

PROLOGUE

Basel, Switzerland, 1705

Crucible tong in hand, forehead briny, Johann wiped the globs of dripping sweat from the glowing spiral. Furnace flames throbbled the dungeon-like walls of the cavernous, vascular smithy. By the forge, a cauldron of molten metal seethed igneous spears of liquid iron. Some rods lay in it, tips submerged.

Above the cauldron, stairs tottered up to a wooden-plank gangway, where he carefully carved the Latin letters onto the disk. On the adjacent shelf, a parchment scroll lay, algebraic scribbles and diagrams etched across it in cryptic elegance.

He scoured the reclusive shadows, dying to just get it over with. Hide the scroll in the plaque and forget about the whole thing. About Bernoulli, his fanciful spirals, and the whole *verdammt* lot of it.

A muffled thud sounded from outside. Fire jetted up his spine. He froze, strained his ears. Then slowly resumed his work.

A gerbil sauntered over, nuzzling his fingers. He gathered some crumbs, letting it nibble from his hand. He smiled gently as the rodent peered at him in gratitude. Scattering the remaining crumbs, he turned back to the disk, the spiral's glow waning as it cooled.

It had to be perfect. Why else come to the most distinguished coppersmith in Basel? Bernoulli had been adamant. The spiral was to be 'Arithmetic,' he had insisted—concentric rings forming a circle, unlike the spirals sketched on the scroll. These other spirals, those he'd marked "logarithmic," had a more balletic sweep, tracing an increasing area as they stretched away from their inner

orbits. Whatever he did, he was *not* to engrave one of these.

A shadow of rumored dread had accompanied this commission from the start. Now, with Bernoulli dead, he wanted to be done with it. To rid himself of this foreboding, this creeping sense of being party to something vaguely mysterious. Profound. Dangerous.

Patters of rain, at first hesitant, then in a thick lash, reverberated into the tin roof shingles under the canopied rumble of distant thunder. Breathless, a shiver clawed through his arms, the hairs on his neck taut, as if ready to bolt in escape.

Concealing the plaque's spring mechanism had been tricky. He hadn't tried it with the scroll inside but it ought to work. *We'll know soon enough*, he thought, breathing again.

The spiral cooling, he worked on the inscription. "EADEM MUTATA RESURGO," he muttered the Latin and its German translation, "Although changed, I arise the same." Balancing the burin on the disk, he engraved the letters along the spiral's outer edge.

The outside rustle prowled again, seemingly closer. He looked toward the entrance. Anchoring his fingers to avoid scraping the bronze, he blew the dust off the plaque.

Then—like a sudden thunderclap—a dark-clad intruder *lunged* up the stairway.

Scaling the stairs, the gangway shook under the hulk of his frame, his face shrouded by the mass of his woolly cloak. He swiped the scroll into his fist and seized one of the rods that was angled into the cauldron, its fiery tip blazing like a bulb of glowing blood.

Johann froze in startled fear; his fingers wilted, the burin clanking to the gangway. The gerbil reared. Clutching the scroll in his gigantic fingers, the intruder brandished the rod like a broadsword poised to strike. Johann waved his arm in a futile defensive motion, reaching out in vain for the scroll. "By God, you needn't!" he begged in whispered

German.

As his words faltered, the intruder's fingers came suddenly aglow, a translucence marbling his cloak and skin, exposing skeletal hints of his massive frame. Sparks kindled across his forehead, a ripple of blue lightning frazzling down his cloak. Panicked, he stared at his shuddering hand, the scroll dropping to his feet. He swiveled on the tottering gangway, throwing Johann against the railing.

Losing his balance, the intruder tripped over the side, tumbling into the vat in a screaming, scalding burst of boiling iron. He was gruesomely gone. Vanished without a trace, save the fading ripples of his forgotten impact.

Regaining balance, Johann retrieved the fallen scroll. He took a moment to catch his breath, each pearl of sweat now a cool bead of soothing reprieve.

The small, stove-like device near the furnace purred on, oblivious to the drama that had just unfolded. Offshoots of silvery crystal at its base clawed disquietingly along the floor. Unnerved, he picked up the burin and resumed his work.

1

CHINLE

Chinle, Arizona, 2350

Today she would do it. Just as each fleck of trail-dust willed a note in TiānRén's grand aria of everything. Something inside Ina's sixteen-year-old prefrontal cortex knew that Daddy knew. But it was blunted by too much lonely doubt. In any case, six years of tempted longing were bursting to erupt now like a thundery blood-swell of sudden anger.

She drew in a heave of desert air, its toxic viscera stayed by residual Anquan in her bloodstream. How would Daddy react? Hard to say. But smothering the impulse was no more an option than it could have been when the Cataclysm opened hearts. Or the Emergence eyes. She may not be a glower, but the truth was plain. Augury or no, she was a communicant. TiānRén spoke to her. There, she said it. At least she was going to, as soon as she got home. And did her nails.

A twig snapped. *Rattlers!* Two! Hiss-coiled in the branches overhead.

Pinpricks blazed down her spine. Firm, granite-like, she kneeled to grasp a dead branch from the ground, crouching, other hand raised to block the sun. *Steady Ina. Steady.*

One of the rattlers wound down towards her, its forked tongue tasting the air. The Triassic labyrinth of its marbled irises stole into her eyes. Then, with venom speed, its jaws hissed ajar, pearly fangs bared.

Successive seconds fused. Ina tensed. Inanimate. Icy. Frozen in ferocious quiet.

Then, with silk indifference, it slithered back and coiled up to where the second snake remained. She watched them through her fingers' pallid matte. Just plain skin. Glowless as always. Twitching her hands in a futile bid to stir them into radiance, she swallowed the lump in her throat. Nothing. Maybe tomorrow. Guarded, she eased slowly back to her feet. The rattlers were back to their feral duel-dance. Carefully backing away, eyes dragged down, she edged her way up the path.

It was baffling. How did TiānRén do it, steering all that separate, sovereign savagery? A Grand Master of solitaire chess. *Omnipotence*, she sighed, glancing upward. Just one of those enigmas ushered in by the Emergence. It was smothering. It quashed her whimsy like deer-trap steel crushing the ankle of a doomed buck.

A few yards down the path brought her to the familiar gully and the old termite mound, still towering above the log she and Sicheii used to sit on. Its spokes stretched like a giant hand grasping through quicksand. She ran her fingers along its surface, its vacant grooves unchanged through the years, each ingot of clay a minute remnant of vanished resolve. Reminders of all the joyless dawns that had come and evanesced here.

A capsule suddenly materialized in her palm, sending her gut into dead-fall. The Chinese characters for 'Anquan' were imprinted beside the English letters RT. The capsule was followed by her genMON, the capsule-shaped indentation in its center blinking its readiness to genetically calibrate the Anquan.

It was that time of day again. Should she take it? Be a good girl? Or risk the stalking minefield of microbial treachery lingering lupine just within reach. It was tempting. If for nothing else than to shake free of the stifling mental fog which always came with the medication. And to up the chance of having some communicance, as often happened when she 'forgot' to take her Anquan on time.

That couldn't be an accident. *Could it?*

She tucked the capsule and genMON into her sleeve, her gloomed thoughts swimming with a stamp of aftertasted guilt. She'd take her chances. Anyway, she shouldn't complain. Best to be thankful to simply be alive, able to enjoy the abundance of the post-Emergence era. She squeezed her eyes shut in a hopeless bid to squelch the spectral scenes. She'd dreamt of them again the other night. So much more vividly than the old histos from the Cataclysm. The unfortunates who'd suffered through the viral carnage, stacked in ghastly columns of emaciation. Somehow she felt each and every one of those starved eyes, atoms in a flaming dune of human atrophy. Set afire to halt contagion. And forget the hunger. Hunger? What a strange, alien concept. Thank heavens for the Emergence. *Literally*. A tortured shudder sped down her back.

Her eyes closed with a surge of reminiscence. Dad. His image bleary, a shroud of schooling etched into his forehead and cheeks, whitened into clammy alabaster by so many years holed up at home in the lab, insulated from her and Mom and just about anything that wasn't brimming with tensor fields, simplectic manifolds and differential topological spaces. Simple stuff like that. How many times had she waited at this spot for him? Breathless for a sign of warmth or tenderness. Or just a sign of interest. She'd have settled for that. Mom would probably have made do with even less. Most likely that's what had done her in with Sean's birth. She'd given up.

Well, it was time for a change. *She* was going to change it. By sheer force of will. You're not coming to me? Then I'm coming to *you*.

She rose and turned up the path, her grandfather's warning brooding like an inner treadmill. Wonderful Sicheii...when had she last seen him? Six whole years? How she'd lasted this long was mystery enough. How was she supposed to keep something this big to herself?

Communicance? Cloudiness flushed over her with the thought of Sicheii. He was getting older.

Her pace increased with every thudding heart-pound. No way around it. Dad could say what he wanted, today she would tell him. Even if she had to drag him out of the lab to do it. In any case, she'd better get home before he left again for Boston. And then maybe—*just maybe*—he'd finally let her in and tell her what was going on. Wouldn't he? One way or another, she was about to find out. "Come hell or high-water," as they used to say.

When hell was still thought to be an option.

She came up to the gorge. The same one she'd been crossing for years, over the footbridge which teetered above the yawning chasm like a tress of woven silk. Except it wasn't teetering. It lay limp, wilted against the rocky drop below her feet.

She skidded to a stop, sickness cresting inside her chest. *Today? Of all days?* The sky's brilliance was mirrored, mercurial, in the curves of the silvery brook. It seemed shinier than usual somehow. As if her unshielded torso, starved for Anquan, were teasing out the surrounding microbes into a suddenly visible, metallic sheen.

There was no short way around. The ravine went north and south for at least eight miles of sheer jaggedness, following the frothy twists of creek below. The bridge was the only way to reach the steep stretch where their house stood, about half a mile ahead. Its aged ropes dangled torn from the steel strut jutting from the cliff's edge.

A warmth wafted past her cheeks. Sweet and smoky, it thickened the air with hickory odor, then vanished, swept into the spatter of water lashing the sunken boulders.

Tears pearly in the wells of her eyes. This was way too personal to convey by holo. She had to feel his reaction. And Boston meant he'd be away for at least two weeks. Two *endless* weeks! No, it needed to be today. No

way were twenty feet of gorge stopping her. Not with this much at stake. Foiling the Augury? Confounding fate? Little Ina? No way around it, it had to be now.

Something throbbed behind her eyes. She shut them, trying to stop it, but it continued its intrusive ramble. She'd been having these strange mini-headaches a lot lately.

She glanced across to the slab of rotting wood projecting from the other side of the ravine, where the bridge had given way. *Ain't happening.*

She tested the springiness of the strut with her foot. It shuddered like an Olympic diving board. Some loosened gravel struck the far-down creek-bed. Bad idea. She swallowed hard. *Very bad idea.*

Glancing at the cloudless sky, her photographic memory overlaid its breadth with the expanse of nighttime stars. The numbers had always staggered her. Trillions of galaxies, each with hundreds of billions of stars. What was that? Sextillions and sextillions of worlds in all. There *had* to be someone else out there.

A downward flutter of cool air blew back her raven hair. Here it came. Like clockwork. Eyes shut, she soaked in the serene moment, vanishing outside herself. She felt herself dissolving into the air and clouds and ferrous rock. These singular moments of communion always flooded her with certainty. Ever since they first appeared, around the age of ten, she'd relished them. Even if it did mean exposing herself Anquan-less to every bloodthirsty pathogen on the planet. Everything suddenly made sense, had its place, its special role. Everything felt... well... *right.*

It was short this time. Sinking back into her body, a smile crossed her lips. Her eyes fluttered open, fixing on the other side of the ravine. Here goes. She backed away from the edge.

The hickory waft was back.

She drew a tense breath, teeth puncturing the cusp of her lip, feeling for the Anquan capsule in her sleeve.

Should she take it now? Not just yet.

She sprinted forward, pouncing with perfect timing on the struted steel, eyes glued shut to block out the harrowing drop. She launched into a descending arc above the gaping chasm, heart thumps deafening. Then, with a violent jerk, her fingers snagged the crumbling wood of the other side like talons into prey.

Scrambling atop it, she fell back, regrouping. *Atta girl!* She beamed. The adrenaline tapered back to normal. Now she *knew* the time was right. There were no coincidences. The time had finally come to tell him. And live up to the grandness of her own intimately destined calling. Augury, huh? Bring it on! She couldn't wait to see Dad's face. Now he'd *have* to tell her why he'd been so secretive lately.

Climbing the hilltop, the gamy tang of pungent smoke grew stronger. She picked up her pace, walking, then racing, tripping, jaunting, about to clear the ridge when—

Blurred shock froze her into disbelief.

The sheltered knoll which she had grown up in was a raging inferno. Flames lapped upward, haunted orange tendrils lifting life away from the glowing embers of what used to be her home. Her sapphire eyes watched in numb confusion as everything she'd known dusted into ash. The wooden skeleton beams of the country home scowled through fiery sheets of eaten sideboard and scorched shingles, like ivory ribs gleaming through torn ripples of crucified flesh.

Sinking to her knees, tangled thoughts wrestled in the stupor that seized her.

Something told her that Dad had been inside. That it was too late. But no actionable conclusion followed. For an instant, she thought she saw him, his ghostly face tearing through the flames. Acid emptiness knotted her stomach. She couldn't reach to sooth it, her arms limp. A wooden beam crashed, scattering embers in disarray.

Suddenly, her father teetered into view. He stumbled past the burning home toward the adjacent ridge, overlooking the ravine. He hadn't been inside after all. Dad?

"Dad!"

No response. He kept pace, the gorge drawing closer with every step.

"Dad, stop!" Ina yelled, scrambling to her feet. She dug her nose into the underside of her arm, trying to block the choking smoke. But it clawed her throat. What was he doing? Why was he walking to the chasm? A churning nausea tugged at the inside of her head. "Daddy!" she cried out.

He was elsewhere. His pace drew him mechanically to the edge.

Panic flaming, Ina bolted forward, numb to her shrub-torn thighs. The smoke mauled her breath. She leapt over a mossy slab, slipping, ankle twisting with a violent snap. Jets of pain exploded up her shin as she tumbled, lame, across the rocks.

There he was, ten or so yards away.

"Daddy," she sobbed through the excruciating sprain. "Daddy, daddy, no..."

An unfazed step, then another. She stretched forward but couldn't move. A scalded gasp escaped her throat, then—

He was gone.

Ina choked back her tears and shuddered, as the thud of his body's impact echoed from the crevassed drop.

She was dizzy, unmoored. She watched the blaze in a deadened stare.

This wasn't the sort of thing that happened in Chinle, Arizona. And it wasn't the sort of thing that happened in 2350, two centuries after the Emergence had reinvented the world in a flash of psychic communion, instantly making TiānRén a ubiquitously personal presence, superseding all prior faiths like a black hole devouring its

nearby stars. It was so detached, so far removed from everything she had ever felt, she didn't know where to start.

Why would *You* let such a thing happen?

In a blaze of instinct, she murmured "Sean," an image of her brother's cubicle at Boston Memorial flashing past her thoughts. He was safely incubated, remember? Better check anyway. But her mutinous limbs lay limp. Fear rippled across her skin, her insides plunging, the air around her seemingly curdling with microbial motes of homicidal villainy. Could she really risk leaving him alone? Things were suddenly different. Skipping Anquan was no longer just about indulging her own whims of communicance and taking her chances with infested air. It was about Sean now.

A blast of soot scorched across her.

She cowered against her sleeve, waited, then pulled the Anquan capsule from her sleeve, tapping her wrist to generate a holo, its virtual reflection rendering her incandescent beauty. She winced uneasily. Not exactly the best time to indulge in a little self-regard, with everything afire. Not that that had ever stopped her. She surveyed her sculpted nose, plush lips, and bottomless blue eyes. Each as bone-dry as the parched ravine scraping through their yard. Angelic, as Dad had once said. Dad? The word seemed lost in a kind of crazy, empyrean prance.

As her life burned, guilt skulking, she swept a strand of raven hair behind her ear, turning the capsule over in her fingers. Antlike tingling weaved through her fingers. It felt like a viral stampede charging her undefended flesh.

Mom surfaced in her thoughts. Strange. Only now, with Dad gone, did she finally seem tangible. Her absence hollowed something inside Ina's chest. Dredged her lorn.

It was now or never. She pressed the capsule against her neck and let its contents merge into her bloodstream. Gazing skyward through the gauzy smoke, she wished the comfort would sweep down again and uplift her as before. But the fire's grating heat was the only thing she felt.

“I guess I won’t be telling you after all,” she whispered, tendrils of misty Anquan thickening her thoughts.