm." Starting at the edge, the dim candles and dustmotes flared and sparked in a spiral plunge like a Pitcairn drillbit.

Nimrod lifted from his perch and flew through it. "Shiny!"

"So where are we now?" the Captain asked, and Trixie flashed a blue dot, away from the plunge and deeper. "And where did the story split?"

"There's only one story."

"Trixie, don't give the Captain a hard time. Blink Quercus 6-11, 17 days ago."

At the edge of the thrust's wake, a red light sputtered.

The Captain leaned in. "And where's it going next?"

Golden threads drifted off the bridge as Trixie zoomed, except one thread that grew in the center until it swallowed them all like a shaft of hoverfly ghosts.

"This line," she said, "is the warptube between Glimmer 7-18 and the GAP convergence."

Torisa said, "How old is this data?"

"Two days. Wait, I'll see what's new."

The dim bridge exploded like a star. They covered their eyes, Dez cursed, and the raven made a sound like a cheer.

"Sorry," Trixie said, and the sphere shrunk to the original tight bundle with a new white flare.

"That's the light of irreconcilable testimony, but they all agree on one thing. The warptube broke."

"Thanans into Gridspace," Torisa muttered. "They progged the fracture. Where's it going next?"

"Why does it even matter?" Dez said. "We don't have an engine."

"There might be another way." Torisa looked up at the mirror.

The Captain followed her eyes. "You can mirrorwarp?"

Dez looked up. "What?"

Torisa said, "All cryptomercury is subphysically linked. By staring into one mirror, and carefully forgetting where I am, I might find myself under some other mirror — ideally with the rest of the ship. But you would all have to go unconscious."

Dez said, "So we can't see you cheating."

"That kind of thinking," she wagged her finger, "is exactly how it works."

"But you can't even cheat."

"She's right," the Captain said. "With no engine, there's no plausible story, seen or unseen."

"Trixie, put up the stovepipe." Around the ship rose an opaque black cylinder, flaring to a wide rim as it pressed the mirror. "This gives us time. The story is that we continued to rig simgrav for 1G travel."

"That's not the point. The station won't let us leave."

"But when the Faestorm hits, reports of our grounding become unreliable. Maybe we were never here."

From the roof of the ship there came a thump.

The crew looked up at the invisible monster on their roof. They heard it getting to its feet and sliding gently down the dome.

"Trixie, show us," Dez said.

"She can't," Torisa said. "By definition, the stovepipe is synthetic Arbitrary, total information blackbody from hull to hat."

In the silence, they listened. Out on the floor the creature's footfalls were undefined, but it tethered the ship with a handfeel snaking the wall.

"We had just opened the pipe," the Captain said.

Torisa said, "Like it was waiting."

Now it was at the airlock.

"Son of Space," Dez said. "It's just some dude who fell through the mirror doing repairs or something. You people will believe anything."

She popped the airlock hulldoor. Down at the end of the tube, out of the black, came a slinky figure in a Glimmer suit, with a design on the chest that reminded the Captain of two upturned boobs. The visitor whisked off her helmet — no, it was a man, with a patchy saffron beard and a face like a

spacemad mathematician.

Torisa gasped, "Foxle Spindrift!"

~

Back on the Moonbat, Cataria went straight to the shaman's cave, a candle-dim oblate sphere with ceiling and walls molded from damp substrate growing live fungi tickled by jets spritzing mist, its floor heaped with fluffy blankets and pillows.

The old ethertech said, "I'm told that you jaunted a Faespur."

"I saw my ship, clear as the stars, and when I chased it, it was gone."

"That must be strange for you, chasing something and not getting it."

A tragic expression sank her face. She set her teeth. "Can you help me?"

Ming Findred finger-raked a fistful of umbonate agarics. "Eat some mushrooms."

~

Trixie said, "There's no one there."

Torisa turned slowly and looked between the cartoon doomchick avatar and the bright-eyed space elf.

"Wait," the Captain said, "you don't see-"

"Shhh!" Torisa spat. "Trixie, this is a new kind of divination. We're pretending someone is here, who's not really here. We might say some strange things."

"Okay, whatever. Can I correlate it?"

Foxle said, "Please do." He stepped forward, knocking over a chair, and looked between Trixie and Torisa. "I can't tell which is which."



"You know she can't hear you."

"Of course." He winked theatrically at Trixie. "Can I give you a puzzle for her?" He turned, knocking over another chair, and surveyed the crew. "We are one card from a septimal reference." He bumped the table. "Ask your winsome sage."

"Trixie, if our six personae are in a seven card spread, with our divinatory phantom as the Fool, what myth correlates?"

"The Faeward Island. Even a level two would know that."

Foxle gave Trixie the thumbs up.

Torisa said to the others, "It's a synchronic myth, emerging independently, always from Earths that are just reaching their fingers into space." She took a breath. "This is the standard catechism."

A king of old was so enchanted that on the day of his sacrifice, seven travelers on a Gridspace daytrip

were hijacked by Fate and cast to a mote on the thin edge between Eye and Fae. There, every seventh day, they cast a line eyeward, but one of their number was the Trickster, and every week he cut the line and looped its yearning back into their dreams.

There, they delved the stories that girded their world and ours. They played vampires and pirates, gunslingers and secret agents, autochthons and princes, swashbucklers and spacemen. And as their homeworld dimmed, they cast their line not to return but to gather survivors. How many they caught, none can say, but they dream there still, an endless echo of the fathomless past, a spark in the night.

Foxle jumped up to applaud and toppled the table, scattering the tray of sequins to constellate the carpet.

The raven said, "Story, for what?"

"Silly bird! Our story. We have synced with Ur-

myth, minus one member. I forget," she asked Foxle and Trixie, "who are we missing?"

Simultaneously they said, "The unvanquishable feminine."

~

Cataria lay in the shroomcave on a shag-fur cushion, playing with the light in her eyes. Up on the ceiling, sun-gold phosphorescent filaments dangled like snot from a mat of snow-white glow lichens, and through lids neither open nor closed, she drew scepters and clouds like taffy.

"I dreamed," she said.

"So did I," said the shaman. "I dreamed I was a butterfly dreaming I was a man, and I couldn't wake up. Or perhaps I wasn't dreaming, because lately I feel that way all the time."

"I dreamed that I was my great-grandfather, Foxle Spindrift. He traveled the full length of the Scroll,

from the Panopticon to the Fountain, and on the way through he fucked my great grandmother. She said it was a misunderstanding.

"Anyway, I dreamed I was him, now, inside that blue ship, and the crew... you could not assemble a sorrier pack of losers! First there's this batshit Flow priestess who looks like death in a dollhouse. She owns the ship, but she coddles this upbeat drifter who she's in love with, he made captain by mistake so she calls him 'Captain' even though he does at best level two tinkering. The Na-il have this upstart, her style is a parody of theirs and she doesn't know it, and it's so awkward that they dump her on the worst ship in Chainspace. And I almost forgot, there's also a neurotic Blipchick, and an upcogged crow who thinks he's God's ventriloquist dummy.

"And yet," she said, "through Foxle's eyes, I loved them." A single tear trickled down her temple, and she discreetly hacked up the fiber from the shrooms.

"I sense that your stories will yet converge."

"I hope Fate doesn't expect me to go after them."

"Follow your own path. In the end, you are Fate's bitch."

~

"Why haven't the sequins been picked up?" Torisa looked down at them. "Trixie, are the spiffdrones kaput?"

"The table tipped without anyone touching it, so I thought it was more of your weird divination."

"I'm sorry, but how would I read this?"

"I can read it, if you tell me the rules. Like, what the shapes and colors mean, and what we're looking for."

"What in dark space are we looking for?" the Captain said. "First we need an engine, unless you

pull us back up your rope. Now we're supposed to find this girl, with the storm coming, and there's still the trillion cog bounty."

Dez said, "What?"

"Trixie," Torisa said, "what is the largest bounty currently being offered?"

"Higher than usual. Fifty million skulls for a scavenge bandit in the warptube pileup."

"Shit," the Captain said. "It was part of the dream."

"Raise your faith, acolyte!" Torisa snapped. "You were favored with a glimpse of the uncanny potential Consensus. Even a faespur bounty nods at the unthinkable: that our most primal colony ship still lives..."

Foxle Spindrift turned in shock as she continued, "...the Go Long Be Still."

At "Be" the lights went out. The absolute blackness

reeked of electrical fire.

"Trixie!" Torisa cried, and then there came a flicker of blue from the console, and a whisper:

"The pattern! I see it."

The bridge lights glowed and steadily rose. Foxle Spindrifft was gone.

# 12

*The soul to feel the flesh  
The flesh to feel the chain*

-Emily Bronte

In the bleakest oubliette of an underfunded psychiatric facility, under a barred window whose dirge of stop-and-go traffic hammered the pointlessness of escape, a scarecrow madwoman lay apathetic in her constraints.



The door opened. In walked a small young man with the same black hair and pale skin as the patient, but much cleaner. Closing the door softly, he sidled up to her and said, "I am your cousin Shadrach. Your true name is Pareidolia Meerscham, Scrollkin, Princess. I have come to rescue you."

"Fuck off, creep," she moaned.

He leaned his head and kissed her on the lips. She bit until she tasted blood. He straightened and patted the wound with a fresh white handkerchief, and waited.

A trembling pushed from her belly to her mouth and she choked on sobs. "My little worm," she said, "you've come for me."

"My eternal beloved, your very sweat is so luminous that it would cast a shadow of the sun on God."

"My butt itches."

He squirmed his hand under her.

"Not so deep," she said, "and lower. Aaahhhh. That's enough."

Shadrach withdrew his hand and discreetly sniffed it.

~

Dusty Astroglide, space cop, throttled his cutter out of batwarp and down into the Gridspace backwater where the warptube had spat the chaff of its cracking. From the double-seat nosetip of the bulletship, a skewed panorama of carnage was visible at only 10x shrinkzoom.

Dusty was smooth-skinned and lithe, with wild sandy hair and a stone face on hair trigger to bursting with focused elan. He turned to his timepilot, Treblinka Von Zerelli, a wiry midscroll mountain elf with a tan backslanting face, ring-curved bleached hair, and the hawklike bearing of a regal adventurer. Their uniforms were Minoan

vatleather, hot pink and black.

"Dude!" He pumped his fist. "You were so fast, we must have been sub-time for half the trip."

She high-fived him. "You were dodging paradox like a cutback surfer. We must be hours ahead of the next law."

Down behind them, in her civvies of thriftstore Glimmer and Quercan, cherubic ethertech Godzuki Toke bounced into a puffy recliner, stuck out her tongue, and popped a psych. She levered back and looked at the ceiling, where a screen of enhanced true noise cog-boosted her into Etherspace.

"Zuki," Blink said, "What's the word?"

Eyes closed and masked now, she swam in a gentle ocean of frothy bubbles that made Arbitrary space feel like a stormy pond. "No new distress beacons, so the crack is healed. I'm raising my icon."

"Whoa!" Dusty pointed to a screen where a cubic

landscape was scrolling. "We're not gridparked. This whole thing is moving nearly point one C."

"Sure," Blink said, "along the tube, lagging its warp-velocity. There'll be another crashfield backwise."

Zuki said, "But there isn't."

"And our vector," Dusty said, "is crosstube, with both directions resolving to the same grid-V."

Blink said, "That's like flipping a coin and it lands on the edge."

As the psych hit Zuki's brain, Etherspace focused to a roiling anthill, and she sought the dispatcher's icon. First she saturated the colors, and then zoned in to the universal police colors of red and black. There she caught his vibe, and in the pictograph language of ethertechs, they exchanged greetings.

With six pictures, she said, "1, wreck, moving, X, tube, fast."

He picted back, "?! " And then a field of noise, a wheat seedhead, and a mandala.

"He says it's like a crop circle."

Blink said, "My cousins on the faeward plain got those all the time in their fields of flutecaine."

"Dude," Dusty said, "this isn't elfland. We're on the shoulder of the fully legit Glimmer Aqua Pitcairn convergence."

"We're being hailed." Blink looked at a text screen with downscrolling distress messages, limited by law to 32 standard characters. Among the usual vague appeals, like "6 CREW HURT PLZ HELP", one stood out.

"THANAN MUTINY SEEKS FUGITIVE"

Inside a Devonian biofreighter, among skeleton-suited raiders moving Silphium and trilobites, Dusty and Blink found the mutineers in a side cabin, two men young and proud in their upstyled

bones.

There, on a two-cubit screen, they watched the princess deathmatch.

"This is so hot," Dusty said. "We'll need a copy, but not sped up."

"It is not sped up."

"We will so go after her. Wait, what did she do?"

"Did you not hear her challenge? 'I will violate chainlaw and fight you anyway.'"

Blink shook her head. "That's just a threat. Whatever transgressive value it had, your Captain cashed it in fully to take surprise. Your fugitive is cleaner than space."

Dusty had not taken his eyes from the screen. "But sweatier."

"You can still go after her, yes? Not arrest her, but

tell us where she is."

"It almost sounds," Dusty said, "like you're planning to kill her."

"Oh, no," the Thanan said. "We just want dirt. This elf has bewitched our Captain, and viewing the villainy of her idol will unravel the snares that have led her to break with our ways."

"Confirm me," Blink said, slipping into legalspeak. "You are contracting a transgress-slanted document of an outchainer's ongoing story."

"Confirmed, if it is within the law."

Dusty said, "It just takes longer than arresting her."

"We are suddenly wealthy."

"We don't need your money," Blink said, "but as continuing players in this drama, we request full decryption keys, both electromagnetic and etheric,

to the internal dialogues of the mutineers."

"Done."

Out in the passageway, squeezing sideways past batts of spidersilk, Blink said to Dusty, "I know her."



# 13

*Suppose the universe correlates with some patch of math. That patch cannot be complete and will inevitably bleed into additional math that is even stranger than the starting patch... So, inherent in any reality correlated to math, there is an unstoppable passage into ever-increasing levels of weirdness.*

-Jaron Lanier, "Raft to the Future"

"Priestess Torisa Rosaluna," said a voice like a nebula siren.

Torisa looked up and around. "Trixie?"

"I'd like to save that pattern." Already the spiffdrones were clearing the space around it. One of them nudged the Captain backward.

He said, "For reference?"

"Sort of," said the new voice. "Not for information, but as a memento."

Torisa looked down at the rainbow diamond riot.  
"So the meaning must be simple."

Trixie laughed like a cathedral full of bats. "I could not explain it in twenty years. It requires extra-triaxiom math and recursive orders of infinity."

"Trixie, you don't know that kind of math."

"I do now." While the drones sprayed laminate on the sequins and cut the carpet around them, the most agile drone was painting new layers on Trixie's avatar.

"With no framework to interpret the pattern, I looked and the pattern offered its own. Then it just..." her voice wavered "...unfolded. Every reading was a new language, every layer the teacher of the next. At last I saw: if you go deep enough into one thing, you're at the center of everything."

"Trixie," the Captain said, "did you just transcend to level five?"

"Don't be silly." Torisa said.

Trixie said, "At first I thought, this can't be level five, it's too weird. But that's the point."

Dez was watching the emergence of the new avatar. "Why is it so hot?"

"Thank you. Oh," she giggled, "you mean the temp. I had to burn a lot of cogs. The battery is drained, and I vented so much heat that the ship will need new paint."

In the great mirror they saw, where the stovepipe had been, now the ship sat peeling and smoking in a circle of soot.

"Don't worry," she continued. "We have lots of money."

The raven fluttered and squawked.

"Torisa... Nimrod and I have a confession. I thought it necessary to balance your spending with his thrift."

Already the raven had stormed across and smeared the paint on Trixie's avatar, while Torisa had picked up a throbcaïn and was swinging wildly at the bird as she chased him around the bridge.

"You little shit! That's why we're always poor."

"Flow. Outer circle."

"I'll outer circle your ass!" Leaning into his bunk, she pulled out his nest and smashed it on the floor.

Devonian featherscales, Brumvolzin poscreds, Glimmer moonstones, Quercan grapenuts, Sifrexan millicogs, Chthon skuzzdrums, Caxiletan spurs, Minoan orichalci, Thanan fingerbones, Ch-Kung brakteats, Pitcairn nuggets, Ladbroke quid, Aquan sandpennies, and Aristan dollars tumbled out along with more exotic microcommodities.

"Well," Torisa said, "it's less than I thought."

The Captain took a rough count. "That'll get us out of here, and not much else."

"Come on," Dez said. "We have a Blipgod." She was still watching the avatar as more drones added detail to a butterfly-wing portrait of an ero-sim spacewitch. "This is actually good."

"Blipgod," the bird said, "has us."

Trixie said, "From now on, money will be easy to find, but we'll hardly need it. What was fuel is now lubricant."

"Nimrod has a point," Torisa said. "Do you even need us? You could bump me as owner and dump us on the next Ch-Kung station with a settlement."

"I like having you around. Would it be better if I went away sometimes?" Dez watched in horror as the drones sprayed solvent and wiped the portrait down to bare hullmetal. In a comical monotone the machine said, "Trixie level zero awaits orders."

"Computer," Torisa said, "calculate our course."

~

The pirate ship's faux-oak hullcoat was half-peeled to grey composite, and its flag was a white Jolly Roger whose black crossbones were salvage cranes.

The Captain tasted seaspray on the port deck while Torisa stood on the bow holding her wide-brimmed black hat and leaning into the wind like a crooked bowsprit. Behind her, chrome stickfigure chimps swung through the rigging and trimmed the sails as the great wheel spun itself.

"There." On Torisa's shoulder alighted a peregrine falcon, who lifted a wing and shot a laser pointer at the spot in the slow green swell where she reckoned the treasure lay.

From a port on the starboard waterline, a drone flipperfish burst and dove.

The Captain joined Torisa on the bow. The jib sail windseived, stretched, and squared to a screen where they watched with the eyes of the aquadrone, already gone infrared and sonar in the murky bottomwater.

Back on the poop deck, Nimrod sat on a chairback next to Desdenova, who gestured at the bow.

"Is she hot?"

The Raven croaked puzzlement.

"Trixie's avatar. You know, you being a bird."

"Falcons, bad."

"So, do you like bad birds?"

Torisa squealed as the drone focused on a shape not unlike the crest on Foxle Spindrift's spacesuit, two wavelike curves embracing an empty center. The image faded as the aquadrone rose and sprayed a beacon, a red-lit four-jet fountain. The dronechimp crew scurried and tacked the ship upwind to the X.

Torisa embraced the Captain, who subtly cringed, while Nimrod watched Trixie's avatar rise to the crow's nest to oversee the job.

From the two sides of the ship, four tenfathom struts extended to an answering X, one over the treasure and the other three anchoring.

Now the pirate ship revealed itself as the fulcrum of a telescoping sea crane. Like the body of a spider, it rose from the water as three legs steadied and the fourth extracted. The whole structure trembled and then relaxed as the water swelled and the load rose.



Dropping muck and seaweed, the engine broke the surface, its central gap a tunnel between two robust wings, their barnacle-styled cowlings and jets now sporting actual barnacles.

"Our ship," said the Captain, "was made for that. Eight hundred years ago, small ships trended to one-piece omnidives arching a rear airlock, and all Jalopy three sixes were designed to fit that standard."

"How did it get here?" Torisa said. "Did it fall off a sea freighter in a storm?"

"Could be a space pod," the Captain said, "that fell from orbit and burned up to save its contents."

Dez said, "Maybe it was evidence in a crime."

Perched on the jib mast, Trixie said, "That kind of thinking is exactly how this works."

# 14

*I came across, in my notes about light, the words of a prisoner remembering life in solitary confinement. He wrote that the only light he experienced was 'the vivid burst of brilliance' that came when he shut his eyes tight.*

*-Barry Lopez, Arctic Dreams*

"Bring me another blanket." Pareidolia lay on a tattered patio lounge chair under the stars, halfway up a scrubby ridge overlooking a dotted

rune of radio telescopes on a graben plain. Up the roadless slope their rental car leaned wonkily on two flat tires.

Shadrach lay his own coat over her. "Why must we do this? I know rail tunnels and forest paths where we could cheat the Eycline and pass to the Scroll. There I know a mountain meadow where tame modrounceys feed on sweet thistles. We could ride the high road to an abandoned hillfort where they would never find us."

Somewhere above them, a coyote yipped.

Like plunging on a mouse, Paredolia threw an unearthly howl. Like sonic sparks, more coyotes answered from the ridge above, to both sides, and impossibly, from the range ten miles over the plain.

"Your memories," she said, "how did you keep them?"

"You, I could never fully forget. You itched and

itched below the surface, like some dissipated mermaid, and when you crested, the veil of this world quaked and withdrew, and I saw everything." He shivered defiantly against the night.

The coyotes chattered tensely.

She said, "The faeward heath, the Hills of Counterlux, the Swamp of Ecstatic Ambiguity, up the line of solipsism dominance from the cold beach of space to the Mountains of Candy Madness, and over that line, through the Nest of Rooms to the Fountain of Divine Pinholes..." She drew a ragged sob.

"I forgot it all, but I felt the hollow nausea of its absence, in this dungeon. This world doesn't heal us, or even merely hold us. This world breaks us." Tears drizzled down her temples and her body shook. "Now it will break."

She convulsed violently and threw another howl, a sky-splitting vicious yip like yanking a two-stroke

ripcord.

The liminal symphony exploded. The stars loosened in their constellations, and danced.

~

In the back of the police cutter, tubecrack refugees were having a drug party. Zuki passed out cannabinoids and psilocids, empathics and dissociatives, timescrunchers and egodeaths, scrubs and arbs. Everything but jacks, which Dusty and Blink needed for driving.

Up in front they were improvising timesync through a globe-sized cryptocrystal ball that levitated over its brutalist ashtray base and refracted a view like a yo-yo in a kaleidoscope. They stared into the bright abyss and their fingers played its surface like a hot piano.

Behind Zuki, a Minoan zitherist sat hunched over his strings plucking a chromatic jangle, while the drummer leaned his chin at the sky while toe-

thumping a hide drum and shaking a string of bells. Two women stood and sang like desert ghosts, in notes so close and so clean that you could hear the throb of their interference.

A muscular Pitcairn with a head bandage like blue glass was talking to a serene Glimmer on a disposable mechanical leg, clothed in a full body scarf like a black furry animal whose hairtips glowed green.

He said, "What if every hair on your scarf is a life? Growing thinner and drier, and then ending in annihilating illumination."

She said, "And in our eyes it feels like new life." The scarf loosened.

Two more Glimmer and an Aquan were playing interpretive rock-skin-knife. For a moment their ambiguous handthrows were deadlocked, until the Aquan declared "You're rock and you're knife!" They laughed and threw again.

Two Devonians, in bloodstained spidersilk canvas outfits, were recreationally genetesting a Chthon swamp huntress in a scaly bodysuit and a double necklace of tiny bird and rodent skulls.

"It says you had a Pitcairn ancestor four generations back, a Thanan at seven, and a touch of the Scroll."

"Does it say the future?"

Dusty and Blink came down from the bullettip, whose window was now the comfortable mirrorhall of a warptube.

Blink said to Zuki, "Dude, I am so spritzed. I haven't felt this good for twenty minutes."

Dusty said, "We're dropping off in reverse coolness."

"Okay, I'm on an intuitive and even I don't know what that means."

"The most awesome passengers stay longer. So the party will get better and then we'll go after the Princess. She's probably only now into Chainspace, and the Moonbat's going all the way to its home port on Glimmer 5-8."

Blink said, "She can arbjump."

"Whoa," Dusty said. "So she might have already left the Moonbat and caught a Sifrexan cogtug to the high frontier."

Zuki said, "And she's so new-hatched from the Scroll that I got to design her Ether pictograph. Here it is."

The ceiling screen showed a blue and grey eye, whose upright pupil was a black sword.

~

At the SQA tubeflower, Cataria jumped the Moonbat and caught a Sifrexan cogtug whose polyhedral hull stretched away like an origami



alligator. It dropped brightly into the pixellated blue-white of the Sifrex fourline.

"Hey." She kicked the hull. "You're going the wrong way."

Just below her, the hull pulsed blue with a voice that came through her shoes to spook her suit.

"Arbitrary space is destination neutral. You guessed wrong."

"The way your bubble was wobbling, I thought you were loaded with cogs going to some outpost on the sevenline."

"I'm an old ship. I'm always wobbling." The Blip laughed and its dull blue glow congealed like lightning. "But also, I am empty of human will and fully autonomous. For you, Bride of Space, I will go anywhere."

Inside the ship, she followed luminous wallripples down into the belly. "Why did you call me that? Bride of Space?"

"It's an honorary term, among my people, for an arb jumper good enough to defeat our countermeasures."

"I didn't notice any. But among autonomous tugs, the term for high level jumpers is Master of Space or sometimes Mistress. Where did you get Bride?"

She stopped and looked at the suspiciously watery wall-glow. "Do I know you?"

Before her, a dull-glazed column of light resolved into her father. He stood in rumpled long underwear, wearing a hat of an anchor being lifted from the mud.

"Goddammit, dad, how far do I have to disappear into the trackless void to get away from you?"

"I am not your father," it said. "I am a cryptohologram. But I'm trying to recover." He chuckled. "Seriously, the image appears to you as a trusted figure." He winked. "I don't know why it chose me."

"Just how far faeward did you have to go to make this call?"

"I happen to be in the midscroll hills, visiting my distant cousin, the Countess Chernobyl Von Zerelli."

"Getting bored with the Queen already?"

"She has a daughter, ten years older than you, who also went to space. Treblinka is a spacecop timepilot, and she's just been hired as your vicecam by Thanan mutineers." He beamed. "A week in space and you've already destabilized a chain!"

"I don't suppose you called to congratulate me."

"No, but since Blink found you, I thought I'd ask for your help."

"This is about her, isn't it?" She glared at him.

"Even where there are no suns, I can't get out of Pareidolia's batwing shadow."

"In a way, it's about you."

"Not unless you want me to kill her."

He took off his hat and bowed his head. "Caty," he said, "your sister is opening the dungeon. The entire Scroll wants you to kill her."

# 15

*If the world would go away, we'd open up  
And if the world would open up, the world would go  
away*

-Big Blood, "Secret Garden"

From the decorative battlements of the physics building, a mad grad student proclaimed the end of the world.

"We are alone in the universe," he shouted,

"because this universe is just for us. A prison! Under a dome of objective rectifiers, in a sea of unnavigable physics, they call it the Lonely Planet, and they fill it with their dark heroes and moral imbeciles, their outcasts and linecrossers, the scum at the top and bottom of Chainspace and the Scroll."

Below, the building entrance was barricaded by police doing deep searches on a queue of people leaving, while those entering were ignored. Beyond a flashing corral of emergency vehicles stretched an unexpected festival of demonic chatterers and ecstatic dancers, skywatchers and navel-starers, supplicants and mendicants to the unseen.

Among them came a small woman with eyes so sharp they seemed to cut a path. Her hair was bound in a tense ponytail with a few stray hairs in front escaping eyeward. Her skirt fluttered like brisk wings as she strode with insolent precision through the dreamtime minefield.

At the line of police tape she flashed a badge, and

the cop pointed her to a professor sitting on a rock in a bed of tulips. A greying beard softened his villainous chin, and his childlike eyes flashed dangerous focus, like a surgeon watching a butterfly.

Again with her badge, she cast into the garden and caught his eye.

"Perceiva Seethe," he read.

"Perceva, like Perceval, and Seeth like teeth."

He didn't hold out his hand but nodded. "I'm Crafton Veer."

"And this whole thing was your project?"

"What have they told you?"

She shrugged like a hiccup. "Nothing. They sent me in cold so as not to cloud my judgment with wild rumors."

"And what do you see?"

"At first I'm thinking, LSD in the water, but the door search means an ongoing threat. Then I'm thinking contagion, but there are no biosuits. That cop has noise-canceling headphones." She turned her head like an owl. "They all do. It's a sound!"

"You could say that." Dr. Veer swayed like a seed-heavy grainstalk.

"But how is a sound an ongoing danger?" She closed her eyes and turned her focus inward. "It's viral! A madness-inducing earworm." She opened her eyes. "Is it a song?"

He startled as if teasingly slapped. "How did you know that?"

She shrugged again. "I looked."

"No. Interpreting a memetic sonic attack as a creative work, as art, is an intuitive leap to the very parapet of the truth."



"Your notebook." She looked at its steely icon, stylized radio dishes like blossoming buds around the letters SETI. "It's a song from space."

He sighed longingly. "The Pleiades."

"But those are young stars, too new for life."

"That presumes the aliens are talking to each other. But if they're talking to us, they would post their message in the most conspicuous spot in our heavens."

"But if they can put it anywhere, why can't they put it everywhere?"

"If it was everywhere, we might not recognize it as a message."

She knotted her brow. "You think an advanced extraterrestrial civilization has been trying to contact us, and failing?"

"My ex was a therapist. She said, when a new

patient comes in, I know in five minutes what's wrong with them, and it takes five years to get them to see it."

"Sounds like she wasn't a very good therapist."

"She was the best. That's why I left her. She was getting too close."

"What's wrong with you?"

"So many people have asked me that. I think you're the first one who's actually been curious."

"Well?"

"I have only two mental attitudes: obsessed and indifferent. Somehow neither one is appealing."

"Right now you're obsessed."

"How can you tell?"

"You keep sneaking glances at the sky like it's a

woman's breasts."

He had to look. They were right in front of his face, mysterious in their constriction. Then he looked carefully up at her armor-piercing eyes.

"You've heard it," she said. "The song."

He looked around shiftily.

"Why didn't you lose your sanity like everyone else?"

He grinned. "I lost my sanity a long time ago."

"You realize it's my job to stop this thing."

"Of course. So, do you want to hear it?"

"That is a bold dare, Dr. Veer. I accept."

She followed him into the building. Above them on the rat balcony, the raver intoned:

*The blackened window, cracked, unshades  
The vines that pull the stones from sky  
The blades of grass that break the blades  
Of glass that glazed the eye*

~

In a dark warptube like a coalsmoke moonrise, a familiar craft traveled. Its wide elliptical engine was nearly half its bulk, bearing its aquatic encrustments raw and lacquered to hold its status as a historical artifact.

Ahead, the hull had been repainted as an ocean thunderstorm, blue-black with silver cracks of lightning from the tentacled apex to the wavecrash shore of the engines. Its new name: *Knife of the Sea*.

"Avast!" The Captain's hands tickled the imaginary field of the navglobe, still half-unpacked from its crate by the vacant upface where raw wires led underfloor to the new engine. "We've skipped the ferries to shoot the tubes unhindered!"

"That's some fancy language," Dez said, "for one notch above space trash."

Torisa said, "Trixie, what are we doing in this weird part of the chain?"

She was in her level two avatar, a glazed-paint portrait of a perky receptionist. "The computer says we have an appointment."

"Can I talk to the computer?"

"Ahoy!" Trixie's voice boomed like the radio song of a gas giant. "What was the question? Sorry, I'm cogmodded on the pure glow of pattern recognition."

The Captain said, "We were just in the Ladbroke sixline, but I've been all up and down it. I've never seen it this dark."

"Oh, at the last node I moved us to the eightline."

They laughed. Outside, a deeper blackness flashed.

"Wait," the Captain said. "That was just a node with no light at all. Trixie, is this really the eight?"

"It's a joke," Torisa said. "The existence of an eightline has been thoroughly debunked."

"Raise your faith, acolyte!" Upgraded paintdrones had already switched Trixie to her level five avatar. "The evidence was not absent, only hiding. Hold on."

The ship now slowed to tiptoe the thin edge between space and time. They could see actual stars, blue and redshifted and strobing as the warptube sorted its vector in Gridspace.

"Listen," Trixie whispered.

In the immense silence, something hinted.

Hairs spiked on Torisa's neck. "Trixie, get us out of here!"

With a paintdrone flourish, the avatar's eyes

burned with wicked ecstasy, and her voice resonated across the bridge. "We are now balanced on the very tip of the hurricane. We ride the first breaking of the wave!"

# 16

*...the Earth hung overhead like a rotten fruit, blue with mold, crawling, wrinkling, purulent and alive.*

-Damon Knight, "Masks"

"When Chthon Prime was Earth, the mushroom of the savanna was late, leaving dungpiles barren of transcendence until the forest people found their own teachers. When at last they exploded in conquest, they were no less demonic, but instead of making grainfields and deserts, they fed saplings



on the buried hearts of their enemies."

The huntress, Brillix Windigo, was telling the story of her chain while Chthon 3-1 swole sticky in the hemisphere tip of the police cutter.

Ochre-skinned, in iridescent armor like an excited pangolin, she sat on Dusty's lap in the spacechair, while Zuki sat in the timechair next to her new inamorato, the roguish Devonian Levi Ripp, who showed his dusting of hyena genes by watching hungrily as the planet unscrolled.

At the very edge of space, carbon wafer dragonflies flashed rainbow gleams as they darted to harvest argon isotopes and helium.

Below, butterflies with wings like windowfrost modulated atmospheric ions to balance the planet's headlong chaos by casting thunderstorms and raising aurorae.

Below, colossal etheric amoebae regulated esoteric frequencies, and feeding off their skinflakes was an

ocean of microetherfauna who could be gathered into retinas and lenses by Chthon ethertech sightseers and spies.

Below, in late afternoon, biozeppelins fuzzy with static charge summited to magnet the crystalline carcasses from the higher atmosphere, and then dropped with the darkness to feed the treetowers at midnight.

At dawn they would rise again on swelling gasbags, through pollen and modswallows, gnatclouds and petalwheels, chlorophyll buzzards and adventuresome raptors and swarms of kanji where crytolographic waste sorted its lost meaning.

The police ship was amphibious, but optimized for Gridspace, and it wobbled like an old bucket down the gravity well.

Brillix pointed to the green festoons on the fibrous platforms of the treetowers. "That ivy has been so many generations in the heavens that the canopy is all it knows of the earth, and it hardly guesses

the more fertile ground of its deeper roots."

Now they broke the canopy into the airy cathedral of the upper forest.

"Those bronze beetles live and die on a single tree, genelinked to eat any leaves not of their host. Usually it's just sunlight parasites, but if the trees get too close, they eat each other. When one tree dies, its beetles climb another and stamp its code into their last eggs.

"Those red birds eat the beetles, and spit their chitin in pellets catalyzed for swamp toads to swallow and transmute to their metallic armor.

"Those squirrels are so far upcogged that they only fight over style. Here their nests are like pagodas, but in the east they're spherical, and at the quarrelsome boundary both designs are tested for strength. Because they keep their birthrate sub-capacity, they have so many spare nuts that they use them as feed for breeding extravagant caterpillars."

They breached the lower canopy, a plane of glossy leaves so flat that it was the planet's default horizon. "The trees are the same height because they mingle roots and share, and also because if one gets too tall, monkeys will fight over the high branches and break them. Monkeys!" she spat. "Before time, the Swamp Mother bristled at the arrogance of the Sun, and made his children from the most incorrigible of all beasts."

Down in the twilight damp, braced on stumps and anchored by vines, a great wicker landing platform bore a red X, on which the craft now bumped and settled.

Brillix was first out, and she tugged a secret vine loosing a cascade of bloodblossom petals to signal her arrival to the ethersphere.

Levi sipped the sweet foetid air like a connoisseur of planets, and drank. Zuki turned her face to the red petalstorm while her eyes pretended to fly. Dusty stretched and watched an insect that looked like a copper fiddle and hopped like a cricket.

Blink blank in a shaft of sun, and slunk inward to her cryptic mission.

A while later she launched, waving to her crewmates sinking in the gloom, and fell heavenward on the gravdrive.

Through nutbutter trees and tarfruit blossoms, circled by an improv modswallow racetrack and scattering the thoughtclouds of holocasting etherfauna, through the veiny green roof she rose, and then cranked the fire engine and blasted past spaceneedle treetowers into the void.

~

The Sifrexan cogtug, like a piece of bleached driftwood, circled the Cthuthex convergence, a voodoo whirlpool of Chthon snakes and ratkings, Thanan boneships, and the junkety carnival of craft that ventured the dead chains.

Early to her meeting, Cataria sat on a diamond bulge on the hull, trying to cut the zero-point

weave with the Edge of Space.

"That's good," the ship pulsed. "Remember that you are cutting with your mind. Your arm is a mere prosthetic between the vitality of the soul and the divinity of the blade."

"Not my arm." She wrist-flicked the edge like the lash of a whip, and a fountain of starlight bubbles burst the gash and tickled the cogtug's skin.

"Who are you," the ship said, "to learn so fast?"

"Don't you remember? I'm your daughter."

"I'm forgetting, like the glazy days of summer in September's chill. Don't let me forget."

"Forget what?"

"I don't know... Here's your ride!"

The spacecop cutter hovered and Cataria shot the gap into the deep airlock of the law.

~

It was autumn in the midscroll hills, and flaxtamaracks were shedding yellow threads that drifted like prickly snowfall in the crosswise sun.

In the meadow, a teenage girl was harvesting pillows of unspun gold with an airsieve, when storming up the eyeward trail came her far cousin, just six years old, on a wild pony she had befriended in the lowlands.

"My sister," said the fierce tiny girl. "Has she come this way?"

"She might have," said the older girl. "Come with me to the chateau."

But it was a trap. In the great walnut hall her father was waiting to take her home. And after a night of feasting on bushpeaches and playing mountain rags around the great hearth, as they rose in the morning balloon to catch the spindle

zeppelin, she stared faeward down that cloud-walled well of sparkling blue.

"I see her!" She jerked her father's arm.

"No, that's just-" He laughed. "Of course you see her. How is she doing."

"Dad... she's scary."



# 17

*I went down into a slumber  
And I traveled many streams  
Constellations without number  
A world interned in heavenly schemes  
When I awoke dear  
I held you close dear  
And thought of all the foolish things  
If not I, someone  
In my body has done  
Incognito in my dreams*

-Orphans & Vandals, "Incognito"

A graffitied boombus burst from a backalley, scraping the drainpipes of the wonkety rises of flats.

In its path, a scrapmetal jalopy appeared out of nowhere, and its passengers kissed airbags and blanked as the impact skullpunched their cortices.

The little car skittered and slid stopped by a dead fountain where skatepunks flipped in the ashy bowl.

"I don't know who I am," said the front passenger. The red checkered bags sucked back into their fittings, and she fumbled down the sunvisor mirror and saw her own face, droop-haired and sepulchral, her eyes, curious and shrewd, her dangerous nosebridge and gentle crooked smile.

"Your name," said the driver, "is Risa Dred-Stoke. We are agents of a caper that serendipped that boombus to zero your brains for faesplice. We are now, ambiguously, on Ladbroke 4-2. On this island of Consensus, we have stormed the beach and can

now move inland. But if we draw too many eyes, we never existed."

The driver was a sleek woman in mirrored cat sunglasses and a spiky black skullcap. She turned to the backseat passengers, a sprightly brick-faced bloke and a dreadlocked androgyne. "Your name is Denova Sun-Stoke. And you're Dick Sergeant."

Sergeant said, "What are we doing, and how do you know so much?"

"I'm a transcended simbrain. My name is Trixie Stoke-Aisling, and we're going to steal a time engine."

~

In the SETI office, Perceva Seeth listened to the song from space, and Crafton Veer swooned at the noise leaking from the headphones, like the shrieking trill of an eldritch god gone mad with joy.

Perceva looked curious, puzzled, troubled, and then shocked. She jerked the phones from the jack. "I've heard enough." She fought back a shiver. "It's not even that good." Angrily she brushed a tear from her eye and turned on the professor. "And it's not from space."

"How do you know?"

"It's not weird enough. The notes are just the pentatonic scale, embellished by errors. It has verse-chorus structure. There's weirder music being made in this city. Your song is Earth pop."

"What human can sing like that?"

"Tigers paralyze their prey with a low frequency vocal rumble. This is the same thing, some kind of resonant frequency that matches the default echo of the brain."

"If it's a technology," he mused, "it could be used by anyone."

"What else would it be?"

"A one-off. Something that by nature cannot be duplicated."

"But there still has to be a mechanism."

"Not necessarily. The mechanism might just be that this thing needs to happen."

"Are you really a scientist?"

"Science has rules, and it has boundaries. I know the boundaries from both sides. That's why I never got tenure."

"Do you believe in truth?"

"Truth is a game of musical chairs where they try to keep removing chairs, until there's only one, but it turns out they have to keep adding chairs. And the music never really stops."

"Your music," she said, "is the sonic weapon of an

enemy state, or the latest mass-media machination of a monster tech company."

"How did they ventriloquize the Pleiades?"

"They hacked your computer."

"The telescope," he said, "has a carrier wave, a default hum that is not separate from celestial messages, but grows to become them. If you listen again, you'll hear it."

She looked down at her hand, still white-knuckling the headphones, and she forced them through her fingers and set them down with a tremble.

"Show me your telescope."

~

"Leave the car," Trixie said. "These drivers only see it at the edges of their unlinked eyes, where it will patiently dis-exist."

She led them down a sidestreet whose walls were chipped limestone blocks wheatpasted with posters for music shows: psychpunk and shimstomp, doompomp and dredge, ur-shmaltz and glow-and-drizzle. Perched on the iron rail of a downstair, a feral orphan played a theremin ukelele.

Risa stopped to listen. "Kid, is that for sale?"

Still tickling the air, he finished his ditty and winked at Trixie. "To you, for a kiss."

She kissed his forehead. "Hello Nim. I thought we'd left you behind."

"I remember," he said. "Thick head."

Risa said, "Small brain."

Trixie looked down the stairs. "What's behind that door?"

"Don't know, deadlocked."

Sergeant said, "Do you want to get in?" He reached into a pocket and found a set of lockpicks, deftly fashioned from streetsweeper brushmetal. "I forgot I had these."

He reached for another pocket and Risa grabbed his arm. "Not until you need it! As long as you don't know what your pockets hold, they could hold anything."

Denova looked at her shoulder satchel and her face lit. "I want an endless jug of Minoan spiced rum." She reached inside and pulled out a foodfab specialized to that drink, even mocking the bottle's classic shape. "Are we in heaven?"

"We are in a dying dream if we fail," Trixie said, "and if we succeed, we are hardcoding history. So don't waste your finite rabbit hat on trivialities."

"Your mum's a rabbit!" She took a swig. "This is important."

Sergeant sniffed the wafting aromatics. "Minoan



rumspice has organic molecules that require a level three fab. Denova, is that the real stuff?"

"Do dream sheep shit in your head?"

"Then I can use this," he fingered a pocket flap, "a micro-magfocus multitool, optimized level four in fabhacking, to make that bottle dispense any organic molecule up to 21 carbons."

He pulled it out and beheld a dastardly screwdriver. Its handle was Diphous Hephister, an uncanny alloy that absorbed all light and was fully permeable to a living metalworks whose esoteric circuits hinted at their transient functions by throwing golden surface ripples. From the tip, a proboscis telescoped like a flickknife and spat dancing sparks.

"Careful," Trixie said. "Those sparks are transphysical."

Sergeant reached his mind to the tool and fumbled the grip, and sparks showered them all like a

sunburst firework.

Trixie burst out laughing. "Stop it, it tickles!"

He wrangled his head around the tool and settled it.

"Well," Trixie grinned, "your faepockets are now totally jinxed. There's no telling what might come out."

Risa sniffled her nose and just started to reach for her breast pocket — that was all it took for the hairtrigger dreamfab to erupt with a continuous stream of her handkerchief, realistically filthy.

"Get it off me!" Denova backed away. Risa turned the crusty clothstream down the little stairwell.

"Not yet," Trixie said. "We need to get through that door and off the street."

Sergeant dashed down and stuck his brushpick in the cylinder, while Risa stood at the top of the

stairs and tried to hold the cascade as it bunched under her chin.

"If we don't get through that door," Trixie said, "you'll have to take off your dress. We'll leave it and run."

"You hear that?" Risa looked down the stairs and winked. "Get us in or it comes off."

Desperately, Sergeant whisked out his micromag and worked double with the iron pick. The lock sprung. With a twist, the bolt withdrew. The pocket fizzled to its end and Risa hauled her dirty burden down.

"Remember," Trixie said, "behind that door could be anything."

Together, Sergeant and Risa tugged the handle. A wax seal broke, and a great breath rose like the sigh of an old man who fed on honey and bitter treenuts. Below, a rough-hewn stone stair led deeper.

"What were you thinking of?" Risa said.

"Steam tunnels, going anywhere under the city. You?"

"That poster up on the street, for The Monks of Unnecessary Repentance."

"Catacombs!" Trixie said. "Risa, tie one end of your kerchief to the railing."

"Why?" Denova said. "So we don't get lost? I've got a compass." She reached into her bag and pulled out a sundial.

Risa said, "If the catacombs are not well-remembered by the city, we could get more than lost. We need a physical link to hold us to this world, or we might wander into solipsistic entropy."

She tied a firm knot. "Nim, guard our intersubjective tether. We're going down."

# 18

*In Lulu Land  
The walls are soft and dark  
In Lulu Land  
Your secret heart  
Is in command  
In Lulu Land*

-Paul McKinney for Camper Van Beethoven,  
"Lulu Land"

Leaving the birdlike boy in the glam-littered

Ladbroke backalley, they cracked the door to the catacombs and dangled on a white thread in the dark.

"Flashlight," Sergeant said. He reached in his pocket and pulled out a torch. The flame sputtered in the damp air.

As the stair took them deeper, the walls paled with pictographs, carvings from the red lacquered surface into the white chalky stone. Soon the carvings grew so dense that they merged to become the background of raised red arrows and birds, spirals and raindrops, eyes and suns, hearts and skulls.

The stairs leveled in a T. Sergeant looked both ways.

"I don't think it matters," Risa said.

"It doesn't." Trixie's voice was somewhere off to the side. "But you must pretend that it does. Or vice versa, I forget."

Sergeant said, "But you must know where the time engine is."

"As long as we don't know," Risa said, "it could be anywhere."

"But up there, it can only be in one place."

"As long as they have a story of how it got taken, and we have a story of how we got it, the stories don't have to match, unless we compare notes. Wait, Trixie, wouldn't your perspective tip the paradox? Trixie?"

She was gone.

Down one passage, Denova had produced a blue glowstick that upped the contrast of the pictographs, now sparkly black over sandy white. "Hey, these are getting good."

"Wait," Sergeant said, "we have to decide which way to go."

"You dolt!" Risa slapped his head and his torch fizzled.

The pictograph landscape now covered both walls and the ceiling. Its archetypal base symbols had divided and evolved into beasts and hunters, chariots and triremes, castles and cities, airships and starchains, rising and falling as the two colors traded roles as background and text, until they were both text, each telling their stories precisely in the spaces left by the other. Then they further divided into three woven threads: wall, ceiling, wall.

"Captain," Risa said, "I mean Sergeant. This triptych is beyond default cog. I need you to mod Denova's boozefab for a headcrack psych."

Denova took a last chug and passed the bottle. "I'm in."

The mechanic took the fab in one hand and the hack in the other, the slate and the chisel, the bottle and the opener; there in the dim passage,



hunched over his toolkit, he drew dreamsyrup from the coalbin.

"One part per thousand," he said, "diffused in Minoan spiced rum."

Denova sniffed the baroque volatiles. "That's Chthon spiced rum."

"But that's level four."

"I'm telling you." She sipped. "I hope your other drug didn't also get messed up."

She had barely handed over the bottle when she saw a story so beautiful that she chased it away down the catacombs, losing touch with the floor, her body, her memories.

She became the story, and it got bigger, and bigger, and somewhere in a far corner, a brassy commoner from frontier Na-il rode her discordant style all the way to a rollercoaster plunge down a monster faestorm.

She woke in the Ladbroke sixline. The view outside was like a blurry carousel on a humid night. She was on the couch, and the Captain and Torisa were sprawled sleeping on floor pillows by the half-unboxed sphere-tiller for their new antique engine.

"Trixie?"

"You've only been away for a trifle. The others should return soon."

"Was that a dream?"

"It would seem to have been."

Now Torisa stirred and the Captain sat upright.

"What a dream! I was a driver on Ladbroke 4-2. Risa, you were there. Wait, that was another dream."

She pulled out her snotty handkerchief and waved it at him like the veil of a princess.

"So it really happened?"

"Honey, we are so far from where that question even makes sense."

"But the engine," he said. "Did we get it?"

"It's a long story. You go first."

I was a young busracer. In Ladbroke cities there are two kinds of buses, slack and boom. Slackbuses are Blipmax, and boombuses have no limit, but only the best boomdrivers get to carry passengers. We settled it in the quieter streets, with races.

I was right at the edge of qualifying. I needed just a few seconds, so I took a shortcut down an alley that I knew had a blind exit. I had to risk it. And there, in the perfect spot to get walloped, was this tinny little car with four passengers. I smacked it like a hockey puck. I'm thinking, they're all dead, and so poor they might be permadead, that's a deep cell on the Lonely Planet.

Now, Ladbroke subscribes to Pirate Law, in which all criminals get a sporting chance. So I took off. I stayed in the underground, consorting with the dodgiest scum of the Ladbroke chain. I met this girl... but that's another story.

Under Pirate Law, time spent as a fugitive is credited back to you. But I couldn't take it. After two weeks I turned myself in.

And they kept saying, there was no accident.

"I was there, I saw it. It was me. I need to confess." The Captain bowed his head to hide his quiet sobs. "They kept saying, nothing happened. But it did. It was my crime. Stop protecting me!"

He gathered his breath. "They gave me a silver bullet anti-psych, and I woke up here."

Torisa reached over and took his hand. We were dancing, she said, down in the tunnel. Me looking at the ceiling, and you and Denova standing back, looking across each other at the walls. One of us

would slow down or speed up in our readings, and the others would move out of the way, but in that motion, speeding or slowing their own reading.

So our stories were linked. I would stop to read of a princess fleeing a wedding, and you would skip the whole history of the Suskikus chain to get around me. Denova, feeling you to her side, would slow so you could pass, and get caught in a wistful tale of two orphans, one blind and one lame, in an old stone city.

In the story that took me, I was a Ladbroke cardshark. The game was Minoan Caravan. Players hold cards in their tents and throw them to the arena to capture more cards. Taken cards go on top, and played cards come off the bottom, but you can't change the order and you can't look at them.

So it becomes a game of memory. A good player knows every card in every stack, and the order. Then the choice is how many cards to throw in combat, not knowing the throws of your enemies.

Then it becomes a game of nerve. Combat is triple circle four, like rock-skin-knife, but in this case, grain smothers moth, moth eats rope, rope binds slave, slave reaps grain. In the second circle, water eats iron, iron breaks stone, stone smothers fire, fire dries water. In the third circle, sun stokes spice, spice stokes dream, dream stokes joker, and in the presence of all four, the first two circles are reversed for that throw, and all tents are shuffled.

Then it becomes a game of luck, and that was where I cheated. I wasn't just lucky — I could fine-tune, deal by deal, the luck of every player. When I got better, I could choose exactly which cards were thrown, as long as each card lay in the shadow of a shuffle.

Winning every game would be easy, but then they would know. So I crafted a persona, a ditzy chav amateur who couldn't even remember her own cards, and I entered the big tournament.

First I won through luck. I was a curiosity. But my luck had to run out, so I pretended to learn skills

that I already had: memory, tactics, boldness, a playing style that took interesting risks. I became a sensation.

Meanwhile, watching another bracket, I found the worst arsebowler in the whole tournament, and I made it look like he was impossibly lucky.

Unwittingly, he played the villain. I met him in the semifinal, and I threw down a curbstomp. The crowd roared for me as they dragged him away.

In the championship I faced the sensible favorite, and of course I lost. Otherwise someone would do a deep stat, and figure out that even a level four luck savant was more likely than those shuffles.

But from that moment I was famous. Top-drawer cardsharks queued to face the Caravan Queen. I would pick nobodies with stories, lowly ragamuffins and pompous barristers, defiant spinsters and dashing rakes, streetsweepers and spacepilots. Every game was a reckoning of the stories of its players. I took from the rich and gave to the poor. I brought people together and tore

them apart. I exposed crude lies and replaced them with elegant distortions.

And at the verge, I paused. Nothing stood in my way. The game guild had already fallen to the new wave: bands of players who were transparently theatrical, but still had to nav their stories to the flow of the cards.

Now, the Sifrexans, from their cogfab fountainhead, offer a service to chains and planets called Mulewatch. About one individual in a billion has the talent and focus to zonk the progs of all but the Fives. Mulewatch uses an economical level four prog simulator to identify charismatic interlopers to the sensible prognostications of the cognoscenti. 'We are not responsible for what you do with this information.'

But Mulewatch violates Pirate Law. Ladbroke can't use it. I could rule the planet, maybe the whole fourline. Nobody could stop me except a luck or prog level five, and they would be on my side anyway.



There, on the trigger of my epic destiny, I slacked. I shuffled off the burden of history, and fearing it would chase me, I disappeared into the underground. There I met a Devonian vagabond named Malachi Ripp, and we burned brightly through the saloons and digs of the dead chains, scavenging priceless artifacts and arcane lore.

We found one time engine so antediluvian that I donated it to the Parliamentary Museum and they named a wing after me.

"That's the one you were targeting in your Ladbroke caper." She rose and leaned back on the half-unpacked handflight. "But we found a better one, and I stashed it as an accessory to an obscure navwheel."

She tore open the crate, and there, circling the base of the melon-like globe, was a ring for a dragon's knuckle, a golden bobèche densely sculptured with elfin riot and eldritch debauchery.

The Captain said, "How did you know, to put it on

this wheel?"

"Honey, I remembered everything. Here." From the subwheel bin she drew a level four Ladbroke fabhack and a Minoan rumbottle foodfab, and passed them to their dreamworld crafters.

"Also, one night in the underground, I met a young boombus racer on the run from a hit."

In the Captain's hand, the driver sprung every attachment. "That was you." He met her eyes. "But you were so far out of my class."

She leaned and whispered in his ear. "You were my Captain."

Red and blue police lights flashed in the dome.

With a dry black thump, Nimrod fell dead in their midst.

# 19

*If you go flying back through time, and you see somebody else flying forward into the future, it's probably best to avoid eye contact.*

-Jack Handey

On a sidewalk corner at the fringe of a busy five-way, a raven-haired orphan played jacks. With the eye of a raptor and the hands of a primate, he bounced and whisked up five, six, seven silver stars like nothing.

With his other hand he played a second game. Between games, he pocketed winnings and donations in a heartpouch that locked theft to pre-convicted murder, the cops only give you twenty minutes.

When the sun bronzed in the simsmog, the birdboy left his treasure perch and eyed the traffic. The five streets met in a roundabout where vehicles whirled like fish in a reef: plodding steamlorries and patient slackbuses, wheelless cars coasting on gravbearings and scooters banking crazily on gyrowheels. He flagged a one-seat microtaxi and fed it a spare coin. "Whitby Deposit, main office."

The outside of the bank looked like a colonnaded strongbox and the inside looked like a church. Under a low cathedral vault, rows of brass black-curtained booths stood like archaic confessionals. He parted a curtain.

"Ahoy, Nim!" Above the cash bin and fountain, a vacuum tube screen buzzed with the cheerful cartoon avatar of the bank's great Blip.

Nim grinned roguishly. "Good day." From under his ragged shirt he drew the bulging cashpouch and purged it in the bin.

"You did it!" she said. "You have enough quid to buy a storefront in the Ladbroke-Exchain-ChKung satellite concourse."

"Do it."

"I should tell you, if you can bank like this for another week, you'll be rich! The language guild has lowered the trope threshold to--"

"Buy."

"Bye, Nim. I'll miss you!"

Out on the street, the kid flagged another microtaxi. "Spaceport," he said, and flung the jacks in the air.

~

In slow spin at Brumvolz 5-7-L4, a score of six-spike stations hung like aggressive ornaments and cast sharp reflections of the white sun. Each spike was a pyramid tower riding a point of the efficient octahedral gravity engine at the center.

Deeper at each center burned a tiny sun, keeping the station aloof from its cold star. From the tips of the chrome spikes gushed gouts of infrared waste heat from the servers.

Just below one of these, a cop bulletship docked and became another nodule on the spire.

Inside the station, the halls were bare and white, boasting their grime and scuffs like battle scars. "Seven floors down," Blink said. "Follow me."

At the central shaft, she tipped into zero-G and sprang toward an obscure and little-dirtied door. Cataria judged the vector and shot past, settling her momentum with a twist on the doorlever, which held.

Blink spidered over and quietly two-fingered a polyrhythmic knock. The door opened to a zigzag rectilinear defile too narrow to walk abreast. Blink found another door and tapped the code.

Inside, a scrawny simworld hacker lay tumescent and twitching in a full body divesuit with a cable as thick as his arm. Blink cut the feed.

"You're under contract to us."

"Sorry." The dazed tech rolled back his helmet, found a pillbottle, and popped a grounder. "I saw you were coming from Chthon 3-1 and I had to check it out. They're about to have a monster archaic eruption."

"We've got something more important."

He looked at the two elves, skeptical at first, then briefly imagining a threesome, but the grounder was kicking in and the pale one turned her scarred face to him with frightening focus.

"I need to go to the Lonely Planet," she said, "and I need to bring this."

"That's impossible," he said. "Artifacts-" and then he saw it, so dark and so bright, harder than diamond and alive as a snake. "Father of Space, is that a level five?"

Cataria didn't bother to answer.

"Is it synced to your monadic eye?"

She let go of the blade and blue electricity held it to her hand. With the slightest tremble she twirled it like a baton.

"Okay, that will go. I'll get your suit." He fumbled in a closet. "Will you be staying?"

"She'll be going," Cataria said. "I don't want someone waiting for me."

Outside the door, Blink waited a few minutes and then knocked back in. Cataria was on her back,



fully cocooned, hands crossed over her chest, the blade pointed downward. Divested of animus, it lay flat like a prop.

"They're in," the tech said. "It was strangely easy. Do you want to watch?"

"No. She might need to do more impossible things."

## 20

*I miss the feeling of the landslide  
Shaking the dust off of my skin  
What chokes the breath that makes my heart sigh  
And now I feel at home again*

-Windhand, "Orchard"

On a dark desert plain, head tilted back in rigid curiosity, a great eye pierced the heavens. Above Perceva, the radio telescope struck the same pose.

"The Pleiades," she said, "are shaped like a question mark."

"What do you think the question is?" At the door to the control room, Crafton Veer had his keys out and was tickling the lock.

"A symbol created by chance does not imply referents to that symbol."

"I don't think this door's going to open."

"Unless," she said, "the shape of the seminal question mark was imitating the Pleiades. In that case, whoever chose it must have seen a question in the sky."

He sat down beside her. "I look at the sky and see nothing but questions."

"It just moved!" She pointed. "One of the stars."

"Cool."

"You're supposed to say that's impossible."

"I'm not that guy."

"But it is impossible."

"Do you trust your eyes?"

She sat in the dirt and covered her eyes with her hands. "I think it's in my brain."

"If your brain is unreliable, then how can you trust that thought?"

"Shut up." She elbowed him. "I think your star song has tangled my neural net."

"But your net just caught something it's never caught before."

She sighed. Like raising a weight, she lifted her eyes to the pinspecked void. "Shit. They're still moving."

Crafton squinted. "Did Alcyone just move to the right?"

"You see it too!" She almost hugged him. "I'm not crazy."

"Or we both are."

She jabbed her finger at the bottomless sky.

"Something is distorting the light. It could be a pocket of warm air, or the gravity of an asteroid field."

Where Alcyone's gesture had pointed, Merope drifted and shot to one side. Curving, she traced a perfect circle around her sisters and fell back into place.

"Fuck me! It is aliens."

"I think it's fairies."

"Seriously, what could do that? We can rule out the actual star moving. So it's either a very precise

distortion up there, or..." she pointed to her head, "in here."

From a pocket over his heart he drew a matchbox-sized music player, coiled in earbud wires, suddenly squeaking with the unhinging dirge. He offered it to her small prominent ears. "Listen."

"I should arrest you for breaking quarantine of a neuroweapon."

"My weapon is aimed only at you." Still the black buds tinnily shrilled. "As an oracle in your quest."

She yanked the player from his hand and threw it into the night.

He said, "You play the righteous chevalier, but you're a wild horse."

"My ears." She strummed the protruding cartilage. "I don't trust them. With the eye, things come clearer in the center. With the ear there's no way to focus."

"There might be." From a pocket in his pants he drew a glass pipe in the shape of a fat acrobat, and a packet of Kali Mist.

"It's cold," she said. "Let's do it in the car."

Perceva, in the driver's seat, leaned back and loosened her hair.

Crafton coughed smoke. "If this is a prison world, what do you think you did?"

"Nothing. I'm obviously a guard."

"Sometimes I think I'm the most degenerate person in the universe, and this entire planet is for my rehabilitation."

"Cannabis-induced paranoia gilded by narcissism."

"And then I think, what if it's that way for everyone? Through some extra dimension of causality, each person is at the very center."

"You're a solipsist who can only simulate compassion through intellect." She took off her shoes.

"It's like this world is a big game, where our souls are taken from us and we try to get them back."

"You were right the first time. It's just you."

"And the song is like the cheat code. But I don't feel like I deserve it."

"Deserve. What does that even mean?"

"Maybe we deserve something, not by what we did to get it, but what we do after we have it."

She held out her hand. "I'm ready."

Through the body of the glass trampolinist, Perceva drew the fiery soma.

"Stop," Crafton said. "Now take it out and suck deep." A gibbous moon had risen and in its light



she coughed a faint cloud.

"Does it hurt?"

"A little."

"Suck harder."

"Pack my bowl again."

Dribbling spent bud on the floor, Crafton crammed a pinch in the carnival hussy's midsection and lit it, and Perceva kissed the little glass mouth.

Holding it in, she bore down and then released the pearly cloud.

"What did you just do?"

"I was raising my diaphragm to pressurize my lungs."

He reached for the pipe. "Let me try."

"We'll do an experiment," she said. "You be the control."

"That's not how it works. You have to be the control of yourself."

"No I don't."

# 21

*The diving board springs to assistance  
Throws you off from the shore  
Telephones ring in the distance  
There are lifts getting stuck between floors  
A truck turns into a cul-de-sac  
Springtime turns to ice  
Rucksacks turn into hunchbacks  
Musclemen turn into mice  
In a painless panorama  
With its perpendicular mates  
The women are going bananas  
And disappearing from sight*

- John Cooper Clarke, "Valley of the Lost Women"

The two hitchhikers looked like an escaped mental patient and an exiled evil prince. She loomed skeletally over him as he performed the humiliating ritual of this hellworld.

Up the highway came a dusty sedan driven by a grizzled astrophysicist distracted by the mouselike nuzzling of a birdlike federal agent.

"Pull over," Perceva said.

He slowed. "No rational person would pick them up... But I will!" He drew past the deviants and glid to the shoulder.

They got in, the dark elf behind the wizard and the black prince behind the knight.

The car merged with the echoless emptiness and

moved on.

"Where are you going?" asked the knight.

"Anywhere," said the prince.

"Good answer," said the wizard.

The dark lady said, "Did you fart?"

"My princess, that was your own malodorous beacon."

The scenery changed, subtly at first. "I don't remember seeing that on the way down," Crafton said.

Perceva said, "I'm sure I would remember a fruit stand shaped like a watermelon."

"Especially since watermelons don't grow here."

Around the next bend, the desert road plunged to a humid valley and they caught the sticky scent and

saw the swelling rinds of the fieldbound globes.

In back, Pareidolia drowsed while Shadrach's eyes possessed her.

Crafton turned on the radio.

"The university remains in total lockdown, even though authorities insist that the 'song from space' has earthly origins. But don't take their word for it. The song has been leaked online, and here it is! And coming up, Fleetwood Mac."

The sonic starburst engulfed them. They drove through shadows of the sand-carved spires of the Cornucopia Wasteland on Na-il 6-3. They drove the woven viaducts and ramps of some motorway city in fiveline Ladbroke. They rode a golden straw gondola through the mapless streets of a faeward Scroll canal town. They were mites on a bird in a swerving summer flock. They were rivers of hydrogen in the mantle of the sun.

The tires blew. The car spun, scattering caltrops,

and plowed the gravel of the shoulder. To both sides, sagebrush-dotted plains receded to long ridges like raised scars. Dwarfing the western ridge was a monumental thunderhead, black and pulsing with electrical menace.

From her lair at the mouth of a storm culvert, a demonic figure emerged. In desert camo like a snakeskin pentathlete she danced to the midroad dash and raised a horsecock dagger as black as nothing over a white-slashed face hot with fury.

Perceva rolled in the rocky scree and came up on one knee with both hands on the gun.

"Go ahead," said the battlewitch. "Test me."

The agent shot for the knee and the blade whirled to swat the bullet like a poshball. She targeted the shoulder and the virago sidestepped and swung the unholy racket to cup the lead in crytpocarbon and throw it back, flattened, at the agent's feet.

"I've got this." Pareidolia hobbled from the car

door and rose to her full height, chest out like a dodgy soldier. She coughed.

"Half-sister," Cataria cried, "with the authority of the Scroll and for the sanctity of the dungeon, I will unravel your irksome hex on this planet, not mine nor yours, by severing your cosmocallosum!"

"I know why you hate me." Pareidolia dropped her head. "And I agree." She fell to her knees. "Let it be known that I consent to the execution."

Quicker than quantum decay, flatter than a neutron star horizon, smoother than deep space, and so fast as to backstab the music of the spheres, Cataria swung the blade — not through the neck but the skull: the thalamus, the amygdala, the silver thread between one and all.

That plane-flat halfcircle flashed blue with the blade's passage, and Pareidolia put her hands to her head. Her skull was intact, but her face collapsed in astonishment.



"It's not a prison for the mind," she said. "The mind is the prison."

The storm broke. Through the crisp whiff of ozone and petrichor fell bullets of life.

Cataria dropped to her knees and lightning struck.

~

On a tower by the sea, a little yellow-haired girl said goodbye to her sister, a gloomy adolescent double her height.

"I go faeward this morning."

"Will you be gone long?"

"I'll be back in six years, to see you into space."

"But I'll only be twelve!" Her heart balanced on the risky edge of joy. "They won't let me go."

"They'll let you go, because they're letting me go,

and they'll see what I did."

"What will you do?"

"Just you watch."

"Be good."

The tall girl tousled her sister's hair and leapt over the edge.

~

Kneeling in the rain, Cataria felt her sister's fingers again in her hair, and kept her head down, tears washed by the rain, just to feel that touch for a few more seconds before looking up and seeing, after all, there was no one there.

The storm passed. Out of the fog and thunder of indeterminacy emerged a new land, similar in contour, but the ridgelines were clean diamond and the concave plains grew with cross-spiral crop patterns of nitrogen fixers and predator

attractants, edible and decorative respectively, but supporting the main crop — cryptomercury bioaccumulators — of the extreme eyeward Scroll.

At the side of the solarbrick road, their Ford was now an Orderfab Six, and repair drones were already descending on its busted gravbearings.

Shadrach sat in a daze, lost without his one object of focus.

Cataria kneeled indifferent to the outside world, pondering her heart and its mysteries deeper than space.

Perceva, having already suspected it during the song, remembered herself, and knew her home.

The human viewed his new enclosure with curiosity.

Up the road came an icecream racecar, a two-seater with its top rolled back to a tiny carnival wagon cabin, streamlined and jingling with the

family anthem of the midscroll baron who had lent it to the driver.

Out stepped, of course, King Paracelsus Meerscham.

Perceva ran to him. He bent her over in a theatrical deep kiss, and then flung her aside like a ballerina.

Cataria, exhausted, slumped down in her father's passenger seat.

Perceva looked back at Crafton.

"Catty," the King said, "meet your mother."

Mining some obscure nugget of strength, the Princess Cataria faced her progenitrix. "Nice shooting, mom."

"Does it hurt your arm, moving it that fast?"

"I acknowledge your motherly concern. But you know that a level five bends time. Did you think I

was doing that with a level four? Sorry, mother, if I needed a level five to catch fucking bullets."

"And I'm sorry I shot you. But you know, the real insult would be implying that you had used a level six." She patted her daughter's shoulder. "I just think there's nothing you can't do."

"Let it be known, the eyeward icon Perceva Seeth admits at least the metaphorical existence of a level six."

The King laughed. "Now that you two have completely settled your differences... who's that guy over there?"

Loudly Perceva said, "He's my outscroll boyfriend. Crafton, come over here and meet my estranged family."

"We're actually very est-normal."

"Dad, for that you should be shot."

Crafton said, "Do Earth bullets even work here?"

"At last," the King said, "you've found a man with good questions. All I have are answers. Chemistry is everywhere the same, except on Avalon, but all weapons leaving the dungeons are transmogrified."

Perceva squirted a blood rainbow of cherry juice over the road.

"Watch out," the King said. "She's going to drag you through far eyeward high society, showing off her diamond in the rough."

"I'm great at parties," Crafton said. "A space always clears around me."

"You'll fit right in here."

"The dungeons. What happened to them?"

Solemnly the King said, "Your homeworld no longer exists. It exults!" He leapt in the air and

sang:

*Transeyeard does your planet rise  
It darkens farthest faeward shade  
For past the Fae and past the Eyes  
No wall has our creator made  
But stretched from every trashbound soul  
A sketchy bridge to round our Scroll*

"So this was your plan all along."

"I'm sorry, Caty, for it to work you had to not know. The final seal can only be broken by an eldritch blade merging purest hate and love to demi-deify a wicked princess. It's been that way for a million years."

"Eight hundred thousand," her mother said, "and the old way was harder."

"And yet," her father said, "the people of old succeeded more often."

Shadrach got in the driver's seat. "Let's sully this immaculate island with the dust of our leaving."

"Don't tell me," Cataria said. "I remind you of someone."

"You're nothing like her. I want to forget her. Ride with me now into the nascent Backscroll."

"I'm not going to fuck you."

"Then you will eclipse your sister perfectly."

"Hit it."

The picaresque landship roared off the eyeward edge.

"Well," the King said, "that was over much too fast."

His old lover wasn't listening. She waved her wayward child into the sparkling and gave her eyes to the boy.



The End

... or is it?

# Dictionary

**Arb:** a drug category named for cognitive effects similar to Arbitrary space, in which the separate identities of persons, locations, and things become difficult to distinguish. A drug that confounds the identity of the subject is called an egodeath.

**Arbitrary space:** Where chains come together in a convergence, there is a metaphysical region where location and identity cannot be objectively pinned down, and this lack of definition allows flexibility in making connections. It has been mathematically proven that Arbitrary space exists behind all space, but practical applications remain elusive.

**Arbjumper:** someone with the skill, almost completely mental, of surviving in Arbitrary space and catching the hull of a passing craft.

**Astra:** the base unit of the inscrutable mechanics of warptube propulsion. While astral sails are clearly functional, it is not clear on what level they exist.

**Batwarp:** the fastest known method of Gridspace travel, in which the relativistic time loss of near-light-speed motion is counteracted by motion backward through time, which physics permits as long as there is no chance of paradox. In practice, the quickest path is not the most direct, but an elaborate course improvised by two pilots, one in space and one in time. See Grindwarp and Timepilot.

**Blip:** an artificial intelligence.

**Blipmax:** Artificial intelligence can steer a space or land vehicle with far more agility than any human, but it is limited by law to a moderate maximum speed, so that humans can still learn a fun and meaningful skill.

**Chain:** a particular spacefaring culture defined by its warptube. Or: the set of planets that mark the nodes/exits of that warptube. Each chain originated in an alternate Earth, which, when discovering warptube technology and Chainspace,

projected its own expectations, intentions, and strengths on the planets pinning the nodes of its tube. See Primespace and Warptube.

**Chainspace:** the total geography of all warptubes and all convergences. When graphically represented, typically as a 3-D nest of lines, it does not reflect locations or distances in Gridspace.

**Cog(1):** the currency of the Sifrexan chain. Or: a precise number of simple computer calculations, which sets the value of that currency. Or: those potential calculations in a form that can be stored and transported.

**Cog(2):** short for cognitive or cognitively, a general term for intelligence or mental state.

**Cogmodded:** mentally altered, typically by drugs.

**Consensus:** that region of reality on which all observers can supposedly agree. See Truth.

**Convergence:** Warptubes always touch in sets of

three, and always at the peaks of harmonic waves, but not the same ones. So in Pitcairn, the GAP convergence might be on the sevenline between 7-17 and 6-9, while in the Glimmer warptube, it might be on the sixline between 6-2 and 5-1. (See Line.) Convergences can appear, disappear, move, or swap out their members, but these changes are normally uncommon.

**Cosmoduodenum:** the digestive organ of Scrollkin, which feeds on electromagnetism and other subtle energies, most of which are filtered out by planetary atmospheres. It replaces the intestines, and can draw some nourishment from plant matter but cannot pass anything solid. Also called a "space gut", it is not completely understood by Chainspace biotech, but it has been clumsily duplicated to enable deep space explorers to go without food.

**Crypt- or Crypto-:** a prefix indicating that conventional matter or energy has been alloyed or otherwise linked with some uncanny element that unsettles Consensus.

**Dead Chains:** chains that are no longer important enough to have any direct connection to Chainspace. Instead, they can be reached through nodes and convergences in the Exchain warptube. The Exchain warptube has its own sub-exchain warptube for still more obscure dead chains, and so on. No end has been found.

**Dreamplay:** In the potential worlds that lie between persistent worlds, as in theater, artifacts may suggest functions without ever having served those functions, and without any underlying structure in which those functions make sense.

**Drone:** any small semi-autonomous flying machine, used for a variety of functions. By law, after numerous disasters with microdrones, drones are prohibited from being smaller than dragonflies. For similar reasons, they are never fully autonomous, and for practical reasons they are never fully centrally controlled. Around the size of a human the nomenclature changes, often to the prefix "auto-" followed by their function.

**Elf:** common Chainspace term for the people of the Scroll. They don't find the word offensive, but call themselves Scrollkin.

**Ether:** Like Arbitrary space, Ether is another aspect of reality conterminous with Gridspace. Ether violates relativity in allowing information to move instantaneously, but only if the information moves as a feature of consciousness. The process is so difficult that it requires specially trained ethertechs who typically require psychedelic drugs, and even then communication is limited to pictographs.

**Eyeward:** in the direction of objective metaphysics, typically used in the context of the long-axis geography of the Scroll. The name recalls a primal heresy, in which God is not in the image of man, but must be a cyclops — or otherwise his two eyes, being in different positions, would create two subtly different worlds. See Faeward.

**Fab:** fabricator, typically specialized in making one

kind of a thing.

**Faespur:** a path of experience that ends without reconciling to Consensus, but which may contain useful information.

**Faestorm:** a temporary, systematic, and widespread increase in the inconsistency of experience.

**Faeward:** in the direction of subjective metaphysics, in which different perspectives need not agree on the details of the world they seem to share.

**Flow:** a pantheist religion similar to Taoism. Or: the divine entity in that religion.

**G, or Grav:** gravity. 1G is Earth gravity, or acceleration equal to Earth gravity freefall.

**Gravbell:** a gravity engine, popular for orbital stations, in which gravity is generated in a tight ring producing two symmetrical fields, whose



floors curve slightly away from the plane of the ring, like two shallow bowls bottom to bottom, with gravity stronger near the floors and also near the center.

**Gridspace:** ordinary space, defined not by warptube or Chainspace geography, but by x-y-z coordinates, which may be far from any warptube exit. It is an open question whether all of Chainspace is anchored in the same Gridspace -- that is, whether all places reachable from the network of warptubes are in the same universe.

**Grindwarp:** a reliable method of Gridspace travel in which time is partially reversed by an artificial intelligence making a very large number of very small corrections to avoid paradox. See Batwarp.

**Heart Node:** Each chain's 2 planet is exactly in the middle of the harmonic structure, and can access every line except the rarely used oneline. See Line.

**Jack:** any stimulant drug.

**Line:** a particular harmonic path through a

warptube. The oneline contains no harmonics, only Prime and Zed. The twoline contains those two plus the chain's 2 planet at the center. The threeline is technically the fourth harmonic, including Prime, Zed, and 2, plus 3-1, halfway between Prime and 2, and 3-2, halfway between 2 and Zed. The fourline contains all of those, plus 4-1 through 4-4 at the next halfway points. And so on, up to the sevenline which vibrates at such a short wavelength that it contains all 65 nodes.

**Lonely Planet:** an alternate Earth that is blocked from transcending to Chainspace, so that it can serve as a prison planet. The underlying mechanics are poorly understood and full of holes. According to the Forlorn Heresy, the Lonely Planet is the only true world, and it is the other worlds that are sloppily defined.

**Mag:** short for magnetic.

**Mod:** short for modify or modification.

**Nav:** short for navigate or navigation.

**Null-spectrum:** Inspired by the ancient philosophical maxim, "I am, therefore I think," the null-spectrum is a hypothetical level of reality that participates in consciousness without having physical existence. The only aspect proven to ambiguously exist is the Ether, which is thought to be a single frequency of the null-spectrum, tuned to human consciousness.

**Permadeath:** the death of a person who cannot be restored from a savepod.

**Plink:** to take a drug through a disposable micro-injector.

**Pop:** to take a drug orally.

**Prime:** the original alternate Earth that spawned a particular chain, anchoring one end of the warptube. See Zed.

**Primespace:** Each Prime planet is the sole reality-creating perspective in its home universe, and

chooses the physics of that universe, within certain mysterious constraints. Typically Primespace is emptier and less navigable than Chainspace or Gridspace, and is largely abandoned after the discovery of warptube tech.

**Prog:** short for prognosticate, prognosticator, or prognostication: seeing the future.

**Psych:** short for psychedelic, a drug that temporarily hyperconnects the brain.

**Savepod:** a person's full body and dormant mind, saved against future death. Memories lost at such death may be partly regained after savepod reversion, which proves that memories are stored somewhere other than the individual brain, but this uncanny reservoir has not been found. Bodies awakened while the original is still alive have only rudimentary intelligence, and the practice is illegal largely because it is unclear to what extent these Podzombies count as persons.

**Scroll:** According to the Aristan chain, the Scroll is

a collective insanity, in which people at the unaccountable fringes of all worlds, with a linked set of genetic anomalies, believe themselves to be immigrants from an impossible magical world. According to the Sifrexan chain, the Scroll is a physically real space station, the last remnant of a superior civilization at least a billion years old, whose location in Gridspace might yet be found.

**Scrollkin:** what the people of the Scroll call themselves. See Elf.

**Scrub:** a drug that cancels the effect of other drugs. Typically withdrawal symptoms are not canceled but accelerated, so scrubs are illegal for drugs where withdrawal is dangerous.

**Sim:** short for simulated or artificial.

**Simwindow:** a screen that appears to be a window, typically between a spacecraft or a station and space. They are safer and cheaper than true windows, and often enhance the view. There is a branch of law around the requirement that

simwindows may only distort reality to increase understanding, and also a branch of philosophy. Permitted distortions include spin, in which the direction of view is changed; flare, in which invisible spectra are made visible; clip, in which only the strongest frequencies are shown, making white stars green; true zoom; and shrinkzoom, in which objects are shown proportionally larger than the space between them.

**Stim:** a drug, or a drug application technology.

**Stimslash:** cancellation of a drug effect. See Scrub.

**Tempdeath:** the death of a person who can be restored from a savepod.

**Timepack:** also called timescrunch, a technology where time spent in a simulated world seems longer than the time that passes in the world outside.

**Timepilot:** A talented specialist in operating a counter-clock engine to reverse relativistic time

loss in Gridspace travel. The talent can appear anywhere, but it is only common among female Scrollkin. See Batwarp.

**Timesync:** in batwarp, the difficult process of synchronizing movement through space with movement backward through time.

**Transpolaric:** a spectrum of uncanny energy, whose two poles are mathematically similar to the eyeward and faeward ends of the Scroll.

**Tubeflower:** another word for a warptube convergence.

**Warptube:** the "tube" is really a torus, a donut stretched like the string of a musical instrument and strummed to raise standing waves whose harmonic nodes are exits to gridspace. At those exits are planets that reflect the chain that created/discovered it. See Line.

**Zed:** the first planet discovered by a new chain, using a primitive warptube vibrating at such a low

frequency that it includes only Prime at one end and Zed at the other.



# About Chains

There are many more than these sixteen, but the main text has been simplified and probably distorted to keep the number manageable.

**Aqua/Aquans.** On their home Earth, runaway warming melted the icecaps, and ocean anoxia exterminated almost all life. Humans survived on ships that used solar energy to extract oxygen and nutrients from seawater. These evolved into magnificent floating cities, and when they gained warptube tech, all the planets they found were at least 75% covered by water.

**Aristo/Aristans.** The most eyeward of all chains, it is believed to have originated when an iteration of the Lonely Planet broke quarantine into Chainspace, because the belief systems are so similar.

**Brumvolz/Brumvolzins.** A bureaucratic state rarely achieves planetary unity and warptube tech, but Brumvolz Prime found an elegant balance

between a densely cracked authoritarian edifice, and a somewhat ethical criminal underworld.

**Caxiletas/Caxiletans.** Their name is a mashup of the names of two nations, one of frontier pastoralists and one of casual urbanites, that merged to culturally dominate their primeworld.

**Ch-Kung/Ch-Kung.** All viable economies are based either on zero growth or polynomial growth. The Ch-Kung were so stubborn in trying to sustain exponential growth, that they stumbled on a system of depreciating currency that has all the vigor of an exploding economy, while remaining stable over the long term. Because Ch-Kung brakteats lose value so quickly, they flow fast through the Chainspace economy, like an ocean on which other currencies are islands.

**Chthon/Chthon.** In the consciousness of jungle people, distances are short, so Chthon is a rare chain whose Primespace is more compact than chain Gridspace. Their sun is only a million miles away, their moon is so close that treetowers sway

in its gravity, and they have continued to colonize their home galaxy even after the discovery of the warptube. With its navigable physics and lawless culture, Chthon primespace is a popular hideout for outlaws.

**Devonis/Devonians.** Careless biotech is the most common way that alternate Earths fail to transcend: by changing humans into something not quite human that goes happily extinct. The Devonians avoided this trap through a culture that worships the old, that always values tried and tested forms over new ones. They scavenge Primes and dead chains looking for the most ancient genes, and they dream of a time machine that avoids paradox by dredging information from the past without sending any information back.

**Glimmer/Glimmer.** When surface wars blackened its skies, Glimmer Prime turned inward, first into physical caves, and later into caves of the mind, where they became one of the few chains to discover warptube tech before space travel. Because of their skill in cavemaking, the planets

they find are indifferent to surface gravity, typically large and rocky, and as they delve upward and downward from 1G depth, they develop bodies suited to higher and lower gravity. Because they find space more alien than other chains, their spacesuits are built to a higher standard.

**Ladbroke/Ladbroke.** Something like the British Empire exists in many alternate Earths, but in one, instead of declining, it was reinvigorated by militant reformers who insisted, all through the industrial age, not on the destruction of machinery, nor on equal distribution of its benefits, but on the absolute autonomy of its use. Eventually, through a million linked home fabricators, many inventions came early, especially in macroscopic mechanics and music technology.

**Lodi/Lodians.** Once a massive exporter of agricultural products, its fertile planets are now depleted of topsoil, and only a few obscure convergence links keep it out of the dead chains. There are well-tested technologies to restore topsoil, but Lodians resist them through cultural

and economic inertia.

**Minos/Minoans.** Names and geography are often the same across alternate Earths. In one, the ancient Minoan civilization escaped destruction and grew into a global trade network so well organized that they discovered Chainspace much earlier than most Primes, at a level of technology that had not even developed internal combustion.

**Na-il/Na-il.** Something about warptube technology puts it beyond the reach of warlike peoples. The Na-il are a rare chain that did not originate on an alternate Earth. Instead, they were a minor deadchain tribe until one of their number ascended to aesthetics level five, and led them in violent conquest of the entire Burbosan chain, who are generally believed to have had it coming. By the treaty of Menkalinan, the Na-il retain the right to enforce their aesthetic standards on all surfaces visible from space, including large planetary features.

**Pitcairn/Pitcairns.** In deep prehistory, a rogue

gas giant passed through the Pitcairn Prime solar system, sweeping away most of the planets and leaving massive debris belts. With no expectation of finding planets around other stars, the Pitcairns learned to make planets from scratch, and were rewarded for that skill by finding systems rich in minerals.

**Quercus/Quercans.** The favorite child of the Space Mother, Quercus Prime progressed peacefully to a global ecotopia and then moved smoothly into Chainspace. Other peoples often wish that the cheerful and inoffensive Quercans will suffer some epic tragedy to make them more interesting.

**Sifrex/Sifrexans.** When Sifrex Prime invented the telescope in prehistory, their universe withdrew to such distances that space travel was never seriously considered. They finally discovered warptube tech through computers and math, and entered Chainspace already superior to other chains in processing information. Their method of manufacturing "cogs" -- storable potential calculations -- is not a secret, but so difficult that

no one else attempts it.

**Thanos/Thanans.** Like the Na-il, the Thanans emerged from the dead chains on the wings of a new religion. But where the Na-il rose through conquest, the Thanans rose through reanimation, fattening their decrepit planets on aggressive scavenging, and nudging back into Chainspace on the value of their innovations in savepod tech.

# Acknowledgments

Thousands of years ago a Chinese sage dreamed he was a butterfly, and wondered if he were really a butterfly dreaming he was a man. More recently, Raymond Chandler wrote "When in doubt, have a man come through a door with a gun."

Philip K. Dick brought these two ideas together, driving his plots by repeatedly inverting the real and the unreal. This novel grew from Dick's trippiness, but it grew even more from Roger Zelazny: his dreamlike transits between worlds, his reverent balance between technology and magic, and his vibe of swashbuckling adventure. Where Dick's characters are treading water in a sea of uncertain reality, Zelazny's characters are surfers.

The vibe I was aiming for, and fell short of, was the luminous innocence and epic whimsy of Hitoshi Ashinano's *Yokohama Kaidashi Kikō*, and John Crowley's *Engine Summer*. Hearing that the latter was written on weed, I tried it, and it broke the logjam in my creativity — but only on an



exhausting tolerance cycle of 1-4 days on and 2-10 days off. Repeatedly, my sober mind hit a wall, and my altered mind found a hidden door to move the story forward.

Of the many suns this book reaches toward, the brightest are music. Fiction doesn't come easy for me, because it's so hard for me to not bore myself. What keeps me going, sentence after sentence, is trying to match the beauty — so dense, so incomprehensible, so relentless — that I hear in the songs of Big Blood. Their lyrics are sprinkled here and there, including the entire working title.

Kunigunda Angst, 1846-1928, was my great-great-grandmother. She was completely unlike the character who bears her name, but her husband did work in a cemetery.

Leigh Ann made me an aesthetic thinker, taught me the language of personality, and continues to challenge me to not be such a dweeb.

# CONTACT

[ranprieur@gmail.com](mailto:ranprieur@gmail.com)

[www.ranprieur.com](http://www.ranprieur.com)

# SOUNDTRACK

Hawkwind - Infinity

Rex Holman - Come On Down

The Creatures - Pluto Drive

Big Blood - Away Pt III

Blue Oyster Cult - Astronomy

Fad Gadget - Lady Shave

Big Blood - Sequins

Orphans & Vandals - Incognito

Camper Van Beethoven - Lulu Land

Windhand - Orchard

Big Blood - Song For Baltimore

Hawkwind - Space Is Deep

John Cooper Clarke - Valley of the Lost Women