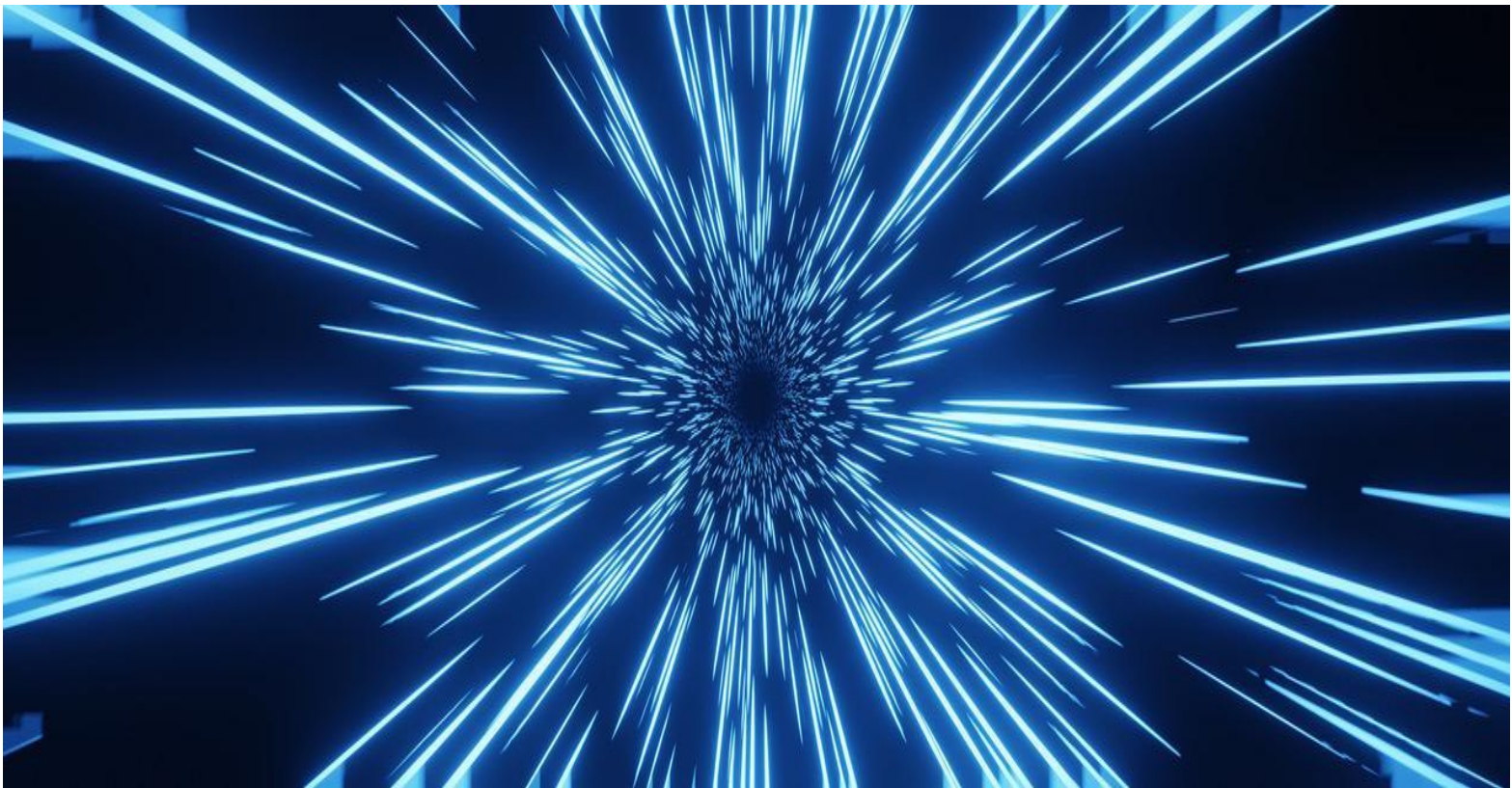


The Dream Machine

A Novel of Future Past

By Lester Jacobson



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To Ronna: Beauty layers deep

What seest thou else in the dark backward and abysm of time?

—Shakespeare-of-Stratford

*Dreamers set the world aglow,
To think it is to make it so.*

— George-5625S.42B-of-Ingleside

I. The Dream

04:32, 7/Martial, GC/XXII

It is finished, a work for the ages, a work that will change history. I am, of course, beyond ecstatic. Is that even possible—like venturing beyond infinity? It must be. Yet my elation is freighted with anxiety, since what I'm doing may be dangerous and is certainly illegal. That is why I work alone, at great risk, in secret.

Staring out the window at the streetside monument that marks the site of his historic achievement, I wonder: is this how Fermi felt, in the underground lab below Stagg Field on the afternoon of December 2, 1942 (old calendar), when he slipped the uranium and graphite piles side by side and unleashed the nuclear age?

An inapt comparison, perhaps. But my forty-second-story hab is only a block away, and through the scrim of sleet that obscures the site, now an Authority landmark, I can just make it out. Authority soldiers stand guard beneath a squadron of hovering laser drones—whether physicals or virtuals is never certain, and doesn't matter, because (the Authority's great realization) the very uncertainty and anxiety they produce ensure security enough. Few of us dull-eyed, dead-souled denizens dare venture out to brave their wrath. And even if we could, what for? What is there to see but the hollowed-out remnants of a once-great metropolis whose vibrant and peaceful streets and beautiful parks and gardens have long since disappeared under the relentless storms and ever-present soldiers on the march, trampling with their steel-toed boots the downward spiral of history these past two decades.

Behind the soldiers is Henry Moore's eerie sculpture that commemorates the world-shattering atomic experiment. It looks like a mushroom cloud emerging from a giant skull.

You wouldn't think it was dangerous, what I'm trying to do, scribbling mere code and drawing hardware schematics that will in a few short hours bring my idea to life. It's an idea as simple and elegant as the wheel.

I call it The Dream Machine, but have nicknamed it Prospero for the magic it will create. It could be like the first submarine or the first Cranial Port,

even the first A-bomb that Fermi's Pile-1 made possible. No one knew what the bomb would do when actually put to the test. Some scientists were giving decent odds that Trinity would set off a global cataclysm. Teller thought it might boil the oceans and ignite the atmosphere.

This is different—so simple yet so inspired. Why someone hasn't thought of it already is beyond me. But face it, we are pitifully reliant on the achievements and customs of what has come before. Tradition binds our hands and deadens our minds.

Consider a simple thought experiment. Imagine being magically whisked back thousands of years to our *Homo sapiens* ancestors living in crude huts and caves and chasing animals for food and clothing, hardly more advanced than cowering ape-men. Is there any way someone today, with all our advanced technology, our Solar Network and Martian colonies and Cranial Ports and our much-revered sesquis, could be of any use to them? Certainly not. All we could bring them would be advance warning of the world to come, our so-called utopia, our dark Destopia, as it's called. Surely they'd never believe it, would want none of it.

Many simple concepts of a radical nature, like the notion that the planets orbit the sun or that humans evolved from the lower species, took hundreds, even thousands of years to become accepted. Now they seem so obvious. What took so long? Suitcases on wheels—brilliant! Mag-lev transit—thrilling!

The same will be said of my Dream Machine. I say this with unbecoming immodesty, but I think there's a chance this afternoon's maiden trip, after I get some badly needed sleep, will rank as one of the epochal events in the history of science, like the publication of Darwin's *The Origin of Species* that wrested our origins from mythology and superstition, or the moment the Global Solar Network went operational and liberated us finally from fossil and nuclear fuels. Or even when my brilliant clin implanted the first Cranial Port, enhancing human cognition and extending average human lifespan to a century and a half.

Yet for all its magnitude and potential, The Dream Machine was really only a matter of assembling off-the-shelf hardware available at any tech corral and coding software any sophomore cloud student could write. What I came up with was the essential ingredient, the sine qua non: *the idea*.

How appropriate that it came to me in a dream!

One night many years ago—if only I could remember when, but at the time it didn't seem all that consequential and in any case, this was a few years before the new calendar system was introduced—I dreamt that I returned as a boy to my childhood home and visited my clin Runa and my older brother Sammy. My parents were there too. But unlike a "normal" dream, in which all sorts of permutations and distortions unspool without the least bit of logic (because after all, there is no logic in a dream), they were astonished to see me, as if my appearance defied logic.

“Georgie! What are you doing here?” my father asked, shocked and put off, as usual, to find me in his presence. Even in dreams I never could live up to his expectations, it seemed. My mother and siblings peered over his shoulder at me as stunned as if they were seeing a ghost.

I mumbled something about time travel.

“Time travel? Oh, please,” he said, rolling his eyes. “What a tired trope from a little mope.” Even in my dreams he was dismissive. “Everyone knows it’s impossible,” he continued. “Haven’t you heard of *Tchnerikov’s Conundrum*?”

I had no idea what he was talking about. But since Dad was the Fermi Professor of Advanced Physics—whose University of Central Midlands team had solved the quantum gravity problem that had eluded even Einstein (the famous “meld in the middle” solution, inspired by Monet, he said) as well as the duality of light problem (wave *and* particle, inspired by late Beethoven, he said, though by then Monet was banned and Beethoven almost inaccessible), resulting in the New Grand Unified Theory that had led to not one but two new fields of science, Photon Synthesis and Spectral Optics, as well as winning him the very first Destopian Prize—I had no doubt *he* knew what he was talking about.

I said I had invented a new method of time travel. I thought that would please him, for once, being the renowned scientist.

“Oh really,” he said, with his arch smile and snide tone. “What’d you do, get on a broomstick and fly here?”

“No,” I said. I was desperate for once to knock the smirk off his face. That’s when the idea came to me, in the dream. “It’s done with virtual simulation,” I announced.

I thought I had him there, but he just laughed his braying laugh and said, “There you go again, what a chicken brain, oblivious as always. Spacious mind,” he sighed, “wasting my time. After all, how could you be visiting us from the future when you’re right here in the present?”

My confusion must have shown, because like Moses directing the Hebrews to the promised land, he raised a finger and pointed to the living room. We all turned to look. There I was, the little seven-year-old nerd of my childhood, the runt of the litter, busy breaking codes and ciphers and puzzles and seeing patterns in the random tufts of carpeting on the living room floor and playing video games with his handheld device amid the bundle of blankets he would fluff together like a nest under the piano (the one confiscated seven years later at GC/Z). Mom and Runa and Sammy nodded their heads solemnly in agreement: clearly I had lost my mind.

I hated when Dad insulted my intelligence, hated that Mom and Runa and even Sammy would echo his scorn, hated the toll his sarcasm and hostility heaped on my fragile ego. Years later I might have stood up to him, might have cited quantum superpositioning and indeterminacy, thermal fluctuation and

nonlocality, and Heisenberg's Uncertainty Principle, all of which demonstrate that an object *can* be in two places at once. Dad was right about one thing, though: at seven I was a clueless little nerd. But even nerds have their limit.

"I dunno, Dad," I yelled, reddening, "but damn it, here I am, aren't I!" They all seemed shocked—even the little nerd looked up startled—though whether at my sharp retort or unaccustomed language, I couldn't tell. Then I began to laugh because they looked so abashed, and because it was just like old times: as a kid I'd concoct my zany theories and experiments and with gleeful malice His Dadness would swat them away like so many annoying gnats.

The laughter woke me from the dream.

Two things stood out and piqued my interest in pursuing it—the dream itself, as to its deeper meaning—and the all-consuming dream of bringing the idea—virtual time travel through digital analytics, dataverse synthesis, and advanced holography—to life.

One was the Tchernikov Conundrum. It actually exists, I learned, a real law of science, based on the work of Malorian physicist Alexei Tchernikov. He established the primacy of the *Tchernikovian Now*, this very moment we're continuously traveling through but can never pause, and laid out the definitive problems with and objections to time travel past and future with such logical and mathematical certitude that once and for all the possibility, which had tantalized humankind for centuries, was eliminated. *But I didn't know that at the time!* So how could I have dreamt it?

The answer, I later realized—and this was at the heart of my great epiphany—was that given the increasing volume and ease of accessing today's enormous dataverse, now approaching forty Zs of information pouring into the public domain every day and surrounding us like the oxygen we breathe and the light we absorb, all knowledge seeps into our beings at every level. Digital Absorption, I call it. Jung called it the collective unconscious (of which dreams are the gateway), Yeats the *Spiritus Mundi*. Williams said it was race memory and Serwer the unified spectrum. Even old Wells had a name for it, the World Brain. And with the correct formulations and algorithmic guidance, that universe of data could be collected, analyzed, and put to any use we choose.

Thus from a dream the dream was born.

Of course, the Authority keeps close tabs on all of it, all information—nothing is private—but I had figured out a way to elude their determined gaze and remain safe from their toxic grasp.

The other revelation from the dream was more personal: Dad's braying laugh. It was an odd chirruping sound, part-snort, part-hiccup, that started in a low register and ratcheted through various octaves until it arrived at a pitch only dogs could hear. As a kid I found it weird and embarrassing and later (after he had suddenly and mysteriously died) amusing and even poignant. After all, even though he could be a monster, he was *my monster*, a massive influence, like

gravity itself, the sun around which I orbited, the wellspring of my pathological obsession for learning, gift for coding and decoding, difficulty with people, and volcanic temper: it all stemmed from him. I had forgotten that laugh, or more likely buried it in my subconscious, and now the dream had called it back to consciousness. As much as I might hate him, I certainly admired and even, in my way, loved him too. He was the foundation, the rock on which my life stood. And even if sometimes those rocks fly up to flatten us, that's how we grow stronger—if we survive. In seeing this dream to reality, I would finally demonstrate my resilience and brilliance, my claim to a share of the family fame and my escape from the family curse.

Maybe that's why we dream, I decided: to revisit and reassess the landscape of the past and the people in it, amidst the nightly scrubbing and rinsing of cerebral neurons to sanitize and reconcile the daily havoc of life.

And with the help of Prospero, I began to realize, I *could* revisit my past, and help others do the same—revisit their childhood sites and selves, their families and friends, their heroes and hobgoblins, sort out their searing traumas and celebrate their thrilling triumphs, or—and this was another breakthrough realization—*go anywhere and see anything and be with anyone*.

There was yet another revelation. Going back in time would be hugely appealing to the denizenry, particularly beleaguered Den Ones who could barely leave their grubby habs. *Outside passes elude the great masses*, we were told: higher dens and the Authority didn't want or trust us outside, where we might foul the air and stir up trouble like toxic dust balls. We were mostly confined to a kind of house arrest—*habrehension*, it was called—where we were provided with the so-called basics of life, a new Maslovian hierarchy, the Big Six: gambling and gaming, sedatives and sports, piety and porn.

That was fine with me. I could work alone, in my hab, undisturbed. My most recent venture outside had been a disaster. It had been my mother's birthday, back in mid-Septimus, and I'd promised to visit her, even managed to procure a hard-to-find spray of lilacs, her favorite. But hardly had I reached the street when a bevy of black-uniformed soldiers, physicals, the real thing, strode up and challenged me—"Denizen, show us your pass!"—and when my wrist bracelet stubbornly refused to spiral its festive yellow-and-black lights (yellow for safe transit and black for my lowly den status), through some snag in the software or Mom's failure to get permission, the soldier in front stepped up and administered a punishing jolt on my neck with his electric prod. Retreating to my building nursing a shoulder cramp I could make out the skunk-like smell of choke gas wafting nearby like dense fog. Had there been a demonstration by the DREBs? Better not to know.

Still, I was curious, and lingered in the building lobby to peer outside. The soldiers approached a clutch of people walking quickly on the other side of the street. There were shouts, then the group broke away. The soldiers caught up in

a few strides and laced into them with their carbine lasers and e-prods. I couldn't watch.

Why did we stand for this kind of treatment? Because they had power and we didn't: all den weaponry had been confiscated at GC/Z, part of the Authority's *Great Cleansing* at the onset of the takeover.

But what if we could escape this parlous Destopia? As things stood now, that was impossible. Destopia was a walled fortress. Nothing—not planes, trains, buses, cars, boats, bikes, mag-lev transit—could come or go. Even walking beyond the fortress walls was illegal: too dangerous, we were told. (Though a few apparently had managed it.) We were sealed off from the rest of the world like a giant bubble.

But I was about to pierce that bubble. My escape route would be different. I planned to travel back to a better time when the skies were clear, sun and stars whirled gaily in their empyrean glory, and the gardens, streets, and stores were safe and welcoming. And in the process, maybe find the *tool to unrule* the Authority and free the hablocked dens. Go back in time to undo the crime.

Sure it was a tired trope, as my dad had said in the dream, hashed to death in countless sci-fi films and fiction of the 20th century, back when they were legal. But that didn't mean we shouldn't try. Flying had been a dream for thousands of years, eluding countless attempts, until the Wright brothers figured it out two centuries ago.

Hence my first destination, just hours from now.

Eventually, when the time is right, I'll share the results with the DREBs so they can confirm that the process is verifiable and repeatable, the touchstone for all scientific endeavors—and that it's safe. (Yet safety is written into every line of code—how could it be anything *but* safe?) Then we'll launch it publicly. But given the political climate, that time is not any time soon. Timing is everything when traveling in time.

Until then, secrecy is paramount. I've gone offline and off the grid to avoid compromising my vision and sidestep Authority surveillance bots and rogue or Sino/Russo hackers who might stumble onto and try to penetrate the program. To ensure the utmost security I have, aside from the usual fingerprint, retina, and DNA access, embedded an additional key, the fourth key, known only to me so no one else can operate the program. Four-factor authentication would be impossible to penetrate, even by the most determined state agencies aided by massive parallel cluster quantum computers or AI agents. Any attempt at tampering would cause the program to seize up and shut down.

But if it's as safe and successful as I expect it to be, the state will one day be overwhelmed by dens clamoring to join in, to *trip*, as I call it. In anticipation, and to secure proper credit, I have painstakingly chronicled the development and implementation of The Dream Machine. The scrawled and typewritten lines

that litter my hab floor and the coding and monograph on my Q-tab serve as program source and documentation. And this narrative is my journal, if you will, a record like a day log of my journey. It will constitute proof of my invention, a kind of copyright, a form of protection I fear is necessary at a time when the old laws safeguarding creative and intellectual expression have all but disappeared. After all, we are told, what need is there for protection and security in our little “paradise”? *Art made tongue-tied by authority*, as the Bard wrote. Or in this case, the Authority.

But try as they will, they can never stamp out pride and ego and a sense of achievement to which every artist and explorer aspires and which this journal is meant to chronicle. I am that artist, The Dream Machine that explorer.

Finally, starting with this account, these very ruminations, the Run Report is providing a real-time thought log of the entire experience, a running diary, like the black box in a mag-lev transit, which captures and renders into narrative form everything that happens as I experience it—every thought, emotion, and action, a script of the evolving drama that is The Dream Machine.

There is another, more ominous, reason for this running narrative. Notwithstanding the failsafes, the safety redundancies and precautions, things can go wrong. “Confidence has its place, as long as you place it in context,” His Dadness used to say, and even though he was often wrong —(at least about me), he was right about that: you can’t be too sure of anything!

Thus I reach out to an abstraction, a hypothetical future audience, whether near or far in time I cannot know. Because of concerns about the outcome of this experiment, both as to personal safety and political reprisal and survival, I have no idea when or even if there will be a reader at the far end of this narrative—the image in the wide end of the telescope is too small to see—in a future when our dark Destopia may be, hopefully, a distant memory of a dystopian nightmare.

I had attempted to find out. Some weeks back I tried the first experiment, tripping forward in time. It was a hail mary as alpha tests go. After all, how much hard data is there about the future? None, really: we haven’t arrived there yet. Sure enough, the brief experiment yielded only vertigo. Probably better not to know. Maybe that’s why the arrow of time arcs always and only into the future, from the frozen past through the ever-slippery Tchernikovian Now—not from inertia or momentum but to spare us the knowledge of our failure and demise, as individuals and as a species. Too frightening.

So I describe not only the trip I’m on, tripping through time, but the time I’m in. Writing history is illegal; reading it too. But someone should record our Destopia for future study and dissection, like a cadaver. You may choke and retch at the putrid carcass—but for your own good you *must* know.

Later today, after I have gotten some desperately needed rest, I will begin the historic first journey to a very special time and place in the past. But now it is

almost daylight and I am tired, overwhelmed, exhilarated and—despite the precautions, the safety redundancies and programmatic assurances and artful ways I have hidden my work from the Authority—terrified what I might unleash. Is that how Fermi felt?

Exhaustion and giddiness must be warping my judgment. Fermi, after all, ushered in the Atomic Age. I usher in mere dreams. And yet, “We are such stuff as dreams are made on...”

So it is time to dream, that I may dream of time.

i.

We shall crush them.

II. Runa

08:55, 7/Martial

Falling in darkness, plummeting, pinwheeling, paralyzed, panicked, shrieking, freaking, struggling to hear, to see, to wake, to –

A warm hand, familiar as my own, tugged at my arm. “You OK?” I opened my eyes to see the face that is a reflection in a mirror.

I was spread eagle on the floor. A sour taste coated my tongue, blood or bile. There was a sharp pain in my left shoulder. It took a while to stifle the panic and confusion, to calm my nerves, to sift my thoughts, to form even a single word, which was:

“How—?”

“You OK?” she interrupted. “What happened?”

I took it as a good sign I could remember she had already asked me that.

“How—did you get in?”

“Palm lock, how else?” Of course. Same palm as mine.

She knelt down and reached around to help me up. More pain. I didn’t want her help, not now. I pushed her away and with herculean effort rolled over and managed to climb to my feet and stumble to the sink. I leaned under the faucet and gulped down cold water to squelch the sour taste in my throat and wash the blood from my mouth. I felt around with my tongue: no loose teeth.

“You didn’t answer my question,” she said. “Are you OK? What happened? Could you look any worse?”

I hadn’t seen her in months. That’s how I had wanted it, a clean break from her patronizing arrogance and smothering clin concern. And now, when I had other, more important things to deal with—like make history!—I had her to deal with. Starting with the scornful inflection of her voice, which projected not sympathy but sarcasm and disapproval in her questions, pointed little barbs with which to prick me. We understand these things about our clin.

“And now I find you...what?” she said, hands on hips, staring at me, in full *clin-chastising* mode. “Spread out on the floor, looking...I dunno...what’s the condition just before you’re dead? Comatose? What’s going on?”

I splashed some water on my face. Despite the bracing cold I felt numb, almost doped up. Except for the anger. Sleep—and historic day—interrupted.

“So?”

That hateful word.

“It was the falling dream.”

“The *what?*”

“Falling dream, the *falling dream*,” I said, and dried off with a musty towel hanging from a hook above the sink and turned around slowly to face her.

“Why are you here?”

“I asked first. What happened to you?”

I paused, debating whether to engage in banter—or simply throw her out. “I told you, it was the falling dream, like I used to have as a kid. You know, dropping into a pit, falling through some sinkhole, stumbling off a cliff. *Night panic*, Mom used to call it.”

“Oh, yeahhhh, right,” she said with the glint of a smile. Did it please her to recall the awful memory? Make her feel nostalgic? Superior somehow? “Some rare childhood epilepsy, dire pathogenic event,” she said and wiggled her fingers. “Weird fits, little convulsions like a puppy dream. You’d wake up hysterical and I’d calm you down, back when we shared a bedroom. But I thought you’d outgrown them.”

“Me too, I did, I had. Except I guess not.”

I walked to the window. Outside it was dark as always, an ever-stormy winter night no matter the time of day or year. Sleet pelted the glass with intermittent clicking noises. I tried to decipher them from time to time, the irregular rhythms, the stuttering thirty-second and sixty-fourth notes, convinced they might be some subversive code directed at me. My family thought I was crazy. Maybe. In any case no message ever materialized, just more darkness and storms. Long gone were the sunny days, the sweet songbird symphonies, the large and colorful parks (*Urbs in Horto*, “City in a Garden,” was once our urban motto). Gone too the sunlit parade of people going about their wonderfully prosaic business, boating on the lake or playing tennis in the park or merely taking their morning constitutional—as Den Ones in our confinement could no longer do. *Abandon hope all ye who enter here, never to see your dearest peer*, we used to say. Forget escaping this prison—hab arrest, hab captivity, habrehension—*Dead Ones*, buried in our solitary caskets.

A few hours ago I had been trembling with excitement, on the thin edge of anxiety, on the verge of something momentous, thrilling yet dangerous, certainly illegal. Now Runa had barged in and changed that. Excitement and nerves had given way to exhaustion and anger. I tried to hide it, to act calm, even upbeat. But you can’t keep anything from a clin.

“I’m worried about you,” she said, rubbing my sore shoulder so that I winced. “You look—” she stepped back to take in the full wreck of me, “—like you’ve been jolted by a laser beam. Do you sleep? Eat? Get out at all? Do you see anyone besides poor old Photon Synthesis here?” she nodded at the skinny orange-and-black tabby snoring in the corner.

Not really. In the last year I’d left my hab just once, to deliver the lilacs to our mother. Hadn’t gone well.

I shrugged off Runa's concern. I'd been up for forty-something straight hours to finish the program. I'd needed some sleep and then to prepare for the great day at hand, checking the final parameters and making a few coding tweaks—until she had waltzed in. Well, I would waltz her out.

"Thanks for your interest," I said, taking her by the arm and directing her doorward. "But shouldn't you be out saving lives, winning awards, defending the family honor?" I didn't want to be rude, exactly, but now that the fog in my head had lifted, I needed to move on.

"Whoa, not so fast," she wheeled around to face me—same face, same body. "It's been months since anyone's heard from you. We thought maybe you were dead."

"We? Who's we?"

"Well, Mom and me for two. Your ex, Liz. Even Vänka. She's concerned too."

Vänka? A shudder rolled through me like kicking over a snake. Questions too, about her family connection—and the family curse. Her involvement with my father and his sudden death. And not least the assault she engineered that awful night in her apartment.

There was her striking appearance, the bear-like torso atop the pencil-thin legs, the moon-shaped face, beautiful but frightening, the upturned mouth like a bird's wings in flight, the thick sculpted lips and pointy teeth as if filed. There was the auburn hair piled high and the creamy white sheepskin cape she wore year-round, even in summer, cinched tightly at the waist and clasped at the neck with an elaborately tied pink bow. *Vänka the Terrible* we called her and *Vänka the Third* for her limp and *The Vämbrino* for her curious resemblance to the pug-nosed, bandy-legged ballplayer.

All of it—her relationship to my father, her position high up in the denizenry, her achievements as nanoscientist and biogeneticist, the lilt of some indefinable continental accent, the frequent infelicity of hammered syllables and uncontracted speech, and the odd way she insisted we spell and pronounce her name, Vänka with a soft, umlauted ä, as in Zen—made for a curious and fraught relationship, one that I had never understood, never resolved, and thought I was, finally and thankfully, over.

Evidently not. Now that I was ready to move on, to test The Dream Machine, to fix my immortality to the stars, like my famous father and clin, I didn't need Vänka's meddling. If she and Runa teamed up to interfere in my life, they'd be a deadly pair.

"Since when are you hanging out with Vänka?"

"Mom called Vänka when she hadn't heard from you, thought she might know something."

“You’ve got a lot of nerve,” I said, pointing a finger at her, “bursting in here and conniving with that...that... *creature*. And Liz and Mom too. They don’t need to be involved. No one should be involved—including you.”

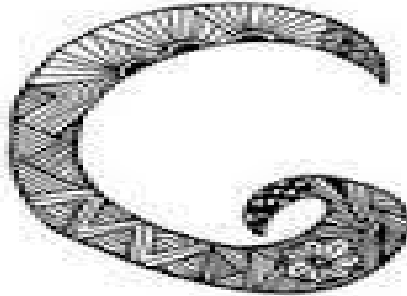
“No, George,” she said, pointing back, in full *clin-scolding* mode. “You’re the one with nerve. You drop out of sight like a ghost, ignore our messages, scare the hell out of everyone. And now I find you laid out on the floor like a corpse.” She gestured around the room and fixed me with her famous laser stare. “And this dis-*gus*-ting hab. I mean, what are you, a Neanderthal? I’ve seen caves that looked cleaner than this.” She kicked a T-shirt at her feet, stirring scraps of paper and dust balls like little tornadoes.

OK, maybe she had a point. The cat’s litter box was tipped over in the corner, scattering clumps of dried turds on the rug like pebbles on a beach; the sink was filled with moldy dishes; the floor and table were strewn with half-empty food containers; shirts and pants were dumped here and there—not much room to straighten up since I had retrofitted the closet for my Command Post and commandeered every other space for my papers and journals.

The place is old and tiny, everything just a few dozen feet from everything else in my studio that doubles as an office and triples as a lab—inclined like late-stage entropy to strong disorder. I’m housed in a once-luxurious residential skyscraper now chopped into a thousand little burrows for lowly UCM undergrads and destitute TAs and Den Ones, we Dead Ones.

Scattered about were all sorts of ancient items of furniture and appliances I had gathered on the sly or on the cheap: combination micro-fridge and single-burner laser range; battered old couch where I stretched out to grab a few hours of sleep; wood shelving along three walls stacked with my prized (but highly illegal) books and gaming collections. There was a smart waiter concealed in the closet, which every morning delivered to me (and all dens) the daily quota of food (if you could call it that), pre-cooked and sliced since all weaponry including knives and forks had been confiscated at GC/Z, as well as our daily regimen of drugs meant to make life tolerable (if you could call it that). Under the smart waiter an ancient and now-obsolete laundry chute, now used as a garbage incinerator, from the days the building was packed with student residents who for yips hurled themselves hundreds of feet down to the basement in drunken approximations of toboggan rides. I facetiously called it my “escape hatch,” suitable for ducking out through our trap door of darkness or relocating from this loony bin of lost souls. On the wall over the couch was a poster of Einstein and Bohr with goofy gap-toothed grins wearing T-shirts that said, “He’s With Stupid!” that a DREB admirer had given me. There was a large and finely sculpted bust of Beethoven, his hair swept back in the familiar heroic pose, on the shelf above the illegal synth clavier. Corner bathroom behind a hippie-era beaded curtain. Vintage writing implements. Assortment of rare prehistoric rock tools and artifacts.

One of them, a flat stone the size of a fist in the shape of a broken circle with a notch that formed a kind of G, hung from a wall. Liz had gotten it for me just before we broke up—Vänka's final legacy. It was some kind of Stone Age adornment with no practical function, a ring or brooch, necklace or earring, with its tooled hatch marks including even a small sprig of flowers. Doubtless a thousand generations back some ancient George had fashioned this stylized object for his amusement or edification. A work of art, like my Dream Machine.



Eyeing the modest collection of Stone Age rocks and tools on a shelf above my desk, I recalled a boyhood fantasy, my first thought of time travel. I imagined I could descend back to the vast unreachable past, when all the great transformations and inventions had taken place—the first fire, the first wheel, the first poem. Tchernikov, Fermi, Beethoven, Homer—they all had their predecessors in the peoples and times before time began, all lost to us, long gone to dust, all that's left of them the atoms that float through our rooms and make up our bodies, unseen and unknown. What if we could see and know them—and discover the origins of all art and knowledge?

Why should that be dangerous? But nowadays knowledge is criminalized, danger ever present. Hidden in the ceiling and wall panels of my hab, as in every hab and hallway, street corner and shopping lane, are the opaque security monitors that enable the Authority to peer in on us denizens and stream its terrifying announcements.

Even paper is risky, illegal for years. Dangerous, the uses a page can be put to, witness the reams of paper scattered on the floor on which I scribbled my illegal code before typing and then inputting it into the Q-tab so I have paper and electronic records in the event the device is hacked.

Call me a hopeless sentimentalist, someone who reveres the quainter artifacts and technologies of decades and centuries past with which I had surreptitiously filled my hab, acquired on the off-grid market, like the Shaker rocking chair in the corner on which Photon Synthesis often snoozed, and the vintage turntable and speakers and the rare LPs and first edition novels on the shelves, a stash of the best cotton rag paper, a stockpile of freshly sharpened

No. 2 pencils with their conical lead points and rounded pink erasers to mark and correct my reams of coding, emblazoned, finally, by the fabulous Underwood typewriter with its shiny black cylindrical platen and inky ribbons and stubby inverted keys with which I clacked and clattered and hunted and pecked my way through the papers stacked on my hab floor and furniture.

I harbor also an illicit passion for the far more fabulous eras of the past: the crystal clarity of the Renaissance, the Baroque cathedrals of light and sound, the depth and darkness of the 19th century, and the fabulous leaps of science and art in the 20th, all those epochs before ours when history raced ahead with naïve, beautiful dreams for a brighter future, each century with its outpouring of genius, the greatest heroes, the sublimest heights, the most innocent hopes and aspirations, the Thanksgiving repasts and Fourth of July parades and fireworks—all soon lost, Old Glory seizing up finally and imploding from the poisoned well of hatred and ignorance, financial ruin and physical collapse.

Or so we'd been told.

It was easy to romanticize such a centuries-long run of liberty, prosperity, and progress that we assumed would continue forever—until it didn't. Then we got the “utopia” we deserved, Homo sapiens being at bottom a nasty and brutish race: Destopia, our little city-state home, “*a utopia where safety and security are abundant and free, the weather is fair and the future carefree*” (one of the many stupid rhymes drilled into us)—except for the constant surveillance, the violence and quiescence intended to keep us in line, the demonization of science as superstition, the soldier-lined streets and miserable weather, the lonely, soul-sucking isolation, surrounded by enemies on every side: the Sino/Russo forces fighting their way inland from the beleaguered coasts, sandwiched inside of which were the Midlands Confederation with its dozens of tiny principalities and provinces (like Destopia) that had sprung up since GC/Z. Vespucci would recognize this newly carved continent to which he had long ago given his name: it resembled the territorial checkerboard that was his Renaissance Italy, with the same mayhem and bloodshed—minus the art.

And what did the *Des* mean in Destopia? We joked it should be *Desktopia*, at least for the Den Ones under virtual hab arrest. But in our darker moods we surmised it stood for *destabilize*, or maybe *desecrate*, or possibly *desolation*, or conceivably *despicable* or *despondent*, and almost certainly *despotism*, for that's what it was.

But who knew? History isn't taught or even altered, it's expunged. Like Authority soldiers who are sometimes mere ghosts of our imagination, phantoms of our nightmares, it's no longer possible to distinguish actual from virtual reality, fact from fake, history from heresy. Facts and truth went out long ago. Banned as literature, fiction lives on as lies foisted on us in a relentless, pitiless parade of propaganda.

Sure, we had studied history in school, pre-GC/Zero. But the Great Convergence itself? Nothing, just an empty hole, a void, or perhaps more like a black lake on a dark night you peered into and saw only yourself, looking doubtful and afraid.

“And then there’s the nasty little matter of your going off the grid,” Runa said, scattering piles of paper as she made her heedless way to the sink and hauled out the percolaser to brew some coffee as if she owned the place. “That’s not even allowed. I don’t know why the Authority hasn’t paid you a visit. Maybe they have,” she said, nodding at the ceiling monitors above. “And you just don’t know it yet. Too busy doing”—she stopped and turned back to me—“what is it you do all day, anyway?”

I shook my head, stupefied. Talk about nerve, walking in and taking over. That’s one reason I’d been avoiding her. I sighed deeply—this was so pointless, so ruinous—and knelt down to reassemble and square the piles, compulsive as always about the ordered disorder of my work.

“Same as everyone else,” I mumbled. “If you must know, I play games, watch vids, feed the cat, clean the litter box—” I looked over at some moldy turds and grimaced, “—wash clothes, check in with friends, eat, sleep, shit—”

“*Really?*” she said as if fascinated, not believing a word. She knew I was up to something, had always been up to something.

“OK, so I’ve been busy,” I said, trying to sound casual about my reclusiveness as I rounded up dust balls the size of small tumbleweeds. Maybe a show of cleanliness would satisfy her. “As for the Authority, they don’t bother me and I don’t bother them.”

“Ha” she barked, a laugh that radiated scorn and sarcasm like our father. Apparently neither subtlety nor humor were going to work. Generally I love and admire my famous clin. Just not now. But I couldn’t just order her out; Runa doesn’t take orders, she issues them. Getting her to go would require something more subtle. Apology? Logic? Charm? The first I wouldn’t stoop to, the second was *her* specialty, the third was beyond me. Maybe I should just have it out with her.

“Listen, Runa,” I started in—

“That’s why I’m here,” she said, returning with two mugs of steaming black coffee and handing me one, “because you’ve gone off the grid. Mom tells me you haven’t been to see her in months, haven’t even called. Nothing.”

I started to tell her about my recent run-in with the thuggish soldiers—Runa was an Authority poobah, maybe she could do something about my errant yellow-and-black-spiraling street pass—but she wasn’t done. “Here it is early Martial, you’ve been AWOL for months, so I thought, what’s a clin to do but drop in and find out.”

I sighed again. Enough. I didn't want to appear ungrateful, but now was the time. "OK, you've seen me. Tell Mom and Liz thanks: I'm still breathing and bipedal. Time to go."

Runa ignored me and plopped onto the sofa (raising furious dust clouds and spilling some coffee). She kicked off her boots so they clattered to the floor like the steel-toed staccato of Authority soldiers on the march. This was her statement: boots off, gloves off—to hell with your phony denials, your show of cheap bravado.

"Soooo...?"

Now there's a word I hate. Has there ever been a syllable so shot through with expectations—*Come clean. Don't lie. What gives?*—especially with the accusing and imperious spin she gave it, demanding an apology, requiring an explanation, dictating surrender. Clins can pin that kind of guilt on you.

"So nothing," I replied casually, but the warming blush on my cheeks gave me away. I could never lie to Runa, couldn't keep anything from her, but dammit, I wasn't going to give her the satisfaction of a straight answer, didn't owe her one.

"Really? Nothing? So why the secrecy?"

She settled back and eyed me with an expectant smile. Runa has a finely tuned BS detector, especially with me, on whom she's had a lifetime of practice. Maybe if I told her just a little, tipped a card from my hand, that would satisfy her.

"OK," I said, and settled down on the far side of the couch, as far from the heavy force field of her personality as I could get. "I'm working on a new project. Software program. No big deal."

I tried to hold her gaze but couldn't, couldn't even keep my eyes open. It was such an egregious lie, *no big deal*. After a few seconds I hazarded a peek. Nothing, just the same smarmy smile.

"But I've got to check it out," I continued, unsure how much more to divulge. "You know...bugs? Beyond that I'm not ready to say—to you or anyone else."

Runa squinted her eyes and pursed her lips in skepticism.

"Oh really? A *new program*, is it? What? A sequel to your Orkestrate fiasco? Let's have it."

She wasn't about to be put off. Ever since biogeneticists had figured out a way to produce opposite-sex cloned twins, *clins*, it was all the rage—until they discovered how fraught the gestation and dangerous the birth, and, having survived all that, how much angst and discord it created when you and your opposite-sex sib looked like weird androgynous mirror images, the gender fluid and almost indistinguishable: perhaps a little more feminine in appearance, a touch more masculine in temperament. You were the best of friends, the worst of enemies, being in effect your own worst enemy.

There was, in addition, an almost mathematical aspect to *clenicity*. We were in some ways perfect opposites, male and female, yin and yang, and yet the same—same fingerprints, same cell structure, same DNA. Perfection bred its own tension, and we fought constantly, epic *interclinicine* battles that drove our parents crazy but were necessary for us to establish our identity and break the hermetic cage.

The tension and weirdness led to some strange outcomes. Being two of a rare breed, opposite-sex identicals, we almost never went out together. We were so different from other people, unique and disturbing. We would attract shocked stares or yawps of distress from little children or hoots of derision from teenagers, a gang of which once threw rocks at us and chased us into traffic.

“I already told you, no big deal,” I said, shrugging.

“Oh yeah, *sure*. Listen, we work together, remember? P in C? ABH? B&C? Together all the way? No one flies solo? That’s what we always said. So? Talk!”

The reference to ABH (Always Better Half) was her claim to primacy: she insisted she was born first (even though like most clins we were delivered surgically at the same time), and obviously was vastly smarter and more successful. P in C was Partners in Crime, a childhood joke, and B&C was meant to soften me up, make me smile, which it did. She smiled back, the identical smile, so comforting, so strange.

It was an in-joke—Bonnie and Clyde—part of the secret code and language we had developed as kids to signify and celebrate our unique clinicity. B&C was one of a number of famous couples we bandied about and compared ourselves to, like Dante and Beatrice, Scarlett and Rhett, Julia and Winston, Orfeo and Euridice, Ike and Isadora, Pebble and Prater, and Søren and Salamander (our favorite cartoon characters). Of course, they all ended badly (especially Salamander), and that was part of the joke. But the joke was serious too, reflective of our ancient squabbles and rivalries, contentious and competitive, even as far back as the uterus, battling for nutrients and growing space.

Not that we were dysfunctional, but we weren’t always the well-oiled and precisely matched team that people imagine clins to be. In fact, despite our startling opposite-sex resemblance—tall and slender, slim-hipped and flat-chested, olive-skinned, hazel-eyed, pouty-lipped, a weirdly epicene mix both alluring and disturbing, and notwithstanding some striking personality parallels: proud, stubborn, impetuous, with a photographic memory and stunted EQ (thanks Dad), which is perhaps why we were both still single at 36—we were more like complements than copies, and curiously, in some ways, complete opposites. Runa was relentless, imposing, brazen, steady, calculating, commanding, a team player and focused—a doer; I was impulsive, withdrawn, erratic, bumbling, bipolar, gloomy, a lone wolf and spacy—a dreamer. But

despite my dreaminess I could when pushed explode with a volcanic rage that spewed fury and mayhem over anyone nearby. Runa claimed I was a closet sociopath (thanks Runa), perhaps stemming from the time I was suspended from school for throttling a boy who made fun of her—though her little act of mayhem at birth was far more violent than anything I'd ever done. I shuddered to think of it, tried always to clear my mind of it.

Instead, I flashed on an episode in contrasts during our early teens. One night at dinner Runa mentioned some theory she had developed in physics, involving, I think, kinematic equations. Our father laughed and disagreed, reminding her that he was, after all, the big deal Fermi Professor of Advanced Physics at the University of Central Midlands, who had helped solve the duality problem yakka yakka, with whom disagreement was not to be tolerated. But Runa never backed down; if anything his smug display only stirred her competitive juices. The two of them started going at it, throwing verbal punches and even the occasional napkin, while Sammy as ever the peacemaker tried to calm the belligerents and Mom and I watched with growing apprehension. I disliked Runa's brass, but still, her arrogance was no match for our father's. I didn't know whom to root against more.

"You're just wrong," she insisted. "You're out of touch." He stared at her agog, which she ignored. "Take time polarity," she continued. "There's this new theory from the Shanghai School about a predicted switch from present to past, like a geomagnetic reversal or climate exchange, only in time. And I bet *you're not even aware of it.*" She said this last as if it were a self-evident fact, even waving her hand at him dismissively.

"Ach," he said, turning to our mother. "Remind me, Trish: why did we have clins?"

"Yes, why did you?" repeated Runa, turning to regard me with disgust, as if I were the main reason her life wasn't perfect. I duly reflected the look right back, the perfect mirror of her annoying expression. She leaned over and socked me in the nose. I didn't even wait for shock or pain to set in or blood to start gushing, I just advanced straight to hysterical crying, which always infuriated our father.

"Georgie, will you shut up?" he yelled and banged his fist so hard the dishes and silverware jumped, as if startled. That only stoked my hysteria.

"And as for your question, young lady," he said, turning to Runa, "it was your mother's idea, all her friends were doing it, the *Great Clin Experiment*, as long as it lasted, which wasn't long. I let her talk me into it, isn't that right, Trish?"

Mom was too busy consoling me to answer, but Runa would have none of it.

“Is that so?” she said, summoning all the insolence she was capable of, which was impressively considerable for one so young. “Well, *you* went along, so it’s your fault too!” she shouted at him.

I stopped crying long enough to cringe at the expected explosion, and sure enough he leaned over and slapped her, hard. The sound echoed through the room, along with my scream. Our mother and Sammy shrieked too but not Runa. She stood up, not even rubbing the offended spot, and said coolly, “That’s it,” and left the table. We heard her climb the stairs to her room.

I resumed sobbing, punctuated by hiccups and streams of tears and snot running down my face while my parents bickered and Sammy left the room in disgust, when a few minutes later we observed with surprise Runa descending the stairs wearing a small backpack.

“I’m leaving,” she announced. Mother begged her to stay, but Dad ran to the door and held it open. “Good riddance,” he said and laughed that braying laugh. “Don’t return until you’ve come to your senses.”

Out she marched without so much as a backward glance. We didn’t hear from her for three days (she stayed with a friend), during which time I retreated to my room after school and sniveled and sighed more or less continuously. What did this emotional upheaval mean for our family? For Runa? Most important, for me?

I thought of this not as characteristic of *their* relationship, Runa and our father—episodes such as this were extremely rare, since they almost always got along well, for in fact he doted on her achievements (and disparaged mine) and she basked in his love and admiration—but the difference in *ours*: I wept, Runa left.

And when it came time to pick a doctoral topic and medical specialization, he steered her toward cognitive biopsychology and neurosurgery and helped her get started and leveraged his knowledge and influence to find sympathetic professors and advisors at UCM and guide her to high academic honors. Six years later at the age of twenty-six her team pioneered Cranial Ports, the CP enhancements and other neurotreatments that led to the burgeoning cohort of beloved ancients, the soon-to-turn 150-year-old sesquicentennials—*pesky sesquis*, we called them—which won her coveted Destopian honors and a place high up in denizen ranks.

All the while Dad belittled my work on advanced game theory and development, specifically the potential for universal collaboration and consciousness through non-violent, non-zero-sum gaming culminating in my first research thesis, the music composition program *Orkestrate*, a focus he could never abide.

“Who plays games at your age?” he would object. “For all your spacious mind, you’re wasting your time, a pipe dreamer, a code schemer. I’m warning you,” he would puff himself up like a blowfish to deliver the awful verdict:

“Nothing eq nothing. You’ll have nothing to show for your work, you’ll be a nothing. Is that what you want?”

What did *he* want? I often wondered. Why did he so frequently assail me and my work? Mom would apologize for him, assure me of his love, and allude to *his* father, a renowned chemist, who belittled Dad’s sometimes strange behavior and academic performance, which was never good enough. I couldn’t say, I never knew the old man, he was gone before I was born. Or perhaps (just as likely) it was my strange and unfathomable interests, which seemed so alien and unproductive to my father. And my many failures and empty life, especially compared to my famous clin.

Whatever it was, he was right: as yet I hadn’t developed much of anything, thanks to Vänka. That was about to change, if only I could get Runa out the door and keep Vänka away from it.

I looked at Runa, glaring at me, and calculated the angles: Loss of control. Pain in the ass. Disclosure risks. Versus smarter than God. Perceptive. Can see around every corner. Same DNA and cell structure. Who can read my mind anyway.

“OK. Maybe it *is* a big deal.”

I waited for her to say something, but she just gave me another half-smile of expectation. She knew I could never tolerate a conversational vacuum. That’s another reason why I had fled from her and Mom, not just to get the work done but to avoid the temptation to talk about it, brag about it, compromise it.

“It’s uhm... kind of ... uh... like a—” I peered down at my hands, which I noticed with some astonishment were fluttering like a butterfly, “—time machine.”

She sat up slowly, almost imperceptibly, and leaned closer, cupping her ear. “A what? Did I hear you right? Did you say...a *what* machine?”

“Time, you know.” I circled my finger around an imaginary clock face in a pathetic demonstration. “Time machine?”

She closed her eyes and clapped her hands and started barking like a seal, that disdainful display I so hated when we were kids, which went on for half a minute, until she had made her stupid point and eyed me balefully. “You’re joking, of course.” It was just the scornful reaction I had anticipated, was afraid of.

I frowned, calculating how to respond, wondering how much more to say, when she reached across the couch and shook my leg: “Wait, you’re *not* joking? You’re serious about this dumb thing?”

Dumb? Thing?

“Actually, yeah, I am. Dammit, Runa,” I said, triply furious with her—bursting in on the cusp of my launch, luring me *clinlike* to reveal my secret, and triggering my own pathetic self-doubt. Did I believe in this project or not? Of

course I did. But if my clin's reflexive scorn was enough to undermine my confidence, how would I ever manage Authority resistance?

"Georgie, you know time travel is a joke, impossible, right? You've heard of Tchernikov?"

"Of course, but no, I mean yes, it's real," I said, my hands wheeling around like gears in a machine desperate to show her the works. "I've tested the program. Well, not much—yet, and, but, uhm..." I stuttered.

I took a deep breath: just calm yourself.

"Listen Runa," I said, slowly, patiently, pleasantly, my hands folding and unfolding. "This isn't like some crazy sci-fi thing. It's elegant, it's revolutionary, and nobody's thought of it. I'll be the first!" I pointed an index finger north, at the ceiling, where in fact some surveillance algorithm might be taking note. Really, we needed to finish this conversation.

"Crazy sci-fi like those banned volumes?" she said. "That's your problem." She pointed at the bookshelves where arrayed in tight rows like Authority soldiers on the march was my collection of first editions and practically one-of-a-kind copies of *Childhood's End* and *Strangers in a Strange Land* and the Foundation series and volumes of Blake's poetry and the Buddha's teachings and Stanley's *Q Chronicles* and Hinton's *Mythologies and Mysteries* and Chase's *Galactic Quartet* and dozens of other classics, as well as vintage video game cassettes, movies, cartridges, thumb drives, laser specs—some of my oldest and most prized possessions—all banned, like most creative expression.

"And what's that? Do I believe my eyes?" she said, frowning so deeply I thought her eyebrows might cramp, and stood up and deftly stepped over some piles of paper to a shelf and lightly touched, as if afraid of scalding herself, like the monkeys in *2001*, a rare (and yes, highly illegal) disk. It was *The Annals of the Secret History of the Authority—Apex Classification*.

I had stolen it on a drunken dare from the Locked and Secure Section of the UCM library where Liz had worked and helped me acquire many items for my collection and research. "You can't keep this out in plain sight," Runa hissed. "You can't keep any of these...things...at all," she added in disgust, barely able to restrain herself, it seemed, from pitching them down the old laundry chute or flushing them down the toilet. She pointed to the ceiling and whispered: "If they find out about your stupid obsessions, you're in big trouble. And how do you think it would look for me, in line for Den Sixteen?"

"The Annals?" I laughed. "It's a big nothing, mostly blacked out. As for the rest, the books and disks? Come on, Runa, they don't mean anything to anyone, just some old and obsolete media of no account. I swept my hand around the bilious hab and tapped my chin. "Like me. Face it, as far as the Authority is concerned, this is no place, I'm a nobody, just a Dead One

antiquarian of charming and harmless reliquaries with his *stupid obsessions*, as you so *clin-nicely* put it.”

Of course I didn’t believe this, not for a nanosecond, it was a dodge to disguise my inflated expectations and anxious thoughts and diminish the scope of my career. The less noteworthy I could portray it, maybe the less note she would make of it. But as disingenuous as it was, deep down, sometimes I wondered if it wasn’t true. Maybe Dad and Vänka *had* been right: I wasn’t suited to the ruthless, narrow world of academia, wasn’t cut out for advanced game theory and development. Maybe Vänka had done me a favor chasing me out of the university and toward The Dream Machine, away from Orkestrate’s illegal collectivism and the Authority’s prying eyes. On the verge of something possibly great, even world-changing, I carried more than my share of doubts. Was I wasting my time, frittering my life away on a dream whose origin was a dream? There are truths, old Wells said, that you have to grow into.

But for all my failures and disappointments, my obsessive pursuits and considerable fears, my years of dreaming and scheming and coding for which I had as yet nothing to show, I had achieved a few things. As a nerdy adolescent, before such endeavors were banned, I had launched the dot.opus domain for creative projects. And my original research project, Orkestrate, had achieved an impressive popularity among off-network gamers who had helped test the program, which taught players to invent and “perform” on musical instruments—real and imagined—and collaborate to write popular songs, jazz suites, retro ensembles, world music, even classical symphonies Beethoven would have admired. No shooters or weapons, no zombies or werewolves, no star wars or medieval fantasies. Just crowd-sourced masterpieces. Despite being blackballed (I was certain) by Vänka, the program continued to circulate on the DarkNet, among my DREBs, where I still spent time moderating and managing it, providing a modest if much-needed stream of royalties, of which Runa and Vänka and the Authority were, thankfully, unaware.

The DREBs, for Denizen Rebellion and Entertainment Band, as I called my cohorts, consisted of a few thousand off-network geeks who developed and swapped illegal games and shared memories of earlier, happier times in the innocent pre-Destopian days. We even had our own slogan—“Widespread Ahead”—accompanied by a spread-eagled splaying of arms overhead and chest outthrust, the Y pose representing *youthful yearning*, as if we were modestly hopeful of a finer future. It was sophomoric but innocent fun, and if nothing else, good exercise.

More seriously, DREBs also set scattered brush fires, rebel outbursts like spraying anti-Destopian graffiti on buildings and even (once or twice) perimeter fortress walls and even putting Authority offices and storage silos and military barracks to the torch. These actions were quite ineffective—the Authority

crushed our little uprisings with ease, like snuffing out a candle—but sent a message to the denizenry: not everyone had given up.

Nor had Runa, in this case: she wasn't fooled by my self-deprecation. She sat down next to me and took my hand and rubbed it warmly with both of hers. "You are *not* a nobody. You're my clin, my co-pilot," she said with a tender regard for my feelings, which took me by surprise. Then she squeezed my hand so tight I winced. "And more important, the member of an important Destopian family. They'll have their eye on you, and that reflects on me too."

Ah well, there it was! Runa was careful to cultivate her fabulous reputation as well as famous family connection. Our father had been awarded the first Destopian Prize in GC/1 for his work on photon synthesis; thirteen years later she won it for hers developing Cranial Ports.

"You don't want to jeopardize my pending promotion, now do you," which was meant not as a question but as a command.

"To Den what? Sixteen? Who cares?" I said, knowing this would stir her up. Maybe she would pull on her boots and march off in a huff. Nothing else had worked.

"I care. And you should too," she said, getting up and padding over to the stove to pour herself more coffee. "You're playing a dangerous game here, Mr. Clinster. You know all creative expression has been Authorized. It's a serious crime to defy the strictures. People have been quiesced for less."

"Runa, please. No one's going to see anything that's going on in my pathetic little hab. If you *must* know..." and I rose and sidled up to her and whispered, "I hacked their system!" Her eyebrows shot up, to my satisfaction. "I programmed the monitor signal to show me doing the most mundane, everyday things—waking up, making meals, doing dishes, cleaning up, taking a dump, going to bed, waking up."

"You infiltrated their network?" she said, her eyes wide, and covered her mouth with her hands to hide the statement from lip-reading monitors. "That's a Level Eight offense," she whispered. "They'd quiesce you for sure!"

"Nah, they'll never find out," I said, regarding her with a cocky grin. It had been so easy. I described how I had programmed the decoy tape to vary the routines so it never repeated, so the algorithm-sniffers couldn't identify a pattern and alert the Authority, all the while recording the mundane goings-on of the hab for future documentation. "And when a Special Announcement comes on, it restores the live image, probably of me looking terrified. OK, satisfied? Ready to go?"

She regarded me with a look of disgust and sat back down on the couch with a thump of defiance, raising more dust clouds. "No George, not until you hear me out," she said, wagging a finger. "It's ridiculous the way you squander your talent. Like Dad said: *A mere coder, bottom of the order, playing with toys,*

just making noise, spacious mind, running out of time, pipe dreamer and pathetic schemer.”

I hated this—hated Runa confronting me with Dad’s stupid rhyming schemes, hated anticipating people’s sarcasm and scorn.

Enough.

I pulled out my handheld, tapped into the private section, pulled up a bookmarked document, and tossed it onto her lap. She stared at it.

“The Dream Machine: A Summary. What’s this?”

“Just read.”

She began to scroll through the piece, which described the dream that made The Dream Machine possible. The summary emphasized that my time travel—Prospero’s—doesn’t utilize impossible physics, because the arrow of time, the arc of the universe that takes us from yesterday to tomorrow through the narrow aperture of the Tchernikovian Now can never be revised or reversed.

...Let’s be clear, it continued. Physical time travel in any literal sense doesn’t work. Disrupting the space-time continuum, as Newton and Maxwell and Einstein and Gleick surmised and Tchernikov proved, is impossible.

No, my program works for one simple reason: it is virtual, not actual, an enhanced Augmented and Mixed Reality creation that utilizes Artificial Intelligence to convert knowledge into a digital stream that promotes a dream-like travel experience.

How does Prospero operate? A rudimentary schematic or data flow diagram looks like this:

**THE DATAVERSE → THE DREAM MACHINE → AI →
CRANIAL CONSOLE → ILLUMINUS → TRIPPER**

In other words, harvest all the world’s knowledge (the “dataverse”); filter it through my software program (“The Dream Machine”); synthesize and manipulate it with Artificial Intelligence, and remote the selected information via the Cranial Console neuroconversion device into my Illuminus goggles to holoproject a curated, totally lifelike, immersive and thus participatory experience for the time-traveling tripper.

So simple! So obvious! So revolutionary! A fabulous leap forward in the way we can harness and apply knowledge for entertainment and education.

I knew where she was in the monograph. I knew how fast she read, and could watch the sweep of her eyes from line to line, sentence to sentence, and section to section. I had revised the fifty-five-hundred-word monograph so many times it was committed to memory, down to the comma and semicolon. So I knew at this point she was scanning the brief historical aside on the “rapid and

relentless progression” of digital devices from “the earliest EDVAC and UNIVAC machines, dinosaurs in size and memory capacity, starting in the mid-20th century, to ever-smaller, faster, and smarter devices.” The result, the summary continued...

...is today’s cognitive quantum computer tablets (the ubiquitous cog/QCTs, or simply, Q-tabs), which can process and store everything ever written millions of times over.

But it’s what populates that massive database that’s critical for my purposes: all the world’s information—everything that has been captured, distilled, synthesized, and digitized. Big Data allows me to collect it, Artificial Intelligence, Deep Learning, and metadata to analyze it, and The Dream Machine to run it.

Historically, today’s vast dataverse and AI advancements give me more control of digital technology compared to a software engineer of a century ago as I enjoy today compared to my feline companion Photon Synthesis.

“Photon Synthesis,” Runa cooed—she had always been fond of him—and reached down to stroke the cat, who was now purring at her feet. “Interesting,” she said, “but I’m not sure where this is going.”

I looked at her with a *clinannoyed* expression.

“It’s going where no one has ever gone. It’s a game changer, a multiplier, a Black Swan.”

She looked at me skeptically, then resumed reading.

With these insights, I began some time back to explore the dataverse, the sum total of all information, seeing just how much was accessible and could be loaded onto or made available to the most advanced cognitive devices. In the guise of game research I plundered Granner Hall and other academic libraries for information.

“Liz helped you with the research, I bet,” Runa said with a sly smile and an extravagant wink.

“Mmm hmm.”

Without divulging my purpose, I consulted the experts—

“Yup, I remember that,” she said, nodding. “Two, three years ago? You grilled me on the latest neuromolecular research.”

I smiled blandly.

— *then retreated to my hab* —

“Remember that too. First time you went AWOL.”

“Keep reading,” I said, irritated by the interruptions. I just wanted her done, curiosity satisfied, convinced her clin wasn’t such a chicken brain after all. Or if he was, all the more reason to give up and leave him to his corn-fed ideas.

— *to research neurohacking, write the necessary software, explore equipment options, and build a crude and then more sophisticated faceplate headset and run the beta tests. Many years and hundreds of thousands of code lines later —*

“Whoa, lots of zeroes and ones. Where the bugs go to live and play, probably multiply too!” she cackled and slapped her knee in an annoying display of *clindescension*.

I kicked her foot: I hated people who thought they knew a thing or two about coding. Just a bunch of zeroes and ones. Give ’em enough time, a tribe of monkeys could write Lear.

But she was right in one sense: the program wasn’t always concise, in fact it was downright kludgy in spots. Sometimes I just threw random coding down to see what stuck, *spaghetti code*, it was called. I hadn’t had time to clean it up. I wasn’t thrilled with the mess, which led to the occasional infinity loop and bumpy task controls, but accessing the dataverse meant covering a lot of ground. Still, it was mostly beautiful, like poetry, and I had supreme confidence in its effectiveness.

“It’s all safe, if that’s what you’re getting at,” I said. “But anyway, thanks for your concern.”

She looked at me warily, checking I suppose whether the comment was *clinsincere* or *clinsarcastic*, then went back to reading.

—*I’ve assembled a workable prototype, a hardware system consisting of High-Def faceplate goggles with a state-of-the-art miniature virtual augmented reality holographic laser projection unit, which I’ve christened Illuminus©... to Illuminate Us®. In essence it’s a model of the way the mind works, with AI tools that leverage the dataverse to construct a neural model of the world.*

She shook her head. “Interesting brain analogy, but wrong.”

“Whaddya mean?” I said, a little alarmed.

“Consciousness comes from the processing of biochemicals sloshing around the brain,” she said *Runapedantically*. “We’re not sure how it works—it’s the great neurobiochemical mystery, surely a Destopian Prize for someone—but it’s way more than bits and bytes.”

Strange: that was the same critique Vänka had leveled against Orkestrate, in our first advisor meeting, the one I had fled. Even now, more than a dozen years later, I had to make a conscious effort to clear my mind of that meeting—and its horrifying consequences.

“Yes, but you’d be surprised, all those bits and bytes from the dataverse can produce a powerful and lifelike version of reality,” I countered.

She hooded her eyes in skepticism, then resumed reading.

Unlike virtual reality gameware, which until it was restricted had been the work of a few visionary developers and directors, The Dream Machine is sourced from everyone and everywhere and everything that has ever existed. Big Data is like the atmosphere, unseen but ubiquitous. It pours information into the datastream for me to leverage so the resulting experience is incomparably richer, more lifelike, more immersive, and more deeply moving and profound than anything that has come before.

Aside from being virtual, a figment of the mind, the program has safety written throughout in a digital Hippocratic oath: <<doNoHarm>>. The virtual format and redundant failsafes ensure the user is never at risk.

But here’s the best part, the part that elevates Prospero above traditional time travel modalities such as storytelling, dioramas, books, films, vids, and theater—back when these artistic technologies were permitted. My device is programmed not just so we can witness different epochs but can interact with real historical people as key players in the glorious game of life.

We can visit departed loved ones and insert ourselves in great historical events. And who wouldn’t want to cheer on Washington as he rallied the ragged Yankee soldiers at Valley Forge or grab an oar to help him cross the icy Delaware? Or hand Michelangelo his mallet and chisel to sculpt the majestic David or his palette to dab some gold paint on God’s face in the fresco above the Sistine Chapel? Or help Zhang Wei co-pilot the Shenzhou XVII Sino spacecraft toward the landing site deep inside the Arsia Mons crater on Mars, the first human touchdown on another planet?

In addition, trippers can travel back to near-and-far distant eras to solve the great mysteries of the past, like when did sea creatures first crawl out of the water, who first used a wheel and controlled fire, and how did the Authority effect such a rapid and spectacularly successful takeover of the Destopic city-state known as Big Shoulders, once known as Chicago?

“What?” Runa said sharply, crimping her eyebrows. “You’re kidding, right? That’s way out of your den limits, even mine. No one is even allowed to say the old city’s name—”

I waved off her concern, though only to placate her. I was deeply serious about finding out how the city and nation had crumpled like papier-mâché put to a match—and maybe do something about it.

“Right, right, just kidding.”

She shrugged.

More personally, why should so much of our past be forgotten and lost to us, even the great moments we'd so like to remember, so frequently buried in memory's graveyard? Why not uncover any and all of it, as needed and desired? Why, you could even attend your own birth!

Runa hooted and slapped my leg.

“What?”

“Attend your own birth? That's about the worst idea I ever heard—especially yours,” she said with a snort.

I grimaced. “Yeah, well, gotta point there, I guess.”

She stretched and yawned loudly, as if hugely bored, then resumed.

The possibilities are endless, the appeal obvious. And not just to adventurers, historians, and memory sleuths but also scientists, even doctors, therapists, and social workers, whose clients and patients could use The Dream Machine as a therapeutic tool to revisit the source of their acute or chronic traumas and better manage their severe anxiety, clinical depression, agoraphobia, drug addiction—the whole spectrum of disease and disorder.

And for humanity in general: not just to enjoy the past but to experience and luxuriate in a time when art, music, and literature flourished, to revisit the glory that was Old Glory. Finally, and perhaps most important: to remember and learn from it, so maybe in the future we wouldn't be doomed to repeat the same mistakes.

She looked up sharply “Bad idea, ‘doomed to repeat the same mistakes’ You know this is heretical, quiescible.”

I curled my lips up in a small smile of disdain. I wasn't afraid. What was worse than being a Dead One, cooped up in our stultifying dens and stuck with the Big Six? Certainly not death. Even torture might be an interesting diversion.

She waited for an explanation, but seeing none, shrugged and went back to reading.

Tripping ahead, perhaps we can explore the outcome of this strange new continent being born out of the ashes of the old, and within it the dark experiment known as Destopia. Does it survive us, and if so, do we survive it?

Tripping forward in time is difficult, the future being an unknown continent. Maybe we can fly over and gaze around, even if we can't touch down.

In contrast the past is rich in detail and accuracy, well-mapped and just waiting, like Mars, for our exploration and delight. After all, even sunlight, of which there is nothing more precious, is a gift delivered up from the past, 499 seconds ago, the time it takes solar rays to reach the earth. And the long-dead stars still streaming their light at us. Dreams themselves are nightly pieces of history, come to revisit the astonished dreamer and work their way into the stories that populate our art and literature. All fiction, after all, is a kind of dream. Dreams famously foretell the future, dark omens like Lincoln's death or breakthroughs like the periodic table and my Dream Machine.

Speaking of Lincoln, maybe some future version of The Dream Machine could gather up historical figures and drop them into the present, introduce Old Abe or Charlemagne the Great or Jesus of Nazareth to today's Destopia, not that the perplexed trio would have the slightest comprehension of its darkness and despair, gloom and misery everywhere.

I watched Runa's face for signs of interest, admiration, excitement, curiosity, disgust—anything, any clue to her reaction. But except for the occasional yawn or slight grimace or vague smile she continued to scan the handheld with an exterior so bland she might have been reading *The Journal of Midlands Neurosurgery*, which she had edited for years.

Of course, no invention, no matter how original, comes about in a vacuum. "If I have seen further, it is because we have stood on the shoulders of giants," Newton said. He was thinking of Greek and Arab philosophers and Medieval scientists. My inspirations are classic sci-fi authors like Clarke, Heinlein, and Roddenberry, the vivid recall from deep memories first documented by Penfield, and more recent technical work by Zhurkov on telepresence and videotelephony, Glanzman's advances in augmented mixed reality, and my brilliant clin's groundbreaking research on biocraniality, neuromapping, and neuroplasticity, all of which were formative and critical.

"Hey! Hey!" Runa brightened and playfully kicked my foot. "Thanks for the call-out."

I bowed my head.

"But you misspelled biocraniality."

I tossed a stray sock at her.

Soon I will launch Prospero on its maiden voyage. I will target a very specific place and date—my childhood home on my twelfth birthday—and program the necessary parameters, strap on the Illuminus faceplate, and render

with amazing accuracy and detail a 360-degree, fully dimensional immersion of that special day. After that I will trip again, summoning personal and historical figures, images and events as if I were there. I will converse with the people I visit, even foreigners, ancient and modern, through my innovative translate-and-dub feature in perfectly comprehensible idiomatic English.

In other words, I will achieve one of humanity's most cherished dreams: to venture through time, on a spaceship of the mind!

Runa looked up dopey-eyed. Was she falling asleep?

"Going home, huh?"

I nodded.

"To see Mom and Dad? Sammy too?"

"Uh huh."

I was preparing myself for her barking laughter, her painful disdain and derision, her typical ABH scorn.

But instead what she said was: "Good, I'm in."

What? I was too stunned to respond. *In?* Who invited her?

"But first it needs fixing," she said, adding with that bland smile I detested, "because otherwise it won't work."

ii.

We have made this world—our beloved Destopian city-state—a far better place than the cesspool that was Old Glory during its final months, when her people and cities were burning out of control like a collapsing star.

They will not acknowledge our success, the paltry band of rebels. They fight out of spite, out of anger, out of humiliation at the smallness of their lives and vision and the grandness of our strength and control.

But they will learn.

We will teach them.

III. Special Announcement

09:39, 7/Martial

There had been a problem at our clin birth. Runa was fine, they had scooped her up and cleaned her off and a nurse rocked and cooed and coddled her and infant Runa managed to coo and smile and bat her tiny precious eye lashes. Right from the start she was a precocious charmer, a regular Mozart of the newborn set.

Me? I was dead.

“I knew it!” my mother screamed from the delivery room—they could detect only one set of heartbeats in the hours before the C-section—but the doctors quickly gave her something for hysteria and administered a dose of stimulants to get me going, barely. For a month I hovered on the edge of life, struggling to take even half a dozen ragged breaths a minute, hardly moving, eyes closed, skin gray and mottled as cement.

My father had his hands full at home taking care of Runa and nursing our poor mother back to health. But finally he showed up to see me, striding into the nursery late one evening. Of course that was illegal—the NICU was strictly off-limits to anyone other than hospital personnel—but His Dadness, as we later called him, or even His Badness, when he was at his most intractable, was never one to follow rules; like Runa, he was above them.

“So,” he said, sidling up to my incubator, looking down on my frail infant body, not much bigger than a newborn rat, pierced with tubes and lashed with straps and surrounded by tanks and bags and other medical paraphernalia. “Screwing up already, are you, huh? Well, listen here chicken brain,” he hissed, “*enough of this business!* Your mother is hysterical with guilt—as if it were her fault—and your clin sister will carry the blame to her grave if you fizzle out. So let’s get going, I don’t have time to worry about you. I’m a busy man.”

At that moment a nurse walked into the room. “What are you *doing?*” she shrieked.

“I’m the boy’s father and I’m giving him a pep talk, if you don’t mind,” he said, fixing her with his sternest Fermi-Professor-of-Advanced-Physics stare, but she was already dashing back to the nursing station to sound the alarm. God only knew who this shady character was, huddling over one of her charges like the Big Bad Wolf getting ready to devour Grandma.

“Listen kid,” he said, leaning back down, “we’ve only got a few seconds to make this work.” He bent over further, put his mouth to my ear, and yelled, “So open your goddamn eyes and start screaming!”

A security guard appeared at the door, gun drawn, and bounded toward him. But I was wide awake and howling at the top of my lungs: a strange man was holding me tight, his face awash in tears.

We were never that close again.

In later years he and Runa would tease me about it—he claimed my oxygen deficiency at birth was responsible for all my cognitive issues—especially when I was mischievous or out of line, which was rare, so averse was I to Dad’s displeasure and punishment and Runa’s sarcasm and scorn, my occasional outbursts of fury notwithstanding.

But one Sunday morning when we were 11 or 12 Runa and I got into a fight. I don’t recall the reason—we weren’t always as close as Bonnie and Clyde, despite the B&C bravado—but it must have been a doozy because when my parents rushed into our bedroom to see what was going on, there was Runa on top of me, both hands on my throat, pounding my head against the floor.

“There she goes, she’s doing it again,” my mother shrieked, running to pull Runa off.

Later, when I had stopped crying and regained my composure, I asked her what she meant by the remark.

“Oh, nothing,” she said and tried to change the topic.

“What your mother means,” my father interrupted, “was that when you were born—”

“Samuel, must you?” she said to him sharply.

“—when you were born,” he continued, ignoring her as usual, “you were about as dead as a baby could be.”

“I know that,” I said, gingerly feeling along the back of my head which my clin had just been pounding on the floor. “Your little pep talk saved my life.”

“And well I did, your mother wouldn’t have survived the tragedy. And I wasn’t sure Runa would have either. Because she was the one who almost killed you.”

“Ha,” Runa crowed. “Even then I was the ABH, sucking down all the vital nutrients.” I was tempted to start in with her again, despite the thrashing she had just administered.

“No, it wasn’t that,” my father said. Mother fixed him with an admonishing glare and for just a moment, out of rare deference to her, he paused.

“What do you mean?” I asked.

He couldn’t help himself. He blurted out, “She had her hands on your throat,” he said, laughing.

Runa and I looked at each other in shock.

“What?” we cried out in unison.

“’Fraid so, saw it with my own eyes, otherwise I wouldn’t have believed it. They always did C-sections on clin births, they were so rare and dangerous, and when they opened your mom up there you were, gray as could be, with Runa’s umbilical cord wrapped around your neck. And either she was trying to unwind it or more likely—” but he couldn’t finish, he started to guffaw, that weird bleating

noise that began in the bass clef and finished off in some register beyond human hearing.

“What? What?” we both yelled at him.

He stopped long enough to wheeze, “—trying to finish you off!”

So there it was: the source of my lifelong angst. Runa had had it in for me from the start. *Before* the start, like Jacob and Esau battling in the womb. I was the runt of the litter, competing with her even *in utero* for attention and nourishment.

And now, disputatious as ever, she was doing it again.

“It won’t work,” she repeated, inching closer on the couch, the better to strike me blind with her poisonous smirk. “The Dream Machine, Pompatus, Priapus, Parsimonious, whatever you call it. You’ve got some big problems.”

I was stupefied—mocking the name, declaring herself in, ruling it inoperative.

“*What?* That makes no sense,” I spluttered. “You know almost nothing about it,” I said, pinching thumb to forefinger to indicate how nothing.

“I know *this* much,” she said with that cool smile of superiority, spreading her own thumb and finger wide. “Tripping ahead, or whatever you call it—that’s impossible.”

I laughed and started to answer, but typically she wouldn’t—couldn’t—be stopped. She scooped up Photon Synthesis and continued slowly and carefully, as if explaining herself to an idiot.

“The future can’t be known, it’s totally unpredictable,” she pronounced *Runapedantically*. The cat purred in agreement. “There’s no certain knowledge, it’s all guesswork, on the assumption tomorrow will be like yesterday and today. Which it never is, progress is non-linear. A hundred and fifty years ago everyone worried about the bomb. Then it was the climate. Then the virus,” she said. “Now it’s —”

“That’s my point. All these things happened. Maybe not the way people predicted—”

“No, you’re *wrong*,” she said, kicking me in the leg to emphasize the point. “They *never* happen the way people predict. Take Wang. He accidentally dropped an acetylene torch into a compound of chlorine trifluoride. But instead of blowing up half of Beijing, it precipitated an endless slow burn, which the Sinos figured out how to convert to highly efficient rocket fuel. Which is how they got to Mars. Now *who* could’ve predicted that?” she laughed the same braying laugh she inherited from our father. “Not *you!*”

“Oh sure,” I said dismissively. But score one for my clin: she’d zeroed in on one of Prospero’s biggest flaws. The future *is* vastly uncertain, as the youngest schoolboy learns when someone takes off with his lunch while he’s in the bathroom. Tripping ahead, I knew, would be much kludgier than tripping back. My rudimentary test run had produced only ghostly, stuttering images in

my faceplate goggles like a silent movie that had slipped its sprockets, plus a throbbing headache, stomach-curdling nausea and deep disappointment. Nevertheless, I was still hopeful.

“I can limit the scope to ten years out, even five,” I countered, “and there’s plenty of information about the near future. If you apply Big Data and AI to—”

“Not really,” she interrupted. Runa was the Empress of Interruptions. “Think of all the unexpected events. How about the Sesquis? Who would’ve predicted living so long? And *Our Idyllic Utopia, Perfect Cornucopia, and Balance and Harmony Mean Living Heartily*,” she said, laughing.

I rolled my eyes. The worst thing about Destopia, we joked, was the litany of cheesy rhymes they drilled into us.

“And what about GC/Z?” she added. “Who could’ve predicted that?”

The Great Convergence, GC/Zero, the 76 hours that changed everything, when the Authority mounted its coup, altering our lives forever.

Runa and I were only kids when it happened. We didn’t even know for sure *what* the convergence was. A few dozen thuggish soldiers converged on our neighborhood, tearing up homes and habs in search of objects newly banned, such as art work and guns. Their weapons detectors and magnetometers even located knives and forks, which were duly confiscated. How were we supposed to eat? Evidently with our fingers, like cavemen.

When Dad objected to all this—the incredibly noisy sweep through our house, the confiscation of precious items including the grand piano and several treasured family portraits plus some fine china and Dad’s great-grandmother’s wedding ring—they jolted him with an electric prod and threatened quiescence. During the ruckus I managed to slip my synth keyboard into a hiding place beneath my closet floorboard. The takeover had been traumatic but happened fast—just days—after which we settled into a torpor of resignation and acceptance, especially after the chaos of the previous years, the *Time of Terrors*. It helped that there was little damage to the city’s infrastructure: apartment towers and skyscrapers, churches and offices, buildings and shops all remained intact and unmarred. Like a neutron bomb, the only casualties had been us dens.

“And don’t forget these little babies here,” Runa said with that annoying smirk as she tapped her Cranial Ports.

Of course I was familiar with the universal implants, everyone was, since Runa’s team at UCM had won the Destopian Prize (the second in our family!) in GC/14 for developing and wiring the devices with synthetic axons that were embedded just behind each ear. Not yet 30, she had figured out how to connect them with and nourish the brain to monitor and treat such cognitive disorders as schizophrenia, dementia, and depression. Under the Authority’s dark auspices Cranial Ports were supposedly being tested to screen for artistic, rebellious, or

anti-social tendencies. Any child so diagnosed, it was rumored, would be dispatched to re-education camps, or, if deemed incurable, QQ'd—quietly quiesced. While this neurosurveillance was still in the pilot phase, everyone could see it coming. Beyond that, Cranial Ports were seen by many as the pathway to transhumanism, the long-anticipated and eagerly awaited convergence of human and machine capabilities. Runa's team at UCM were working on such a singularity, and if successful would certainly be in line for an unprecedented second Destopian Prize.

"And also my work on advanced remote neurosurgery," she added in a voice of studied nonchalance. "Twenty years ago no one could have predicted that. Not even me!"

This was classic Runa, not just overturning my ideas but *me*: flexing her reputational muscles and displaying her superior credentials. ABH, as she liked to remind me.

Thus our argument proceeded—in turns ridiculous, abstract, heated, and peevish. I got up to pee, she got up to prepare more coffee. I cleaned the cat's litter box in the corner, she cleaned the coffee grounds in the sink. Then we were at it again.

"How about private, unrecorded conversations?" she asked.

"No such thing. Everything of value is captured. Prospero pulls it all in."

She stroked the cat and tried another tack.

"OK, what about nightmares, horror stories, the depraved psyche of some deranged sociopath," she asked. "Wouldn't that infect your program?"

"Nope. Prospero filters it all out."

"Really?" she said, with that smarmy look that radiated *clin-insincerity*.

"How about your images, whatever you're supposed to observe on those goggles of yours," she said. "How would you see stuff no one's ever witnessed, like, oh—" she paused in concentration, "—Zhang Wei on Mars? The Sinos didn't share any footage. Or Oswald taking aim at Kennedy from the sixth floor? Or Brutus putting the knife to Caesar in the Senate portico? And how about way before that, tens of thousands of years ago? When did early man come down from the trees? And why did they knock off the Neanderthals?"

She kicked me in the leg again and gave me her annoying "answer that" smile, all cheeks and teeth. I reflected the same look and kicked her back and we both laughed, the identical register and rhythms of laughter. Give us half an hour together and we inevitably defaulted to our old shenanigans, P in C, B&C, and all that.

But for all her logic I wasn't to be denied—not this time, not when I had the facts on my side. Facts didn't count for much in Destopia, but they still counted in the digital world.

"That's just it, what I've been trying to tell you," I said, leaning in. "There's all the testimony, the speculation, the conspiracy theories, the footage from

Mars that people hacked off Sino servers, the books and plays about Caesar's assassination, Zapruder's film, everyone who was there, who talked about it, wrote about it, all the news stories, the grapevine chatter, oceans of information."

She smirked in disbelief. I ignored it.

"And before that, tens of thousands of years ago, when Neanderthals still walked the planet, we have tons of archeological and biogenetic finds—DNA, bones, shards, tools and artifacts, like my little collection on the shelf there." I pointed to the decorative G hanging from the wall, which seemed to sway from side to side, as if listening in, fascinated.

"Plus the latest research, paleontologists and anthropologists and bioethnographers all weighing in. I've programmed Prospero to capture all that data and synthesize and reshape it to fashion a specific, highly refined, and perfectly clear narrative. And in the end everything, all these inputs, form a composite picture, a reasonable truth. Who knows? Meta knows!" I chuckled.

"Sure," Runa said *clincaustically*, "and what about—"

"In any case..." I interrupted her. I could interrupt too. Enough debate. Time to drop my little bomb. "We have a problem, Houston."

She cinched her lips. "A problem?"

"Right. You can't come along. No room," I declared, and slapped my hands together with finality.

She stared at me in disbelief, or maybe scorn, her icy looks could sometimes be hard to interpret.

"Oh? And why is that?"

"Two reasons: The Dream Machine is my idea, my work, and my program. So I'm the one who goes. Moi."

I paused to let that sink in, and for emphasis held up both index fingers: Number 1.

"Uh huh. And the second?"

"Simple. There's only one set of goggles. One per customer. And that's me." I turned the fingers around and pointed them at my eyeballs.

She nodded and scrunched her lips and took a deep breath, a bad sign, I knew from 36 years of *clinhoo*. She was planning something.

"And where are these precious goggles?"

"Hidden, that's where. For my eyes only."

But inadvertently my gaze swept to the closet Command Post. Just the tiniest swerve. Just enough.

Her eyes followed mine and immediately I realized my blunder. For there, open to view, was the closet with everything in readiness, what there was of it: a folding chair behind a card table barely large enough to accommodate the pre-programmed Q-tab. Overhead, some clothes hanging like Spanish moss,

pushed to one side; underneath, mixed in with some shoes, assorted spare parts.

And my faceplate glasses.

“Ah, what do we have there?” Without waiting for an answer Runa leapt off the couch, dumping a hissing Photon Synthesis from her lap, took two strides to the closet and scooped it up.

“Hey, whoa. Hands off the Illuminus. That’s private property.”

“This is...what...your viewer, your glasses, your faceplate...what do you call it? Ruinous?” she said, turning it over to examine.

I jumped up after her to grab it but she turned her back on me and held it away, just out of reach. I sputtered a protest, which she ignored.

“Just what I figured,” she said. “Cheap pair of lenses and frames with some wires sticking out. No better than those early virtual reality glasses that made everyone sick.” She turned back to stare at me. “*This* is how you’re going to see the trip, through *these*?”

“Dammit, Runa, it’s fine,” I said, still reaching for them. “But even if not, it’s the only set I have. One per customer, like I said. And that’s *me*.” I stopped reaching long enough to bang my fist against my chest, like old King Kong or the latest kid vid Hairy Ass the Hydro Monster, feeling both belligerent and stupid. I couldn’t help it.

She ignored my pathetic alpha display and examined the device again before her gaze fell to the floor.

“And what’s this? Is it what I think it is?” She knelt down below the desk, where all manner of spare machine parts, a junkyard of electronica, the detritus of previous experiments from the makings of The Dream Machine, were piled in disarray. A synthesizer-like device that looked like an old-fashioned audio soundboard, about the size of a synth keyboard, with columns of switches and dials and knobs, lay on the floor.

“Uhm, probably yeah,” I said glumly, stepping back in retreat. It was a Cranial Console, the crucial neurocranial device I planned to use to remotely connect the dataverse to my consciousness, to link up with the goggles and embed time travelers in the trip. It was illegal to possess—the Authority kept strict control over all “brain gear” to avoid mind-tampering falling into the wrong hands, which were any hands but theirs. With Liz’s help I had commandeered a lot of aging, half-obsolete equipment from the university Tech Corral, and had no compunctions at all. The only brain I intended to tamper with was my own.

“You know, it’s illegal to have one of those,” she said. “Like your books. And the paper. And the writing instruments. And the Annals.” She was always an excellent scold.

“Nobody has to know, right?”

“Of course not. And that’s your answer, right there.” She pointed at the device and hooted a gleeful note and unaccountably started pirouetting across

the floor, pushing me aside, scattering dust balls, overturning pages of code every which way.

“Dammit Runa, what are you doing, what are you *talking* about?” I said, kneeling to straighten up stray papers.

“I mean just this,” she said, twirling to a stop. “I can remote into your chicken brain with it, with the Cranial Console. And connect your software program to the right and left hemispheres by hijacking your entoptic and endogenous channels—”

I straightened up. “Whoa, excuse me? Hijack? What does *that* mean?”

“Sorry. Override, take over. I can *commandeer* the signals coming in from your program, the various data stimuli you’ve gathered, and wire them direct to your brain’s neural pathways, the necessary ones—” she pulled back to consider, “—let’s see, optical and auditory percepts for sure, olfactory, uhm, maybe—” she sniffed, “—vestibular—” gaze back in focus, “—I can figure that stuff out later, all the necessary nerve channels we need to transduce—” I waved my arms and started to object (*we?*) but she just kept motoring on “—to generate neuroactive patterns, the ones that, you know, create the novel experiences in our brains. And that way we can *dump*—” she paused and turned to regard the Illuminus with a look of disdain, as if she were holding one of the cat’s errant turds between her fingers and, arching her eyebrows and fixing me with a roguish smile, flicked open her fingers so the glasses dropped to the floor, where they took three bounces, the third down the old laundry chute, “—*these*.”

“Hey! Whoa! Wait a minute!” I dashed to the chute to retrieve the precious object—it *really* was the only pair I had—but too late: I could hear the device clattering down the metal shaft, destined for the incinerator.

She brushed her hands melodramatically. “Good riddance to bad goggles. Cuz you won’t be needing ’em anymore!”

“I can’t believe you did that!” I screamed. “What colossal nerve! What...what...what...” I spluttered, too enraged to say what. I had to grip the table and take a deep breath to prevent my knees from buckling or striking out at her or, worst of all, bursting into tears.

Instead I moaned, like the whine of a whipped puppy, “How am I expected to see?”

She laughed again, more heartily, the short ascending bray of His Badness’s laugh, and clapped her hands. “With your eyes, goofball! I can remote in from the Console and program your cranial nerves to play the whole thing, the whole trip, *in your head*, just like ACTUAL EYESIGHT!” She hooted in triumph. “And hearing too, with your ears, not on some tinny speaker, the full sensorium the way God meant for you to take in the world. Oh, yeah, *this... is... good*,” she trilled and twirled around the floor on one toe, scattering more papers.

“Wait, you can’t do that because... because—” I blustered.

“Because *why?*” she said, twirling to a halt, hands on hips, defiant.

“—Because I won’t let you!” I started to shout, but it was too late: once again she had asserted her ABH superiority and turned my life askew. I dropped my voice and hung my head and collapsed onto the couch. “Because I’m not some lab rat in a maze you can toy with,” I whimpered.

But despite my pathetic objection, my abject self-pity, my clin jealousy and anger and inferiority, another part of my mind, as if already hijacked, was racing ahead to this new and more exciting line of thought: maybe you *could* run the whole thing through your brain and play it out there. Eliminate the goggles altogether! Despite the highfalutin name, Illuminus was more like Dubious or even Insidious, held together by cheap plastic scraps and jury-rigged wiring, which I worried would produce the same nausea and disorientation as my failed trip into the future or during the early days of virtual reality games and retina apps, before they were deemed addictive, invasive, subversive and dangerous—and finally banned as health hazards and civic distractions.

She reached down and gently patted me on the head. “Toy with you? I would never *dream* of it,” she said, as if she were consoling a hysterical three-year-old.

“Thanks, so good of you,” I said, *clin-insincerely* and reached up to brush off the offending hand. But my irritation at her patronizing attitude was immediately replaced by curiosity. How *could* you rewire someone’s brain? Runa’s advanced neurosurgery was among the most innovative and critical elements of the Cranial Port-and-Infusion process, later commandeered by the Authority through their mandatory annual check-ins, sluicing the brain with mind-enhancing and therapeutic drugs, a major factor in the sesquicentennial revolution for which she had won the fourteenth annual Destopian Prize.

That was all to the good. But the technique she seemed to be proposing now was far riskier than a mere cranial infusion. *That* was minor, a routine resectioning procedure. *This* was major surgery. Had anyone ever tried to neurohack and overwrite brain sensory functions, the billions of neurons, the trillions of synapses? Choosing which of those to mess with would be unprecedented and highly dangerous, probably impossible. And worse yet, it was *my* brain she was talking about hacking into.

“I’m not sure I want to be your clinny guinea pig,” I said nervously.

She waved her hands as if waving aside my concerns. It wasn’t *real* surgery, with scalpels and sutures, she insisted. She could operate remotely, through the Cranial Console, had done it before in Q-tab simulation and on lab animals. It was all part of her award-winning research on non-invasive neurosurgery, with AI programs to fill in the gaps and speed the process along.

That was not entirely reassuring. Artificial Intelligence? No one knew quite *how* it worked, it was a black hole in a black box. But if anyone could pull it off, it was my brilliant clin. She looked at me expectantly. She knew I couldn’t resist

the idea: it was so much more enticing to play the trip through the inside of one's head—eyes, ears and all, like real life—than through some cheesy goggles, like the old-fashioned stereoscopes.

I closed my eyes. I was so exhausted, frazzled, and conflicted. I couldn't think anymore. Did I want Runa in or not? It seemed too late now. I had spent years developing the project. In less than an hour she had spotted the fatal flaw in tripping ahead and proposed—I hated to admit it—a huge enhancement to the visualization process, which she was, as it happened, uniquely suited to implement. It was an unbelievable piece of luck. She seemed to have made herself indispensable.

Still, I wanted the first trip for my very own. She could be the co-captain, the executive producer, the assistant director, whatever she wanted to call herself. But I would be Neil Armstrong and Zhang Wei. Only one astronaut can be first on a new planet.

I explained all this to her, patiently, logically, rationally. But she was not to be denied. She argued—not unreasonably—that she had as much right to return to our childhood home and see our beloved older brother and contentious old man and darling mother as I did. She said she'd be there as always to protect me if something went wrong, like another falling dream. She harped on her brilliant suggestion to replace my crude goggles with her highly advanced neuroimagery.

Then she administered the *coup de grace*.

“Look, I don't want to make any trouble,” she said, though the arch of her eyebrows and jut of her jaw suggested otherwise. “But you can't launch a project like this without tipping off the Authority. I know you think you've covered your tracks,” she said, pointing up at the monitors and muting her voice to a whisper, “but they're *all over*. They'll find out, and so will Vänka,” she insisted. “And she'll come down hard if she learns you're doing this with stolen university resources and hidden from Authority surveillance. I can keep that from happening, keep her off your back.”

How can you do that, I started to ask, when suddenly the lights in the ceiling and walls and out on the streets and throughout the land flickered and the speakers crackled to life. Alarm bells clanged and the stentorian four-note opening of Beethoven's Fifth Symphony boomed across the room, across all rooms, all streets, all Destopian spaces. We snapped to attention, bodies rigid, eyes wide.

“Greetings... esteemed denizens of Destopia,” the slow, deep, robotic-sounding voice of Apex Leader rumbled, portentous and terrifying, as if welling up from some subterranean cave, sounding half machine and half animal. “*This... is a Special Announcement.*”

We looked up reflexively and saw, as always, the ceiling panel go from cloudy to silver, a mirror in which we spotted two frightened and confused people looking down, at us.

From outside came the sound of a thousand motorcycles, amplified to the threshold of pain, as if we were in some tiny hive surrounded by hordes of angry wasps. Military drones, the size of bees, darted over and among Authority soldiers on the march, beaming their scarlet beams of light. The walls, the building, the streets, the sheets of snow and sleet, even the air itself seemed to hum and vibrate.

Then the shrieking noise abated and Apex Leader appeared above us on the ceiling and room walls, flashing from one panel to another in rapid succession—to induce frenzied disorientation and fright—as a murky shadow.

“Today is Surveillance Day, the anniversary of the most devastating and infamous surprise attack in history, the Sino/Russo coastal invasions,” he or she or it continued; the gender was ever uncertain. Even the words were unclear, a hissing, sibilant, accented voice, speaking in a strangely synchronized fashion so the words fell from the lips a half second before the sound filled the room. The face was smudged and could just barely be made out, too. All the upper parts—hair, brows, eyes, ears, nose—seemed vague and surreal. Only the mouth was palpable, lips bulbous and cherry red.

“We remind ourselves of the necessity of utter and constant vigilance to forestall plots against the Authority. Remember, *Apex Leader Means Maximum Order*. Remember: *Destopian Patrols Mean Safe Shoals*. Remember: *The weather is fair and the future is fine.*”

There was a pause to let the familiar slogans play out before the dreaded voice continued. “Rumors have circulated that Sino/Russo troops are advancing swiftly on our beloved Midlands Destopia. Be assured that Authority border stations and surveillance towers have been reinforced and the Great Gates surrounding us have been carefully secured. Our soldiers there have been placed on high alert. Street security and all checkpoints have been fortified as well, which you may observe at this very moment.”

This was not a request. We glanced into the stormy darkness outside. The tiny drones, visible by their cones of blood red light streaming straight ahead, flew in rapid complex formations that produced shrieking Doppler echoes at painfully high volume. On the ground Authority soldiers, their boots clicking on the wet pavement, black metallic vests gleaming from the amber light reflecting off the sodium vapor lamps, long hair rippling under shiny steel helmets like the Authority flags that flew on every street corner and building, high-stepped in columns up and down the street. Other soldiers roared by on giant black cycles that resembled ancient beasts, giant arachnids, once extinct, returned to haunt and threaten us. We knew that *holocasts*, meant as security measures both to reassure and terrify, projected virtual images of soldiers onto

the street alongside real soldiers. Which were physical and which virtual? No one knew for sure.

“You may have heard insidious rumors that Destopia is in grave danger,” the bestial voice continued. “One particularly vicious slander is that Sino/Russo engineers have hacked into and weaponized our Midlands weather system to create the storm cycles we experience. Disregard such talk, but report anything suspicious or untoward you see or hear immediately! Always and ever remember,” the voice rumbled on, “speak only when and to whom it is necessary, within the limits of your prescribed Authority. Emergency Rules are in effect for the foreseeable future while we remain on wartime footing. Never venture beyond Authority Limits. With the proper constraints and guidance, all will be well on our journey. Remember, celebrate and effectuate these watchwords—”

And here the voice seemed almost to clear its throat and pause, for effect, and of course we knew what was coming, the accustomed Authority mantrum, one of the many drilled into us from cradle to cremation:

Dreamers set the world aglow—

Runa screamed and pointed to the window. Some drones were hovering right outside, their horrifying scarlet rays aimed at us, and we braced for...*what?* Explosion? Laser strike? Sonic blast? Incineration? Then they circled around, as if shrugging us off, and darted away in perfect formation, and we were left to wonder at their warning, if that’s what it was.

The voice on the speaker concluded. “Good luck on your march to the future.”

Beethoven’s four-note theme sounded again; the broadcast was over.

Runa looked at me impassively. At such moments casual gestures were dangerous and speech was suspect. Surveillance teams at the other end of the monitors might still be—probably were—watching. But silence, even under the burble of the decoy tape loop that I had programmed to resume after a Special Announcement, was equally risky: this was when you had to be the most careful, to pay the most attention.

“The weather is fair,” Runa said with barely concealed emotion, looking again out the window, the street obscured by the lash of the storm.

“And the future is fine and carefree,” I answered the familiar couplet with precisely flat affect.

“Another reason to return to the past,” she whispered with sudden urgency. “The present is rotten and the future may be worse, ugly and chaotic—”

“—Or certainly despotic—” I answered in a voice just a wisp above silence, “—even in our little Destopian paradise.”

“Let’s go back to earlier times—”
“When the sun shone brightly—”
“And people didn’t need a pass to walk freely and assemble at will—”
“Or pursue liberty and happiness, genuine, not fake.”
“When gardens still bloomed and the land was green.”
“When there were no gauntlets of virtual soldiers and drones—”
“—and no relentless storms—”
“—and books and music and paintings thrived—”
“—and Sammy was still alive—”
“—back before our names became numbers—”
“—and our cities became slogans—”
“—and our lives became sad and paltry.”
“Yes,” she added with quiet conviction, “Let’s get out of here. Let’s go home. *Home.*”

Suddenly our arguments seemed trivial, beside the point, inane even. *Who* went was unimportant; *going* was the thing, *home* was the place.

I lived through the Great Terrors, the times of war, of widespread famine — death in every crevice and corner. I fled my native Totenstan, in the eastern sector of the Old Land, and in the flight was an unwilling witness to a continent crawling with disease, decay, and disintegration.

And then it spread here, through the dying embers of Old Glory, which bad as it was resulted in GC/Zero, our glorious Destopia, a “utopia for all deserving denizens.”

From the Greek “eutopus,” a good place.

We built it to guarantee safety and prosperity. And for 22 years it has, and for another thousand — a Destopic millennium of coming peace and security — it shall. Other topias are being planned by Den Thought Squads: a healthtopia to extend human lifespan beyond even the sesquis and an edtopia in which all data is diverted into learning everything there is to know about the universe. What a paradise we will be!

But now a handful of Dead Ones rise up to try throwing off the strictures that keep us safe and strong. They can’t see it, the Dead Ones, they are naïve and blind to our pure purpose. They thrash and wail like spoiled children and try to pull down the society we have so carefully built up.

But despite their dangerous efforts, we shall prevail. For they are few and paltry and we are many and strong!

IV. Home

11:12, 7/Martial

The broadcast left us with the usual and intended dread and disorientation, but also something new: a sense of urgency. It was urgent to act on our plans, to run the program, to escape the present, and especially to defy the regime's ban on rogue adventure and creative freedom.

But there was another feeling too, a dark cloud of apprehension settling over me like a nightmare: Runa still had to rewire my brain. The thought made me cringe.

"You OK?"

"Not really," I said, frowning. I was embarrassed at my anxiety and still angry that Runa's intrusion, however much it improved the program, had brought me to the brink of something so drastic and terrifying. "You're about to scramble my brain!"

"Oh, *that*," she said with a laugh. "It's going to be *fine*." She fished from her pocket a small vial and handed it to me. "Here, try this."

"What is it?"

"Cranial formulation, Neuramind, five ML's. Do you good."

I held up the glass container with the familiar hooked *A* logo, like a sneer or a wink, one of many neurotreatments churned out by the Authority for the ostensible enjoyment of its denizens, really to drug us into bland conformity and diminished capacity.

Outside, flashes of lightning lit up the street followed by a huge clap of thunder. The room shook as if in the grip of a giant fist. I might have taken it as an omen. Instead I thought, what the hell, any port in a storm, and sluiced the piss-colored liquid down my Cranial Ports and lay down on the couch.

"Don't you need a laser scalpel or something?" I asked with a nervous titter. "X-ray vision? How about a stiff drink?"

Runa laughed. "No, silly boy. Not when I have this," and she sat down at the Command Post desk across the room and pulled out the Cranial Console. "I trained on these old gearboxes," she said, running her fingers appreciatively along its levers. "This and my handheld, which has a remote surgical function, and your Q-tab, from which I'll hack into your connectome."

"Wha's that?" I slurred. The Neuramind was already taking effect. Neura mind. Never mind. No mind. *Nice*.

"A neuroschematic of your brain's pathways, all the axons and synapses, the quadrillion connections made by your hundred billion neurons. I'm starting to pick it up now. Oh oh." She paused to study the image on the Q-tab, her face creased in concentration, her mouth pulled back in concern.

"Whassa matter?" I slurred apprehensively.

“Just as I thought: empty-headed as ever.”

“Ha. Ha,” I said. I tried to think of a suitable riposte, but also to tell her that I trusted her to make the right decisions and protect me from harm, my trusty clin, as she (usually) did when we were kids. But I was too muddled to articulate a coherent thought, and in any case she was going on about neurohacking this and rewiring that and “downloading some neuroenhancers” and “stimulating new cranial connections. And then,” she said, cheerily, “you’ll be ready to go. Zip zip!” I heard a rapid clicking on her handheld and sliding of dials and levers on the Cranial Console. “After that I’ll do the same here,” she tapped her forehead, “and we’re in business. Shouldn’t take long.”

“Careful,” I tried to say, and rose up on my elbows. “A lobotomy is forever,” which, despite being the hoariest of jokes seemed at that moment scarily relevant, especially when it came out, “lababame fordedder.”

“Will you shut up?” she said, laughing, and motioned for me to lie back down. I relaxed onto the couch and closed my eyes, glad not to see what she was doing. I could hear her twisting more dials on the console and entering some instructions on the Q-tab. The slight whine of a wireless connection buzzed into hearing range. Within a few moments I felt mild pings and twinges in my head, and a steadily increasing haziness, so that I had trouble making out what she said about nanoparticles and optogenetics and cranial mapping. “And then AI does the rest.”

“AI...AI,” I sang in a hoarse whisper, “don’t pass me by...my consciousness, a homunculus...!”

Almost as an after-thought I mumbled, “Don’t steal the fourth key,” but she just kept yakking, more to herself than me. “You’ve done most of the coding to your faceplate device,” she said. “I’m just gonna close off that ... *like so*... and perform some crafty input/output manipulations...*there*...and shut down the motor-neuron gate to prevent lucid and flash and micro and hypnagogic dreaming—and stop nightmares and your ridiculous falling dreams—and any form of somnambulism—”

“What? Somnambuwhat?”

“Sleepwalking. You know, out the door, down the hall, into the street, where the soldiers would be waiting to pop you. Can’t have that, can we?—and rewire those images straight into your head.”

In my semi-blissful state time had stopped, so it might have been minutes or hours later when she announced, “Done. Piece of cake!”

“Some...cake,” I said, and, glowing in a warm stupor from the drug and relieved that she seemed finally to be finished without, apparently, finishing me off, gushed, “You’re...*so good*.”

She laughed and said something I couldn’t quite make out, it might have been “ABH” or “anything but.”

I must have fallen asleep. Maybe it was the Neuramind, but my mind seemed to surge and roil with dreams, mostly vague and spectral, clouded with an air of scarlet-tinged foreboding, like the light beam of Authority drones.

But one was clear and unforgettable. I dreamt that another Special Announcement sounded, only this time one of the drones that had buzzed our windows before managed to get inside the room and circle around close as if to inspect us—or wipe us out. In our childhood clin world I was usually the coward and Runa the super-hero, but in this case I wasn't frightened and even took a swipe at the thing, while Runa squealed in terror and dove under the couch with Photon Synthesis under her arm.

The drone flew to the wall next to the poster of Einstein and Bohr and astonishingly projected, not a blood-red laser light, but rather a dreamlike image which, after a second, came into focus as Room 102 in Granner Hall, Vänka's office. Vänka was there, standing by her desk, but inexplicably, in the dream-inside-a-dream, she was a hulking figure, larger than life, inflated to the size of an old-fashioned parade balloon, almost touching the ceiling. Seated in front of her was my father, only an ancient and frail version of the real thing. He was balding and thin and blue veins pulsed like heart beats across his scalp. The two of them were arguing about something, I couldn't make out what.

Suddenly, with a violent motion, Vänka reached down with her bulbous hands and gripped his throat and began howling like some wild animal. At which point my father turned to me, the observer, and croaked: "What are you...going to do...about it...Georgie?"

I stared at the two of them, confused. Do about what? What was I supposed to do? It was, after all, just a dream. Or maybe not, maybe it was Dad's ghost, like dead King Hamlet on the castle wall, exhorting his son for once to do better, to live up to his expectations, to uphold the family honor. In other words, to wreak vengeance.

He turned back to Vänka, his scalp heaving and throbbing, and spit out, "Absolutely not. I won't do it. Georgie won't let you. You have no right, you have no authority," and with painful effort started to rise from the chair.

Ignoring his outburst, Vänka turned to wave at something in the doorway. "*This* is my authority," she said calmly.

A piercing sound cut through the air and a drone appeared and started buzzing around his face. He fell back into the chair flailing at it and ducking his head. Another dozen or more materialized and, easily evading his hands, zipped up his nostrils and into his ears and mouth to quiesce his insides. Several even disappeared down his pants.

His face turned bright red, he crumpled to the floor and tried to retch up the foreign objects while pummeling at his crotch. "No!" he screamed in a raspy wail. "Make them...go away."

I tried not to watch, it was too awful. But how could I stop? I was

imprisoned in this dream, as if commanded to witness this nightmare, my father's and mine.

"Enough," Vänka ordered. The drones emerged and disappeared out the door.

My father turned back to me, still in the dream, and wailed, "Why aren't you doing something, anything?"

But all I could do was shrug, the act of which woke me up. My hands were shaking, my skin sheened in sweat. What did the horrid dream signify?

The room was dark but I thought I could make out Runa's shadow, standing by the window, examining my Q-tab.

But before I could ask her what she was doing, I was asleep again, this time blissfully dream-free. When I finally awoke I saw Runa at the stove making coffee. She seemed perky and excited; I was limp with fatigue and still steeped in anxiety.

"Sleep OK? I didn't want to disturb you," she said, her back to me while she measured fresh grounds into the percolator.

"Not really." I noticed my Q-tab and some books had been rearranged.

I looked at the wall clock. A hundred minutes had elapsed since the Special Announcement.

"I see you've been busy."

She turned and looked at me with those innocent hazel eyes. "How's that?"

"The tablet? The books?"

She paused a second, then turned back to the coffee. "What about 'em?"

"They were moved. And I thought I saw you going through my Q-tab when I woke up at one point."

"Yeah, well," she admitted with a shrug, "I did take a peek. I'm working on singularities, and this *thing*, your Dream Machine—" there it was again, denigrating my program with that common noun, "—might be the way in."

"Never mind about that. What else did you look at?" I didn't need her snooping around.

"Nothing much, just that." And she pointed to the book *1984*, sitting on the table, where she had removed it from the shelf. "I can see why it was banned."

With all the illegal volumes on my shelves, the collected works of Verne and Wells and Markey and even some rare Tribikov, funny she should pick Orwell. There were the weird coincidences—the namesake author, the date a century before GC/Z—and the story: Oceania's dystopia so like our Destopia, the disappearances, the same phony facial expressions people wore to avoid revealing their true feelings, the Two Minutes Hate like the Special Announcements. Room 101 versus our reportedly unspeakable torture chambers where denizens were quiesced and disappeared. Julia and Winston,

one of the tragic couples Runa and I sometimes compared ourselves to as kids. Cranial Ports, a neural pathway direct to the brain, was the perfect vehicle to detect thoughtcrime. The telescreen versus the ceiling and wall monitors. The Party's goal to obliterate all art and literature, which the Authority had already accomplished. And "the place where there is no darkness"? That would be, I imagined, the harsh illuminated streetscape under the relentless lightning storms and sodium vapor lamps, where Authority soldiers marched in endless procession and brutalized low-level denizens for not having their safe pass wrist bracelets—or for any reason at all.

Of course, the parallels were inexact: Big Brother was ever present, Apex Leader ever vague. Oceania was a much more harsh and cruel autocracy than our pissant city-state. Like Tolstoy's unhappy families, every unhappy dystopia differs from every other. Only the soul-crushing misery is the same.

Funny also that Runa had skipped over or missed several other books, journals and vids huddled together on the shelves that might have served as evidence of my audacity or delirium. There was the volume on *Mythologies and Mysteries*, from which she could have adduced Prometheus, who stole fire from the Gods and was punished by having his liver pecked out by an eagle. Icarus, who fell into the ocean and drowned after flying too close to the sun. The book burnings in *Fahrenheit 451* and Frankenstein, of course, with the villagers angrily waving their torches and pitchforks and storming the doctor's castle to kill the monster and its creator. The transposition of epochs leading to apocalyptic warfare in *A Connecticut Yankee in King Arthur's Court*. The murderous HAL in *2001*, Faust's clear-cut warning about the danger of hubris, and Haley's *Tales from Distant Utopias*.

I thought of these stories and the warning lessons they conveyed, all amounting to the same thing—don't disturb the natural order of things—and shivered.

"Hey, you need some more Neuramind?" Runa said, handing me a mug of coffee and digging into her pocket for a vial. "Got it right here," she said with a bright smile, and, pulling it out, gave the bottle a little shake, the liquid stirring uneasily like my psyche. Her ability to read my mood was always unnerving.

I shook my head. Coffee would be better. I took a few sips and waited for the bright splash of caffeination to grab hold. What I needed now was to reframe my thinking, to revive the excitement and confidence I had felt early this morning before Runa had crashed my little party. After all, I told myself, what could *really* go wrong? If neurohacking was going to create neurohavoc—stray electric charges, leaking chemicals, a sudden stroke—it would've happened already. But everything seemed normal, considering: my senses were primed and taut like a high wire and my mood anxious but elated. As for the program itself, I had built in safeguard after safeguard. Conceptually, we were merely conducting an experiment in the life of the mind. The process called for inputting streams of

carefully curated data straight to our brains. Wasn't that how hearing and eyesight worked? Consciousness? Life itself? Of course, life had plenty of unpleasant consequences, but that was just the chance you took embracing it, as we all must.

"No thanks," I said, finishing the coffee. Might as well do what I'd been aiming to do for a long time. "Let's trip."

"Great," she said breezily. "Off we go!" What a lark, her tone implied. We could as easily have been crossing the park as reeling in the mind and peeling back the decades.

And with that, my anxieties drained away and my spirits soared. Action always trumps inaction. "Do and not stew," His Dadness used to exhort us, along with "Be a den of action and not inaction." He was almost as full of cheesy slogans as the Authority. When he admonished me once to "be a den of iquity and not iniquity," I laughed so hard it shut him up, at least for a while.

"But first," I pronounced, "we have to review the Rules of Tripping."

"The *what*?" Runa said, her eyebrows furrowed with skepticism. "Sounds like some stupid grade school thing. No running with scissors, no pranks in the playground."

"No, I'm serious."

"Okaaaay. What are the Rules of Tripping?" She rolled her eyes and folded her arms to listen patiently to her goofball brother.

"First, you can't tell anyone you're traveling in time. They won't believe it and even if they do, it might lead to awkward consequences. Plus, it might jam the conceptual gears."

"OK, fine," she said impatiently. "*Conceptual gears*. I don't get it, but that's OK. Next?"

"Try to avoid thinking about the Destopian present—this very moment of 7/Martial, GC/22 we're in *now*—when you're in the past. You have to stay in the Tchernikovian Now of then."

"The now of then. Sounds very Zen. And that's *why*?"

"Same thing. It introduces a kind of cognitive dissonance in your head that could mess up the trip. It's like meditation: stay focused on the moment. And the next rule is obvious: don't try to change the past, it won't work."

"Great, that's three. Any more rules?" She circled her index finger to speed things along.

"Just two. Don't lie, for any reason. The program is built on verisimilitude: reality as it happened. And don't exploit today's knowledge, like predicting a natural disaster from history or betting on a sports game in which you know the outcome. Bad form."

"I'm not sure why. But fine, got it. Two questions. What if one of your rules conflicts with another?"

“Uhm, dunno, hadn’t thought of that. I guess we’ll figure it out if it happens. Which it won’t.”

“Uh huh. Sloppy thinking there, but OK. And how long will trips last?”

“*That* I’ve given a lot of thought to. One hour. That’s when the trip times out. Since this is the first one, I don’t want to get stuck in the past if something goes wrong—even if it’s just in our heads.”

“One hour?” she cried. “Sixty minutes? That’s *all*?” She started to argue the point but I glowered and held up my hand. Enough debate.

“OK, fine,” she conceded. “One hour. You know best.”

I had to stifle a bitter laugh: clearly I had *not* known best, my clin had intruded on my plans, invited herself in, and, for better or worse, introduced a whole new modality to visualize the trip. Oh well, too late to regret. Time to *do and not stew*.

I shaded the windows from prying drones, bolted and quad-locked the front door, which produced four shot-gun-like blasts—*bam bam bam bam*—and checked the decoy tape to make sure it was running. Then we pulled in another chair and squeezed inside my Command Post and closed the closet door to block out ambient light and noise against distractions.

To capture the historic proceedings, I readied the first recording of our maiden trip into the past. The trip counter would record the time and the Run Report would log Q-tab settings, monitor vital signs, check the algorithmic and processing activities, and read and transcribe thoughts, constituting an electronic diary of the proceedings. All of that is excluded from this document for space considerations, except my thoughts, which make up the running narrative of the trip.

This was it, finally—the historic moment! I glanced at the time on my glowing wristband. Exactly 12:59 and fifty-nine seconds. An auspicious moment, the zeroes lining up at the top of the hour. Also, the cusp of the Pleiades starburst, famously lucky.

I shivered with excitement, like some ancient oarsmen setting off on an historic journey across the sea, like Columbus sailing out of Palos harbor toward the new world, or Zhang Wei cheerfully leaping down the chute onto Martian soil to claim the red planet for the Sino Empire.

I turned to smile at my fellow tripper and squeezed her hand for luck. She squeezed back.

The program was ready and required only the tap of a few pre-programmed keys on the Q-tab in front of me. One of them activated a circular display of twenty-four small lights on the tab screen that pulsed to life. The configuration made it easy to see at a glance the status of the major subfunctions: electronic, AI, code, hardware, safety, timing. At my touch the lights zipped round, bright as a holiday tree in the otherwise total darkness,

reflecting final status checks, rapid and then slower and slower still, until it finally resolved to a steadily pulsing green: all systems ready and urging me on!

I paused and took a deep breath to steady my thumping heart and jangling psyche. This was it! Only one command remained: the bright red START key, deeply embossed like the stubby inverted keys on my old Underwood. Such a simple word—*start*—for such an auspicious moment, the first step in a momentous journey. I let my right index finger hover for a second, dangling in readiness and expectation, anxious and excited, history on the verge, time set to reverse, before whispering, “Here... we... GO!” and pressed my finger down.

Runa says something—“Good luck,” perhaps?—but what I hear instead is the sudden waft of a breeze. Could that be right? Perhaps it’s the Q-tab starting up or the blood coursing behind my ears.

My feet tap a skittish dance on the floor, a nervous paradiddle of apprehension.

But why? *There is no risk*, I keep repeating like a mantram, no risk at all. <<doNoHarm>> is inscribed on almost every page of code. We are going nowhere but inside our minds, entering the darkness to embrace the light.

Only...

No light.

Just darkness.

Total void.

And...

Still nothing. More darkness.

Fifteen seconds... twenty... twenty-five... thirty...maybe a minute... maybe two. Time collapses into fear.

Oh God, is Prospero bugging out? You can’t bug out. Don’t bug out!

All the years of supreme effort and expectations, the beautiful ideas, the obsessive worry and cerebration, the thousands of hours scribbling on my purloined paper and hunting-and-pecking on my precious typewriter, doing the math, writing the code, loading it into the Q-tab and testing the results, fixing the bugs, testing again, fixing again, over and over, until it was ready, the capacious sum of my dreams—reduced to this...what? This *nothing*...emptiness and darkness?

“Nothing equals nothing,” my father’s noxious critique of my work, floats into consciousness.

Worse, the thought emerges like a monster in a nightmare: what if we can’t get back? What if we’re *stuck forever* in our empty minds, blackness shrouding our thoughts? Worse than death, worse than hell.

Again I squeeze Runa’s hand, harder this time, frightened this time.

No response.
Nothing.
But...then...*some* thing.
A dim scene.
I blink hard, blink again.
Wait...*is it?*

I see emerging shapes like the air after a cleansing rain, as if waking from a dream: our childhood home on South Blackstone Avenue comes into focus, the block of ugly cinder block towers and half a dozen vintage six-flats and sturdy two-story red brick homes like ours. The world-famous Destopian Museum of Magic and Mystery looms two blocks east. Not just *images*—not a vague murky scene or jerky hologram or flickering diorama, but *life*: the great baggy beast, the whole whirling and whirring machinery, the thrust and thrum of reality—but *metareal*, realer than reality, like flying through clouds when a hole in the vast gauzy curtain opens to reveal a dazzling city below, bright as sunlight and clear as air!

I am standing on the porch of our home on South Ingleside Avenue. It is late in the afternoon, the sun slanting down behind the museum through the crystalline air, balmy and refreshing, back before the weather turned pestilential. Above me is the curlicued 5632 sign I had made in fourth form shop class hanging just where I remembered it below the porch light.

All seems in readiness! Yet I hang back. Why? To linger over the historic moment, yes. To take in the sweep of my childhood surroundings, certainly. To exult in Prospero's sweet triumph and my vindication, of course. But also fear. I shiver from nerves, tap a sneakered foot on the concrete porch slab, drum my fingers on the metal banister, almost afraid to let go, teetering on history.

Obey the Rules, I tell myself, stay in the moment! Because this is it, the *Tchernokovian Now* that all these years have been primed to achieve, the long-arc-ing arrow of my spacious, wasted life finally nearing its target, about to strike home.

Home!

I turn the front doorknob and step into the small foyer just inside. I pause and take a breath and register the scent profile of our house, that long-forgotten and oh-so-familiar musty sweet smell, mixed with the heavenly odor of a German chocolate cake Mom must be making. *Your favorite for my favorite*, she used to say. I am quivering with excitement, my legs trembling and wobbly so that I have to grip the front hallway table to avoid falling down—the sights, the sounds, the emotions, so real, so

deep—until I can calm myself enough to take a breath, remember to breathe!—and step into the living room.

I can hear my mother humming a favorite tune. Oh, beautiful and cherished voice, the slight rasp, the honeyed alto of her youth, now miraculously restored to me.

Curiously—for I had not anticipated it, might have expected otherwise—I feel perfectly at ease in my 12-year-old body. I look down to see the pants hiked high, feel the cap angled over my left ear, note the many twisted and multi-colored deco bands I wore on my left wrist: all the style tics and fashion fads and physical mannerisms I used to think heroic and cool and had long since forgotten, summoned into play from my unconscious mind. Good job, Prospero! Oops, banish that thought: the Second Rule!

I glance into the living room. Familiar items—the auto recliner where I'd spent afternoons reading my favorite sci-fi and fantasy books, which are lined on the shelves overhead carefully arranged by author and subject; MacGuffin's sleeping pad in the corner; and a large-screen vid monitor embedded in the wall. They all appear as real as if I could reach out and touch them. For fun I stretch up on my toes and lightly tap the doorbell chime above the door. It sounds a playful, welcoming note. Good job, Runa!

Wait! Where is she? I look around, but she's not here. Maybe she's landed upstairs or out back. Why wouldn't she have arrived on the doorstep with me? I suppose since The Dream Machine wasn't programmed to synchronize dual trippers, she could be anywhere, up in her room or maybe even down the street.

But first I must face the existential question, the paramount consideration. Having connected me with the past, can Prospero *let me interact with the people here?* This is the essence of the Dream Machine, the crux of the program, the ultimate test: full-on, synchronous, spontaneous, life-mirroring immersion. If not, my dream will have been a failure.

Only one way to find out. I screw up my courage and bellow, "Hi Mom!"

"Georgie? Is that you?"

A seismic jolt of pleasure rolls through me: Yes. YES. **YES!** I have to clap a hand to my mouth to stifle a scream of joy: Prospero works, my dream a reality!

"Yeah, Mom, I just got back." (Ha!) My childhood voice, which I had forgotten, a piping tenor, crackling slightly into baritone at the onset of adolescence.

"Where were you?"

Oops. Need a quick answer. Where did I go after school at age 12? Then I remember. “I was at Alan’s. We were playing video games.”

“Aren’t you a little old for that sort of thing?”

“Nah, never too old. I bet I’ll still be playing games when I’m a grown-up. Maybe I’ll invent ‘em!” Another joke: I’m on a roll!

“Gee, I hope not. What a waste of your talent,” she trills lightly, not really upset. “What are you up to now?”

“Uh, I dunno.”

“Then come into the kitchen and try some of this birthday cake first. Your favorite for my favorite.” I have to steel myself to avoid being knocked over by this emotional tsunami.

I step through the hallway and dining room into the kitchen, into a wonderland of forgotten childhood. There are the wall signs I had made for *her* birthday—

*Cake and Cookies
Fresh Baked Here,
Mom’s Best Cooking
Without a Peer*

and...

*Home Is Where
The Hearth Is!*



—hanging over the sink. Vid clips of Sammy and Runa and me from family vacations and music recitals and birthday parties scrolling on the monitor. The pot on the window sill I managed a year or two later to crack over Runa’s head in one of our epic fights, the little red flowers from the crown of thorns peeking eagerly out onto the backyard, overlooking the giant oak we tortured Mom with by climbing so many lazy summer afternoons. And my mother herself: still young, still vibrant, still beautiful, happily buzzing around the kitchen in her apron doing one of the things she loved best, baking for her family.

I tiptoe up and kiss her on the cheek. She looks at me wide-eyed, those hazel green eyes flecked with gray. It’s like I’m seeing her for the first time, paying minute attention to every detail—the flowered embroidery on her apron, the fashionable sprig of lilacs in her dark brown hair, the perfect ovals of her ruddy cheeks.

“Why Georgie, whatever was that for?” she says, surprised.

“Just cuz. Cuz I love you.”

As a kid I never was one to fawn—what kid does?—and this show of affection might be a mistake, a clue to her something’s amiss. But she smiles and puts her arms around me and gives me a big hug. I can feel her reassuring solidity, smell her soap-scrubbed cheeks and long-forgotten perfume. *Starry Nights*, was it called? Stay in the moment! I squeeze back.

“You’re so sweet,” she says, and turns to cut a piece from the birthday cake. “Here, try this,” she says. Like a two-year-old, I let her fork the cake into my mouth.

“Yummy, tho good,” I say, swallowing it almost whole. My emotions are welling up, I’m almost afraid to dawdle and dwell on them. “Thanks Mom, think I’ll head up to my room,” I say and wheel out of the kitchen and take the stairs two at a time before I collapse from emotion or start blabbing from excitement about time travel.

At the top of the steps, below the giant Stibel poster I’d always liked (gone with so much else at GC/Z), a lazy MacGuffin ambles over to greet me, fresh from a nap in the sunroom I’m guessing, stretching and yawning extravagantly, still a little drowsy.

“Hey sweet boy, how ya doin’?” I say, and kneel down and extend my hand for an accustomed licking. I haven’t seen our beloved mutt in—how many years? Run over a year or so later when he slipped his electronic leash and scooted out onto Blackstone Avenue. So great to see him! But MacGuffin does a strange thing: He starts backing away. “What is it boy? It’s your best buddy! You on to something?” This makes me a little uneasy. Even after 20 years Argos recognized Ulysses. Wouldn’t my own dog know me?

He continues to retreat, issuing a throaty growl.

“What is it, Guff?” The voice of my beloved older brother Sammy, coming from his room. My heart spikes. My idol, my mentor, my guide. Dead in five years from the Q2 virus. “Hey Georgie, is that you? The birthday boy? Whatcha doing to MacGuffin, getting him all riled up out there?”

I step into Sammy’s room. Another emotional torrent. There’s the Falcons poster—Reimer and Jansky and Bauer and Leigh and our favorite, Dilly “The Pocket Rocket” Davis, all five feet two and one hundred and twenty pounds of him, holding the Championship Cup at center ice. The Bolton High banner in the green and gold school colors, and the heart-shaped photo of his sweetheart Annie. His cello propped up in a corner, soon to be illegal. (Stay in the moment!) Stacks of ebooks and vids on the floor and lined up along the shelves above his desk. And there *he* is, lying on his bed, scrolling through his handheld.

“Hey,” I say shyly. The feeling is bittersweet, almost heartbreaking. I have to steady myself.

“Whaddya up to, Goof?” His pet name for me. His voice, that friendly baritone! How could the dataverse know that voice, that nickname? But of course, those are *my* memories, buried but recovered and served up by an obliging Prospero. (Stay in the moment, dammit!)

“Nothing, just been out goofing around,” and giggle, realizing I’ve just fed him the line I often used from which he derived my nickname. “Whaddya looking at?”

“Dickens,” he says. He smiles up at me and starts to recite the famous opening lines: “It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity” — he stops to take a breath, “—the year the Falcons won the cup in six and the Martyrs finally made it back to the Honey Bowl after 34 years.” I laugh so hard my laughter turns to something like hysteria—I start to cry. It’s as if my nerve endings are all lined up on my skin like toy soldiers, utterly exposed. I’m stunned how intense everything is. Maybe I should have expected it, hardened myself in advance to the overwhelming emotions I was sure to experience. But how? And in any case I couldn’t have known that everything would be so genuine, so perfect here on this maiden trip into the virtual world. After all, it’s not really real, is it? I think to reach out to touch the desk in front of me, back in my Destopian hab, to test: is it still there?

“Whatcha doing there, practicing your karate chops, Goof?” Sammy asks, but absent-mindedly, he’s already back to his book.

“Sammy, I gotta ask you something. Something serious.”

He glances up. “Serious? *You?*”

“Yeah, well kind of. Dying. You ever think about that? You know, like, what it’s like to die? What happens, where we go? Stuff like that?”

He looks at me funny. “That’s a strange question for a goofball. Why do you ask?”

“Well, you know, uhm. There’s a kid in my class, he’s got Q2. No hair, skin pale and thin as parchment, gone all frail and sad. It’s kinda hard to take, makes you wonder.”

Sammy screws up his eyes, peers at me intently and puts down his handheld. I can feel a little trail of tears glistening under my eyes, which I wipe away with a quick swipe of my sleeve, hoping he hasn’t noticed, or hasn’t wondered at the strange line of questioning, even the word “parchment” that no kid would use (how could I let *that* slip?). Is he surprised, or worried? What’s he thinking? It’s what *I’m* thinking, isn’t it? And yet I have no idea. Is Prospero freewheeling it, or going off my memories and then improvising? Of course, I wrote the program, I should

know. But some of the key elements are activated and run with AI, which operates under the hood, out of sight. It's entirely safe, the way I have it programmed, but no one is quite certain how the processing works. One thing's for sure: I know this conversation could never have actually taken place, because there was no such kid from school, and obviously I couldn't have known back then Sammy was going to die so soon.

"Nah, never think about it," he shrugs. "Figure I'll live past one hundred like Gramps. That would put me well into the next century. I'll worry about it then, maybe they'll have discovered how to live forever."

"Oh," is all I can say. If only he knew. What if I told him? What if I defied the Rules and said, "Hey Sammy, sweet brother, make the most of these next five years, they're your last." How would he respond? Probably just: "Yeah sure, Goof, how do you know? You visiting from the future?" And just laugh at me and box my ears if I told him I was. Should I try?

A robocar roars into the driveway.

"Ya better get down there," Sammy says, with a smile. "I think Dad's got a big birthday surprise for you and Runa!"

Of course I know what it is: I've thought about it, obsessed over it, even dreamt of it all these years. It's why I'm here, on this special day. I wheel out of his room and race downstairs and out the front door just as Dad is coming up the front walk.

"Hey, Georgie Porgy!" he peals, and I jump into his waiting arms. He holds me for a second, then looking distracted drops me so I crash onto the sidewalk—how embarrassing! "Where's your clin?" and shouts her name.

I dust myself off and look around. "Dunno. I haven't seen her." Maybe she'll show up, finally, at his call.

Sure enough I hear Runa's excited little trill as she comes bounding round the side of the house. She's dressed in billowy shorts with a red and green bandana tied around her head, the fashion fad her cliquy friends affected when they were that age. I had completely forgotten it.

"Daddy!"

"Sweetie! How's my bestest clin?" he asks, grabbing her under her arms and starts swinging her around in a wide circle.

What? How could he say that in front of me? This was worse than dumping me on my butt, more like a slap in the face: take that for being such a disappointment to me, for not living up to my huge expectations, for being such a chicken brain. But I was only twelve, how disappointing could I have been at that age? Evidently plenty. In any case I shouldn't have been surprised—he was always blatant about his favoritism.

Runa squeals with excitement when he lets her down so she careens dizzily around the lawn, almost crashing into me.

I look at Runa. Is she...*with me?*

Sidling up to her, I murmur, "Where *were* you?"

"Me? Just now? Backyard, climbing the tree."

I lower my eyebrows and whisper as conspiratorially as I can, while Dad heads inside, "Runa, are you with me? You know... on the trip?"

But she bolts away, skipping up to the front door alongside him.

"Daddy, whaddya got for my birthday?" she asks.

"Easy, sweetie. You'll find out," and he scoops her again into his arms. Curious. If she *were* tripping, of course she'd know. But maybe she's just faking it, the ignorance, putting on an act.

"Let's go see your mom and favorite brother," he says, planting a kiss on her forehead and wrapping an arm around her shoulders as they disappear inside the house.

I had forgotten this scene, just one in a lifelong series of slights and insults, but there it is, buried in my brain, discovered and revived inconveniently by Prospero. Our father clearly adored her, barely tolerated me. Beware: the past isn't always welcoming.

Defying the Rules, my mind reverts to a late-night "confrontation" I had with him just weeks after his mysterious death, to put to him the great question of our painfully contentious relationship.

This was one night two years after GC/Z, so bypassing the thuggish soldiers and low-flying drones and ubiquitous security cameras required some stealthy maneuvering on my part, hopping backyard fences and ducking from doorway to doorway down pitch-dark alleys. When I got to the cemetery I sluiced ten ML's of mind-enhancing hallucinogens (*Flash-in-the-Brain-Pan*, I think it was called) and clambered over the gate and approached his grave in a state of high agitation, screaming with every step, "Why? Why? Why?"

When that didn't elicit a response, I yelled even louder: "Why the hatred? The chicken brain, nothing-from-nothing derision? I hated it, didn't deserve it."

I went on like this for some time, but there was still no response, other than the answering bays of some nearby foxes or coyotes (or perhaps wolves, packs of which had somehow slipped past the security guards and through the gated walls into Destopia) objecting to my noisy presence and possibly sizing me up for a meal.

What a ridiculous waste of a night, I thought. What a ridiculous waste of a life.

That's when I heard it, a yammering from the gravesite, and turned to see something jerking up by painful degrees out of the ground. It was Dad! And not some desiccated, dirt-laden, worm-riven corpse but a much younger Dad than I'd ever known, perhaps in his twenties.

I stepped back, startled by the spectral figure, but he advanced on me rapidly and pointed an accusing finger. “What’s the matter with you?” he said. “Why aren’t you out there doing more for the denizenry, like your clin?”

I squinted in confusion, then exploded. “You have a lot of nerve, dressing me down, comparing me to Runa,” I yelled, nosing up to him. “You, who demeaned me my whole life, that whole chicken brain thing—” he sniggered, almost chuckled, “—and why, tell me: what was the reason?”

He just smirked at me, that infuriating smugness I detested, an expression he and Runa trained on me so frequently, then started to laugh.

“You’re right, whatta chicken brain,” he guffawed, even closing his eyes and leaning forward and slapping his palms on his knees. Then he looked up and wagged a finger at me and said smugly, “Nothing from nothing, that’s you.”

I couldn’t help myself. I took a swing at the faux father, but of course, his being a phantom, my fist just flew through his face like a hand swiping at a mist.

But that stopped him, his face darkened, and he reared back and threw a punch at me. I started to laugh but the expected swish was no spectral punch: it landed with a hard thwack on my cheek and knocked me over!

“What the hell!” I yelped, and jumped up and made a move on him, but he held up a hand as if to warn me, and launched into a chant:

*Earth to earth and dust to dust,
Pouring out from graven crust...*

At this a dozen more corpses popped out of the ground—I could see Granddad Sol and Grandma Viola among them—joining Dead Dad in the wretched recital, pointing their skeletal fingers and snarling:

*Earth to earth and dust to dust,
Pouring out from graven crust,
Shrieking pain and peril, rant and roar,
You have a lot to answer for!
Up for the evening, down for the count,
Georgie Porgie, time to mount.*

Such was their rant and roar that I didn’t at first hear the night watchman yell at us from a distance and approach at a trot, at which the

phantoms disappeared, or rather dissolved and rejoined in a fine sprinkle of dust the earth from which they had sprung, leaving me to wonder at the meaning of the whole episode. A lot to answer for? And mount what?

Pink tendrils of dawn were starting to spread across the gray sky. I quickly scaled the fence and jumped down the other side, managing to sprain my ankle, and limped home with little more to show for the evening than a painfully twisted foot, the jangling echo of my family's twisted past, and the certainty I would never again sluice Flash-in-the-Brain-Pan.

Gradually the ghastly memories of that awful night faded and only one lingered: the moment weeks earlier, when I heard of his passing. Mom called with the news, angry. "Why didn't you get here? He asked for you."

I explained that I couldn't take it, it would've been too painful to watch him die. What I didn't tell her was that I couldn't deal with the powerful and confused love/hate feelings and beyond that couldn't tolerate the thought of some phony deathbed reconciliation, or deal with his sudden, shocking decline over little more than a few months—from full health to skeletal wraith. How could that happen? Poisoned? Quiesced? But there was something more too, something deeper. I had always had a toxic fear of the dying moment, the *Tchernokovian Now*, the exact moment when the soul somehow eases off its fleshy casing and flies away, ceases to be, goes from existence to extinction, being to nothingness. It was, I figured, impossible to fathom, terrifying to witness. It would crush me, I was sure, into a million emotional fragments of horror and sorrow, shock and above all, mystery. How could it be?

"And anyway," I told her, "you and Runa were there with him. Four's a crowd."

That whole episode—his sudden and mysterious death, my absence and guilt, then my appearance at his gravesite and the drug-addled farce, the bevy of cosmic "why" questions—had yielded not a single answer. Maybe I could get one now, back at our childhood home, which I re-enter somewhat hesitantly after my father's revolting display of favoritism, my ardor for time travel momentarily cooled by the chilly reality of history.

Inside Mom herds us into the dining room for dinner. It's my favorite meal, an old-fashioned family recipe of slow-cooked pot roast and sweet and sour lima beans, simmered for hours in a broth of vinegar and sugar, and for dessert our favorite chocolate birthday cake. We talk excitedly about our big day. Runa is burbling like a brook about her violin lesson and her upcoming dance recital—she's *such* a prima donna—and Sammy recounts some passages from Dickens he likes and, more hesitantly, a lunchtime stroll with Annie in the Japanese garden near their

school. Maybe he's a little shy or unsure about their relationship, I wonder.

Mom mentions her afternoon piano lessons, especially one with her favorite student, working on the monumental *Hammerklavier* sonata.

"And what'd you do, Georgie Porgie?" My father's obnoxious nickname for me, which of course I hated; even Granddad and Grandma had jeered at me with it. ("Made the girls cry," Runa used to taunt.)

"Me? I, uh..." Of course, I don't know what I had done that day—what'd I tell Mom?—can't even think of something to say.

"Yes, *and*—?" he asks, looking around at the others with that obnoxious smile, that patronizing suggestion of patient paternal sufferance for his clueless chicken brain son. "We're *waiting*."

They all turn to me. Don't look! I want to hide, to duck under the piano, just like in the original dream as the nerdy seven-year-old.

"I, I—went to the Martyrs game!"

"Oh really?" Dad says, turning to the rest of the family. "Interesting. The Martyrs are playing in Havana tonight."

Everyone laughs. What a goofball, can't even lie convincingly!

I slump down in my seat. My father favors me with one of his usual demeaning bromides. "Remember son, don't be uncouth, just tell the truth!"

But Mom weighs in to save me. "Oh, Georgie was at Alan's and then helped me with the cake. He was kidding about the game. Let's go into the kitchen and sing Happy Birthday." And with her magic intercession all is forgiven, all is forgotten.

The doorbell peals and we look at each other.

"Anyone expecting anyone?" Dad asks. We all shrug. Sammy goes to open the door. It's Vänka. How can that be? Looking of course years younger, not as massive and thick-boned as later, more attractive with her long auburn hair rolled into twin pigtails extending almost down to her waist and her tanned skin barely covered by tight shorts and a man's T. But strangely wearing her odd cape, even in mid-summer.

"Sorry to intrude," she says lightly. "I was in the neighborhood, passing by on my way to Granner, thought I would poke my head in. Hope I am not interrupting anything. Just came by to say hello," she chirps in her uncontracted syntax and slightly foreign accent.

"Ah Vänka, glad you did," Dad says. He turns to us by way of introduction. "Vänka's one of my latest students," he says and smiles broadly before turning back. "So good of you to drop by. We were just about to have some birthday cake for the clins. Twelve years old today. Won't you join us?"

And for a moment I feel utterly confused and let down—whether the twelve-year-old George or the tripping adult George, or both, I can't tell. Of all people: Vänka!

But she stays only a few minutes, long enough to exchange pleasantries—lovely stretch of weather, school year winding down, summer vacation plans, but also increasing concerns about social unrest, most recently the police attacks on protesting civilians which led to a 36-hour riot downtown that had spread to many neighborhoods and only just been put down. “But I am sure it will blow over,” she says and waves her hand as if to whisk the troubles away before taking a couple of bites of cake and excusing herself.

Dad closes the door behind her. He and Mom exchange anxious looks. What did that mean? Maybe for Prospero's next iteration, Dream Machine 1.2, I'll program it to pick up people's thoughts, like giant bubbles streaming above their heads. The Authority would love that.

As if to change subjects, Dad launches into a story about several of his university colleagues, all enthusiastic amateur musicians, who meet once every few weeks in one of the music school practice rooms to play string quartets.

“This afternoon we stumbled through a late Beethoven quartet, Opus 135,” he says, reseating himself at the dining room table. “It was the last piece he ever composed. And the last movement had a puzzle in it, like a code, which we couldn't figure out. I thought maybe one of you kids might have an idea.”

I perk up. I like puzzles, am good at them. Maybe I can show off, for a change. But a code hidden in music?

“There's a heading at the start of the fourth movement, *Der Schwer Gefasste Entschluss* in the original German, which translates as ‘The Difficult Decision.’ What could that mean? The movement opens with a solemn three-measure phrase in F minor, titled, mysteriously, *Muss es sein?* ‘Must it be?’ Just three notes played by the viola and cello, very slow and low and eerie, like a snake slithering through grass.” He hums the ominous phrase and floats his hand serpent-like over the table. “This is answered by another three-measure phrase, equally mysterious, which grows louder and concludes with five big fat chords marked *sforzando* and played emphatically like bombs: bang-bang-bang-bang-bang.” He slams his palms on the table so hard the dishes shake, as do we. Even MacGuffin looks up alarmed from his corner sleeping pad.

Dad pauses to smile. “Must it be?”

After a moment Runa asks, “What *must* be? What's he talking about?”

“Good question, sweetie. We don’t know,” he responds. “What *is* Beethoven saying here? And the mystery deepens. The music abruptly shifts to F major, a bright, happy key. The heading changes too. It reads, *Es muss sein! Es muss sein!* ‘It must be! It must be!’ The music frolics through a long and playful section, like squirrels chasing around a tree. *Except...*” and he sticks out a finger and pauses for emphasis, “near the end the same frightful F minor passage returns, just as ominous as before. Then the major key theme resumes and like that,” he snaps his fingers, “the quartet is over. Done, before you know it.”

He looks around again, a sly smile on his face. “This is Beethoven speaking, maybe the greatest artist of all time, in the last of his sixteen string quartets. So we have to ask ourselves: What was he saying—back in 1826 to his contemporaries, and to us here in the future? *What* was the difficult decision? What is it that *must be*? Was it some kind of personal statement, or a curious benediction maybe, or some kind of corny joke? Maybe a reflection on life and death, the decision to let go and die in the face of chronic suffering or incurable disease. Or maybe a peek at the future—perhaps *our* future, as if he could see it coming.”

Silence descends like low fog as we contemplate this strange future that Beethoven foresaw, the incipient disorder that swirls across the country manifested in the street fights, the rioting, the sporadic outages and ongoing collapse of civil authority.

“Someone set off a smoke bomb in school today,” Sammy says, staring at his lap.

“What?” my mother and father cry out.

“And tried to burn some books in the school library.”

“Who?” Mom asks, alarm spreading across her face.

“Neo-Fascists. Neos, they call themselves. ‘First we burn books, then we burn people.’ That’s their slogan, that’s what they chanted. Before the guards chased them off and put out the fire. No harm done, one of them assured us.” He laughs bitterly.

Everyone else looks around the room, at each other, mouths in perfect ovals of astonishment.

“Funny because it sort of goes along with Beethoven’s difficult decision,” Sammy continues. “Accept the dark forces or resist? It was the theme of the exhibit our class saw last week at the museum, *Art Destroys Silence*, something the Russian composer Shostakovich said about life under Stalin. You could hear it in his music, the Fifth Symphony, the Eighth Quartet. ‘Art as truth, art as memory, art as redemption, artists as provocateurs and flame throwers and bomb makers,’ the vid said. All of it coded of course, in the music, because he couldn’t speak out.”

“Why not? Why couldn’t he?” Runa asks, the same question that has occurred *clin-like* to me. Stalin’s Russia? That was ancient history to us.

“Speaking out was a one-way ticket to the gulag, or a KGB bullet in your brain,” Sammy answers. “Shostakovich kept a suitcase packed and ready. That way, if the police came in the middle of the night, he had his toothbrush and pajamas. They said he was this close,” he held up two fingers pinned together, “to arrest.”

“Coded music?” I ask. “What does that mean?”

“Listen to it, it’s all there—pain, suffering, endurance—just under the surface. They played us the Largo from the Fifth Symphony. The audience at the premiere wept at the tragedy of it. It’s a wonder he *wasn’t* arrested.”

“Not just Shostakovich,” Dad interjects, “but a whole gallery of artists—poets and painters and writers—artists who took up the cause of freedom against oppression, who weren’t afraid to tell the truth: Picasso, Tolstoy, Verdi, Goya, Brueghel, Beethoven of course, our own Herbert and Marsh, in a straight line right back to the cave painters who laid the foundation for abstract thinking and advanced civilization. All of them were our guides and heroes.”

“But bombs and book burnings?” Mom asks, fingernails tapping. “The school should have told us. Maybe you shouldn’t be going.”

“No, it’s OK, Mom,” he says. “They’ve added more security. And I need to be there with my friends. And to protect Annie if it comes to that.”

Despite Rule 2, I can’t help but reflect on this grim conversation. At twelve years old I wasn’t aware of much other than hanging out with my pals, playing keyboards in our school band, and following the Martyrs and Falcons. Dangerous times? I was oblivious, or maybe content to put all that dark stuff out of my mind. Runa used to say I’d forget my name if it wasn’t sewn into my clothes.

“But enough of this talk,” Dad says and claps his hands to strike us out of our grim reveries. “Let’s celebrate your birthdays!”

The mood changes like the sun emerging from a string of low clouds. We’re shooed outside to view our birthday present. It’s the moment I’ve long awaited, the reason I’ve programmed us to be here.

In a corner of the garage, covered by a tarp which Dad ceremoniously whips off, are three 40/80s, the latest jet bikes (unbelievably dangerous, soon banished), two wheelers with mag-lev motors that can reach forty kilometers an hour and levitate eighty meters off the ground.

“Whaddya think, kids?” Dad says cheerily.

Of course we are beside ourselves with excitement, every kid has heard of them. But few of these bikes have been produced, as yet.

“They’re prototypes, borrowed ’em from the university lab,” Dad says. His smile is as wide as I’ve ever seen, he’s practically levitating himself. “I bet there aren’t two dozen in the country—maybe the whole world!”

“Oh Daddy, can we try them?” Runa says, and does a cartwheel on the lawn. Just at this moment I can’t stand her, even if she is my tripmate.

Mom makes a fuss about our safety but it’s clear Dad has this planned out. “Now, it’s all right, Trish. They’re perfectly safe. Sammy will go with them—OK Sammy?—and you kids have to stay close to home. Nothing crazy like jetting downtown, just stick to the neighborhood. Rides just like your regular jet bikes, except it levitates too!” he says with a cackle. “No one’s ever seen anything like this, you’ll stop traffic!”

The directions are simple: spin the pedals for speed, rotate the handlebars for altitude. The small electromagnetic motor in the rear tire rim provides power, the gyroscope under the seat maintains balance. We mount our bikes, squealing with pleasure and a delicious pang of terror, too, and ease down on the controls and lift off from the sidewalk as easily as if we were feeding kites to a breeze.

Across the street two boys I know, Pillage and Plunder, I call them, looking amazed and envious, point at us. “Whoa, lookit Georgie!” Plunder yells and they run over, but I ignore them, getting my bearings, adjusting to the strange sensation and intense thrill of levitation.

Waving goodbye we head south on Blackstone Avenue and east on 57th Street as the bikes pick up speed and altitude, sailing over the museum. Heads are turning all around. There is still plenty of light—it’s the longest day of the year, and it’s barely past seven, so traffic hasn’t let up as we float over the long line of robocars heading south along the Drive. Some people honk, some lower their windows and point. “Hey,” someone yells, “look at those darn kids!”

Then we’re at the beach, flying above the trees and turning out to the lake. A faint gibbous moon hangs over us like a lantern. A few sailboats roll gently northbound, and a police patrol boat motors by, and they all look up and wave and yell, but we can’t hear them, we’re flying further out, the wind in our faces, the sun at our backs, the three of us side by side, swooping down to skim the water and scooting back up, buzzing sailboats, shouting inanities, basking in the memorable thrill of flying, the thrilling intensity of this very moment. The Tchernikovian Now has never been so real! We float like gulls above the lake, above life’s

mundane concerns, old gravity far beneath us and well beyond its dull grip.

“Shall we try for the Dunes?” Sammy yells. “Dad didn’t say anything about that. Just head this way,” and he banks right, pointing us southeast.

“Yes, yes!” we scream.

We glide leisurely above the steel mills and industrial corridors and within minutes approach the famous Dunes, their peaks sparkling mauve from the setting sun. We can make out a few people clambering to the top and then leaping and tumbling back down, shrieking with laughter.

Suddenly, as if the sun has sunk out of sight, the lights dim, the chuffing sound of blood courses again through my ears, and our first trip is over.

One hour.

I kicked open the closet door. Light and happiness flood in.

“Runa, were you there?” I shouted. “We did it! It works! It was beautiful! We saw Mom and Dad and Sammy and even MacGuffin! And the 40/80s! It was fantastic!”

“Georgie, of course I was there, it was incredible, terrific,” Runa shouted back and hugged me.

We held hands like square dancers and skipped out of the closet and around the room in excitement—tripping over dirty clothes and kicking up piles of paper like confetti, to hell with the documents!—and jumped on the couch and bounced up and down yawping gleeful nonsense like little kids. The commotion shook Photon Synthesis out of his usual torpor and with a yowl he leapt from the rocker to one of the shelves, the one with the bust of Beethoven, bumping it, so it tottered, poised to smash all creation, like the beginning of the Fifth Symphony, before settling serenely back on its pedestal, where Beethoven belonged.

We serenaded each other with accolades.

“It was unbelievable!”

“Wonderful!”

“Awesome”

“Thrilling!”

“Brilliant!”

“Historic!”

“So wonderful to be with them.”

“All so happy and healthy.”

“Dad and Sammy and MacGuffin still alive.”

“Mom so young and sweet.”

“And the 40/80s, weren’t they fantastic?”

“What? The 40/80s?” she said, dropping my hands and staring at me.

“Yes, of course. You said you were there...?”

“That wasn’t *my* trip,” she said. Her face winched tight; I thought she might burst into tears.

I was stunned. Not the same trip? I could barely comprehend it.

We stepped down off the couch and sat down, holding hands in commiseration and looked at each other, the same look of astonishment and disappointment.

“I mean Dad came home and after dinner handed out our birthday presents,” she said. “I got the new violin, you got the synth clavier, that one.” She pointed at the keyboard, which two years later at GC/Z was deemed illegal but I had managed—barely—to squirrel away beneath my closet floorboard. I still played on it every day. Propped up on the stand was the score to a late Beethoven piano sonata, Opus 109, the one that had set my world aglow.

“Our neighbors the Sadlers came for dinner,” she said. “Afterward we played a Beethoven duet, the *Kreutzer*, our favorite, remember? Dad said we sounded great, that you could hear Beethoven’s genius, how his music shone a light to help free the future.”

“*Free the future?* What did *that* mean?”

“Dunno,” she shrugged. “You were there, don’t you remember?”

“Hell no! That wasn’t *my* trip. Dad gave us the 40/80 jet bikes. We flew with Sammy over the lake and almost made it to the Dunes before we timed out. Don’t *you* remember?”

Something was badly off.

“And another thing that was odd,” I added. “Vänka came by during our birthday dinner. Remember that?”

“No, but I can believe it. She was one of Dad’s protégés.”

“Really?” I said, puzzled and even a little shocked. “You knew that? How come I didn’t know that?” Anxiety tightened like a cramp in my stomach.

“I don’t know, George,” Runa said. “You were always pretty oblivious as a kid. Still are.”

“But Vänka and Dad? They didn’t even work in the same field.”

Runa got up and walked around the room, pausing to square up some of the piles that had been knocked askew, like the trip itself.

“Actually, they did...work in the same field,” she said, her back to me, continuing to straighten. “Her research in nanospectrum optics required advanced Q physics. That’s why she approached Dad in the first place. That and the fact she was an émigré, fleeing the Old Land as a kid, escaping the Russo invasion. He felt sorry for her and took her in. And as a biogeneticist, she was intrigued by our clinicity. They had banned clins by then, so we were like exhibit A on some museum shelf.”

“He took her on? Why?” I squinted in confusion. “They would have been like oil and water.”

Runa sat down on the couch next to me and stared at the back of her hands. “I asked him about that once. He said Vänka was a prize student, brilliant and ambitious. He felt she could make a contribution to his work and as her mentor it would reflect well on him.”

Strange.

I looked at Runa’s hands. There was something mesmerizing and mysterious there, life pulsing through the flesh, thick bluish veins roping and swirling in serpentine patterns like some vast network of roads. I looked at mine: same veins, same roads.

“We’re getting old, Clin,” I sighed. “This business with Vänka and Dad...it’s a shock to the aging system.”

“Yeah, but so what?” she said, shrugging. That part was obviously of no interest to her.

“It’s worrisome, these anomalies. Vänka there, on the trip. You not there, on the trip.”

“Yes, about my absence, I think I know why,” she said, firmly back on topic. “We weren’t on the same wavelength.”

“We weren’t? On the same—”

“Literally. The trips were being processed and neuroprojected by two different brains, yours and mine.”

“Of course. But it’s not like two different things happened on our twelfth birthday. Either we got the 40/80 mag-lev bikes or we got the musical instruments. It couldn’t be both.”

“Actually, it *was* both,” Runa said, smiling. “It’s just that one of us messed up the date.”

“Messed up the date?” I was reduced to repeating her statements like an idiot.

“Yup.” She leaned in and patted my hand with both of hers, like she would sometimes do when I started getting hysterical as a kid.

“Let’s assume you were right,” she said, pat pat patting. “We got the jet bikes on our twelfth birthday. We got the violin and keyboard the next year, on our thirteenth birthday. But I made a mistake. I *thought* we got the instruments on our twelfth birthday.”

“So? So what?” I protested. “You can’t just imagine a thing taking place and—*presto!*—” I pulled my hand from hers and swept it over my head, where none of this made any sense, “—it happens. Either it did or it didn’t. You can no more change the facts of history than you can change the number of planets.”

She laughed. “They *have* changed the number of planets, Goofball. Remember Pluto? As far as the brain is concerned, everything’s up for grabs, even the solar system.”

This was ridiculous.

“The mind isn’t objective, like you think history is,” she said *Runapedantically*. “Perception counts as much as reality, sometimes more, it colors and affects reality. *Mind jurisdiction*, it’s called. A lot of stuff we think happens to us in the so-called objective outside world is made up, the brain confabulating to fill in the gaps in our understanding and experience, hallucinating what we think of as reality, like a weird stage play, like imagining alien spaceships from hazy shapes in the sky.”

I started to object but she cut me off.

“In this case,” she continued, the palm of her facing out at me, “we went back to what we *thought* was the right birthday, you to the 40/80s and me to the *Kreutzer* recital. Simple as that.” She snapped her fingers and sat back and crossed her arms. Case closed.

“But it’s not right!” I said, exasperated. I couldn’t unstick my thinking around the trickery of it. Treacherous mind.

“Oh, but it *is* right, little Clin. It’s like the old saying in brain science: *Neurons that fire together, wire together*. The brain overrides memory, it overrides history, it even overrides reality. The past to our minds is always alive. We reinvent it all the time.”

I closed my eyes and let out a long sigh of exasperation. That didn’t sound right, but I couldn’t think of a better explanation. She was the brilliant neuroscientist. Who else would know better? Not me.

Still, it was deeply troubling: It overturned the basic premise of my program: to observe and replay reality, based on our collective and personal memory bank. Now Runa was saying there was no objective bank to draw from. Or rather, there were billions, everyone on the planet. But that couldn’t be right: The past might be subjective to us now, confusing and shifting, as she said, but when it happened it was objective, inscribed in history like words on a page, solid as rock and unalterable as the universe. It *had* to be. Either things were the way they were or they were fiction. And while fiction is a kind of dream, it wasn’t the kind of dream I was pursuing. I couldn’t accept life as a lie.

But Runa was more sanguine. “Look at it this way: there *is* no objective reality,” she said, scrunching her eyes and mouth and shaking her head like it was the darndest thing. “That’s what relativity is about: I see you from *my* perspective; you see me from *yours*. Very different. We comprehend the universe from separate silos, separate nervous systems and brains. Kids figure that out around age three, *Theory of Mind*. Maybe in our next life we’ll all share a single consciousness, like those giant fungi fields out west. That would be cool. But meanwhile we’re each our own cauliflower on a cornstalk.”

I blinked at the weird metaphor. “And I suppose every cauliflower is different.”

Runa shrugged.

I rose from the couch and crossed to the window. The sleet had turned back to snow, which blasted down like a polar blizzard making bizarre reflections off the vapor lights. Was everyone in their Ingleside habs seeing the same scene? I supposed Runa was right: every observer had a different view, the unique windows of our eyes and souls. We were all alone in the universe with our singular consciousness, stuck in the Tchernikovian present, racing further from the past into an unknown future at the speed of time, like the universe itself. A frightening thought, one I had hoped The Dream Machine would help dispel.

I turned back to her. "That's one reason the program was designed for one person: one vision, one experience. I can see this tandem tripping idea of yours isn't going to work."

"Ah, but you're wrong, little Clin. It *can* work," she said, joining me at the window and sliding her arm around my shoulders. "There *is* something close to objective reality. No one is *truly* alone. Look at the street: We both see the same things," she said pointing to the spooky Moore sculpture denoting humanity's first successful atomic fusion. "The same monument, the same light posts, the same soldiers, the same snowstorm, even if our perspective is slightly different. Close one eye and then the other and even your own perception is slightly different. That's just life!"

I had to smile. Runa: ever resourceful, ever the problem-solver. "So, what do you propose, famed scientist and ABH clin?"

"Simple." She turned to me, and there was that momentary sense of disorientation, of looking in a mirror. "On our next trip we should visit someone hugely famous, about whom there's overwhelming historic and objective information," she said in earnest. "At a time and place in history when we know that person is there. That way there's no confusing the destination."

"Hmm, maybe." I smiled. "Maybe we *do* go see Oswald at the Texas Book Depository. 11/22/63. Get to the bottom of it. Was someone with him or not?"

"Ha, I don't think so, that wouldn't be much fun. And anyway, we'd be tempted to violate your Third Rule and save Kennedy. Which wouldn't work."

"OK," I offered, "how about we go back to GC/Z. Find out exactly what happened, who triggered the implosions that brought down Old Glory."

"*The Day Democracy Died?* No thanks," she answered, and closed her eyes and started to laugh. "No, I've got a *brilliant* idea!"

"What do you propose?" I asked, a little nervous. A lifetime as Runa's clin had taught me to be wary of her brilliant ideas.

"I propose we go see someone we both revere."

All I could think of was the Pocket Rocket, the Falcons' scrappy star center Dilly Davis. "Who do you have in mind?"

She opened her eyes dreamily and pointed to the bust on the shelf.
Nestled by a sleeping Photon, Beethoven cast his fiery gaze down upon us.

iv.

There is a reason Special Announcements open with those four notes. They send a stark message. They tell the rebels we will crush them, like boots stomping ants, like fists smashing bugs, like bodies rendered to ash and dust.

I hear them now, the notes ringing out furious and terrible, tombstones bursting into song: You time has come. Your life is done.

V. Beethoven

15:44, 7/Martial

We are standing across the street from the *Schwarzspanierhaus*, the house of the black-robed Spaniards, once the home of Benedictine monks, now the domicile of Vienna's most famous citizen. It is a rainy Monday afternoon on the seventh of August 1826, a date I've picked because I know he is not yet too ill to receive visitors, but at this point sufficiently infirm, especially given the inclement weather, to be home and not prowling the woods outside Vienna as he once loved to do, howling off-key tunes in his deafness and stamping rhythms and swinging his arms to keep time and marking up his famous sketchbooks with musical ideas, in the process frightening little children and farm animals and sometimes being taken for an idiot by local boys who would yell and throw stones at him, or as a vagrant by the local police, who once arrested and held him overnight, laughing at his absurd claim to be the famous Beethoven.

There is another, more prosaic, reason to pick this date.

Across from us two workmen astride a wagon are wrestling with a large crate inside which is the famous Broadwood fortepiano (serial number 7362), his favorite, a gift years earlier from the London Philharmonic Society. It has been restored at an instrument shop across town and is being moved to the second floor next to the master's trusted Graf. He has been eager to get it back and I am certain he will be home to receive it.

Runa, in a long beige dress with short puffy sleeves, covered partly by a black shawl, is at my side. Her long hair is piled up in a fashionable bun. She has on a bonnet and long gloves, pulled up almost to her elbows. I am dressed in a long gray frock waistcoat, two-tone button-up boots and absurdly striped trousers. But Prospero knows this is the style—the other well-dressed Viennese are similarly trussed and trousered as they stride along the fashionable Alservorstadt district, across from Beethoven's building.

The steady rain casts a sparkling sheen like a silver-threaded web along the amber-tinted three-story buildings. At the corner is a church, and just blocks away the famous Prater, the centuries-old park.

Despite the Rules I can't help but compare the beauty and liveliness of Old Vienna with the dark weather and darker outlook of present-day Destopia, with its physical and virtual soldiers and deadly drones on constant patrol, where venturing outside can mean facing a

gauntlet of indignities or worse and the Big Six passes for entertainment and lies pass for truth. I shake my head to banish the forbidden thoughts.

Still they come, unbidden. Thoughts—such uncontrollable creatures, such wayward children. I can't stop thinking how sweet it was to have returned to the pre-Destopian home of our youth. How wonderful it would be to guide dens back to experience first-hand the satisfaction of our blessed and inalienable freedoms, the joy of earlier times, and the thrill of meeting our beloved heroes. Such as now!

Turning to Runa, I whisper, "Are you ready?"

This time, thankfully, there has been no problem with synchronicity. We have landed together, same time, same place, same dreamscape. Instead, as we discover, the problem is access. We have searched our pockets but there is no letter of introduction, as would be proper for such a meeting—a surprising oversight by Prospero. So we will have to bluff our way in to see him, and Beethoven is notoriously churlish about uninvited guests.

We make our way across the muddy street, stopping to let several carriages roll past followed by a crack regiment of Metternich's soldiers in crisp lockstep, then approach and give a few sharp raps with the knocker on the large wooden door of Schwarzspanierstrasse 15. After a minute a short stout woman answers. She has a wrinkled, welcoming face.

"Is the maestro at home?" Runa asks politely.

"He is busy now. Always busy," she says, rolling her eyes and smiling. I smile too. Prospero's translation function has passed its first test, rendering her lilting Viennese German into a lightly accented but perfectly comprehensible English.

"Can we see him?" Runa asks. "Tell him please it is urgent. Tell him we are from America. We are here to interview him."

"America, really? Such a long way off. Wait one minute. I will ask," she says.

The woman disappears around a landing. We can hear the floorboards creak and her shoes click as she mounts the stairs to the second floor. We wait, too nervous to speak.

I close my eyes to let the transcendence of the moment wash over me. I can hear the rain pinging off the cobbled street, and in some distant apartment a harpsichord playing a dainty sonata (by Clementi?).

Runa taps her boot in time with the sonata, but when the piece ends she continues to tap. "What if he's busy?" she whispers. "What if he's ill? What if he's out of sorts? What if he's sleeping? What if he's—"

"We'll come back," I cut her off. "We can always come back."

“Yes, but there’s another problem,” she says, leaning over to me. “On our first trip we went home. We saw Mom and Dad and Sammy, we had amazing experiences—even if they weren’t the same.”

She pauses while a carriage loudly trundles by.

“That’s why we’re here,” I reply, a little peeved. How transcendent can it be to argue such petty details at a time like this? “So we’d have the *same* experience.”

“No, that’s not what I mean,” she says, looking down at her boots, still tapping. “What I mean is, everyone can remember their childhood homes, family mealtimes and memories, hanging out with old friends, classroom lessons, school playgrounds and games.”

Another pause. I don’t get it, her concern.

“So?”

“So, Destopia is far removed from 19th century Vienna. This is the *real* test, isn’t it? The first *far away* trip.”

“We’re here, aren’t we?” I say, nodding at the door and back at the lively scene behind us. But her anxiety is palpable. To distract her I reprise a game we played as kids, guessing our thoughts, testing our *clinness*.

“Hey Clinny Clinny, what’s the skinny, what am I thinking this very minny?” I ask her. That’s what we used to say.

She looks at me, then up at the apartment building where we hope to meet the master.

“Hey Clinny Clinny, that’s a gimme,” she replies with a big smile. “Let’s give it a whirl, let’s give it a spinny.” We used to say that too.

I look at her expectantly, eyebrows raised.

“Opus 109?” she guesses.

I laugh and nod.

“Of course,” she says, smiling.

It was, after all, momentous, when a door opened on a bright new world, a world of excitement and wonder, and I strode right in.

One night years ago, sometime after the Authority had taken over, Runa stopped by my hab and plopped an old-fashioned score down on my synth piano.

“What’s this?”

“Just take a look. I think you’ll like it,” she said.

I did as she commanded, as usual, sitting down on the piano bench. The title page read:

L. Van Beethoven
Piano Sonata No. 30
Opus 109

“Where’d you get this?” I asked. “It’s illegal, you know.”

“So’s your keyboard. I won’t tell if you don’t tell.”

Above the staff, in a florid cursive script, was: “Dedicated to Maximiliana Brentano.”

I turned to Runa. “Who’s she?”

“She was the daughter of Beethoven’s famous Immortal Beloved, Antonie Brentano—he called her Tonie. But he could never marry Tonie.”

“How come?”

“She was already married.”

That seemed quaint.

I looked at the opening. Sonata No. 30, the third-to-last in his lifelong exploration of the solo piano repertoire. Four sharps: the sunny key of E Major. *Vivace, ma non troppo*: lively, but not too. A hundred and twelve quarter-note beats per minute, a brisk but not frantic tempo. *Sempre legato*: always smooth. *Dolce, calmo*: Sweet, relaxed.

30. *Vivace, ma non troppo* ♩=112
sempre legato

p dolce, calmo

cresc.

poco rit.

Adagio espressivo ♩=72
appassionato, rubato

p *f* *p subito* *f* *p subito* *p subito*

I can play this, I thought, and gingerly ventured forth. The opening four measures were pleasant, joyful, almost jaunty. Ascending thirds and descending fourths in the right hand and octaves and fifths in the left gave the music a lilting quality, like a rowboat bobbing in soft waves. In the fifth measure the notes started to rise higher, grow louder, push faster, the delicacy overtaken by something more urgent and insistent.

Then, in measure ten the music swept to a pause, switched to three-four time, marked *Adagio espressivo, appassionato, rubato*: slow, expressive, and passionate, sounding a little improvised, announced with a loud roll of an unexpected B-sharp diminished seventh chord, a long, relaxed breath, a slight pause or hesitation, like a reconsideration, of longing or regret, perhaps, before starting over with the opening theme, this time in B major.

All in just fifteen measures, the time it takes to pour a cup of coffee or say a little prayer.

I paused and looked at Runa in wonder and shook my head. She smiled and nodded.

I continued. The opening pattern returned with the same stepwise arpeggiated intervals, quicker and louder, the bass line more pronounced, more urgent, then pausing again, as if ascending a hill and stopping to view the distant peaks, dying back again, a long sigh, before going on.

The music suggested sweet contemplation, a quiet walk in an alpine valley flooded with wildflowers—a vision of heaven—but then suddenly whipped upward in ascending phrases, ringing in temporal beauty so intense that one would never want to leave, to say goodbye—to family, to friends, to life—the music rolling on, richer in texture, shedding notes like a waterfall, tones glistening, then descending, a time machine of mysterious and exquisite dimensions carrying the listener from this moment to the next on a flood of magnificent and profound longing, for a better world, and thankfulness, for this one, until, at the end, it transported us yearning and searching back to the beginning, now triumphant, now poignant, and then a sadly foreordained final chord of wistful summing up.

I let the pedal notes hang in the air, like a wisp of April lilacs or the fragrance of a departing lover. When the movement's last overtones had faded, I glanced at the time. Less than four minutes from start to finish. Just ninety-nine measures, a miracle of concision and expansion, like peeking through a keyhole at a vast spinning universe, infinite and unknowable yet minutely observed, a shaft of sunlight illuminating the countless lazy motes and molecules of a vast dusty room. It was God's lens, large and small.

My cheeks flushed red. Whether owing to my pitiable circumstances—the cramped and tawdry hab, the childhood insecurities and adult failures, the unrealized dream of Orkestrate and the as-yet unfulfilled vision of The Dream Machine—measured against the incomparable beauty and depthless spirituality of the music, not to speak of the vastly superior achievements of my famous father and clin, I turned my face away and blinked back tears.

When I regained my composure I looked up at Runa, who seemed not to notice, or had considerately looked away. “My God, how did he do that?”

“Yes, how did he?” she said smiling.

A strange and thrilling tingle of anticipation ran through me, sitting on the piano bench that evening, a sense of untold discoveries lying ahead. Here was a vast garden of Beethoven’s music, rich with color and fragrance, dizzying in its delights and possibilities, close at hand and yet unknown to me.

Of course I had heard the symphonies, who hadn’t? Even the Authority couldn’t entirely ban Beethoven, and had appropriated the opening four-note motif of the Fifth Symphony for its Special Announcements. But the more intimate music, the chamber music, was *terra incognita*, and it was here, in the many string quartets and piano sonatas, that Beethoven could shed his heroic, fist-waving pose and reveal his deepest and most intimate feelings—the terror at approaching deafness, the sadness of inevitable loneliness, and yet the powerful spiritual renewal and redemption of his timeless art.

Impulsively I dropped everything—friends, family, work—to embrace the master. I called it my *BODI* phase, Beethoven Obsessive Disorder Interval, and like a *bodhisattva* decided I was advancing to the next stage of my spiritual journey—through his music.

I spent hundreds of hours finding (in obscure nooks and hidden corners of the dataverse) and learning the thirty-two piano sonatas as well as piano reductions of the sixteen string quartets, the nine symphonies, the Mass in C major and the Missa Solemnis, plus the song cycles and even Beethoven’s sole opera, *Fidelio*, singing the arias late into the night, sometimes losing track of meals, sleep, time itself.

I became mesmerized by another piano sonata, Opus 111, written two years after 109. It was the last of the thirty-two sonatas, but instead of some lengthy revelation or cosmic summing-up, 111 was a mere two movements. The first was headstrong and majestic, but it was the second, the famed *Arrieta*, a set of variations in the obscure time signatures of 9/16 and 6/16, mysterious and other-worldly, that gripped me with a terrible force.

Studying and playing the *Arrieta* I became convinced it contained some secret code, particularly the third variation with its strangely compelling syncopations. I spent weeks working up a theory that Beethoven was coding a message to the future. After all, hadn't Shostakovich, disguising his anti-authoritarian feelings from Stalin's censors more than a century later, done the same thing? And even Bach coded his name into *The Art of Fugue* and some other works.

In the end I managed to reduce the *Arrieta*'s code to a simple couplet:

*Art must do its part
To smash the state apart.*

What did it mean? At first I took it for a koan, impenetrable and mysterious. But one afternoon as I was practicing the piece I heard some shrieks just down the hallway and cautiously peaked out. An elderly neighbor was being terrorized by drones, easily evading his pathetic attempts to swipe them away. At that moment the *Arrieta*'s message became clear: despite its suppression, creativity could spark a rebellion to overthrow the Destopian horrors of our time—such as this one. No one had figured this out before, I guessed. Beethoven was speaking directly to me!

But even in my delusional state I suspected the “code” I had cracked was merely the product of a fast-fading intelligence. It was, I realized, my *mind* that had cracked. Clearly I was unraveling.

I lost weight, my skin and clothes sagged, my gums began to bleed. Runa said with disgust I was starting to “decompose” and sent a shrink and a physician to see me. I wouldn't let them in. She begged me to give up my *BODI* phase. I wouldn't, couldn't.

In the end two things saved me. The first was physical: my fingertips began to shed skin and bleed from the hours of obsessive practice. I would wipe them off and resume with synthetic skin salve, until it peeled off and they bled again. At first I couldn't help it and didn't care. Bloody keys notwithstanding, playing the notes and absorbing their essence had become as necessary as peeing or breathing.

I began to notice with a kind of fascinated horror that my fingerprints had started to wear off, as if sandpapered, ridges and loops and whorls abraded into mushy pulp like the featureless gray skin of a seal. It was time to take a break.

But what finally stopped me for good—not so much the obsession but the time devoted to it—was a deep and curious connection that sent me back to the nascent dream of *The Dream Machine*.

With Liz's help I had managed to get a precious online pass to remote into the websites devoted to the master's life. One evening, scrolling through the Beethoven Museum's library, I happened on the letter he wrote in December 1821 to Maximiliana Brentano, the dedicatee of Opus 109.

It read in part:

This dedication is made in the spirit that unites the noble and finer people of this Earth, and which time can never destroy. It is the spirit which now speaks to you, and which calls to mind and makes me see you still as a child, and likewise, your beloved parents.

There it was. More than just a simple declaration of affection, it was a poignant and bittersweet glance back at what might have been: the domestic happiness and blissful love that Beethoven forever sought but could never find and finally, regretfully, had given up in order to serve his art more faithfully. Seen in that light, Opus 109 was both an apt complement to my own disappointing life and creative aspirations, and, like our trip back to our childhood home, Beethoven's own nostalgic Dream Machine to a happier past.

Now, waiting at his doorstep, I ask again: "How did he do it?" and recalling that magic moment, Runa repeats, "Yes, how did he?" adding, with a smile, "We're about to find out."

The servant reappears. "Come," she beckons.

I look at Runa. The moment is now!

"I can't believe it," she says, a smile quivering on her lips. "You've done it!"

"No," I say, flushing with excitement and anticipation. "We've done it."

We follow the woman up the stairs to the apartment door front, where she asks us to wait.

From inside I hear voices. A small anteroom off to the side is piled high with books and manuscripts and scores scattered on the floor. An array of overcoats hangs on a tree rack and thrown over a divan in the corner.

The woman reappears and crooks a finger to follow her. We pass into a large salon. Several men and a woman are seated on a large couch. The men rise to acknowledge us, staring at Runa.

At a writing desk facing the others is a lone figure, dressed in a dark coat, gray pants, slippered feet. His head is down, black-rimmed spectacles perched on the tip of his nose, scribbling with a thick-nibbed pen on music paper. From the size of the pages and number of staves I

guess that it's an orchestra score. He pauses, takes a sip from a glass of wine at his side, dips his pen in an ink bottle, and is ready to continue. But sensing our presence, he looks up.

It is the master!

Who wouldn't recognize the man whose likeness is painted on countless portraits, chiseled on countless statues, molded on countless busts, like the one in my room, as iconic in appearance as in his music? There is the famous hair, now flecked with gray but as always wild and swept back from the low brow, the flattened nose, the thin lips, the high cheekbones, the intense brown eyes.

And yet he looks somehow...*different*. *This* Beethoven, the one in front of us—the *real* Beethoven as remembered not from heroic myth or a handful of portraits but summoned from history and captured in the dataverse by Prospero—is swarthy, almost mulatto in complexion. It is rumored that he is of African or even Sephardic blood. Some call him, not to his face, the Moor or the Converso. His cheeks are pockmarked from childhood smallpox. He is thick-set, with a large head, a high and broad forehead, a cleft chin.

“You are here from America, Sali tells us? We have never met any Americans,” he says, nodding at the others.

He speaks in a firm baritone, slightly inflected. He is, after all, from Germany, a somber Rhinelander, alien in accent and spirit from the light-hearted, opera-loving, waltz-crazed Viennese.

An embarrassed silence descends on the room. Neither Runa nor I can manage a sound. We are mute, frozen with awe and terror to be in the great man's presence. We keep staring at him, holding our breath, until he repeats the question, then hands us a writing pad and quill pen. Because of his hearing impairment, visitors must write down their statements in one of several conversation books scattered around the room, then repeat the inscriptions for the benefit of the others.

“Yes, Boston,” I scribble, and show it to him. Runa and I had agreed on this story: in 1826 Big Shoulders was still a swamp and Destopia far in the future. It would be necessary, we realized, to use the forbidden city names and take our chances violating the Exclusionary Strictures, which like the new personal names and date conventions had been promulgated at GC/Z to reinforce the vast changes underway, or more accurately, to obliterate the old city and family names and addresses, and more generally the old customs and ways of thinking. *The sharper the break, went the saying, the lighter the ache*. As such, the old place names were, literally, unspeakable.

Except now, in the safety of the imagined past.

“Ah, Boston,” he says and smiles, revealing an unusually even set of white teeth. “The Philharmonic there has commissioned a major work from me. Perhaps it will be *this* one,” he says, and picks up the thick sheath of manuscript pages in which he has been writing and holds it up for us to see. On top, in bold and florid cursive, I read:

Symphony No. 10
‘Orpheus’
By L. Van Beethoven
Dedicated to Archduke Rudolf

I blink rapidly in disbelief and take a deep breath to steady myself. Could it *really be*....the long-rumored Tenth Symphony? Word of a Beethoven Tenth had tantalized music lovers for decades, ever since a few pages from a purported first movement allegro—the notes and markings authenticated as being in Beethoven’s signature scrawl, but unlike any other symphony ever written, so sharply syncopated and harmonically free that it was said to anticipate not only later 19th century music, but also 20th and 21st—had turned up in the archives of a remote Bavarian *hochschule*.

Without thinking I reach out to touch it. “May I?” But Beethoven ignores my mumbled request, which he probably hasn’t heard, and holds the manuscript over his writing desk.

“It will shake the world,” he pronounces grandly, “with a *new gravitational force!*” and lets the score drop, landing with a *smack*, the old force still at work.

“Named for Orpheus,” he adds with a satisfied smile, “the greatest musician of all. His music entranced the gods and mankind and beguiled the animal kingdom. Even the trees danced to hear him play and sing. So it will be with this new work. All finished and done,” he says and slaps his palms, “but for a few final edits.”

Satisfied, he collects the manuscript, squares the pages and reaches for his glass of wine, then frowns and turns to me. “But forgive me for not introducing my friends,” he says, nodding at his guests, who have resumed their seats. “We have—” (gesturing with a graceful turn of the wrist) “—Baroness Dorothea von Ertmann, my dearest friend and a wonderful pianist. Sadly she has forsaken us here in Vienna and moved to Italy with her husband, but has returned with him on business and does me the honor of a visit.” Baroness von Ertmann, a petite, handsome woman, nods and smiles pleasantly from the couch across from us, steeping her fingers and bowing slightly as if sharing a prayer.

I recall the famous story. The Baroness had been very close with Beethoven, whom she called Louis, the French name for Ludwig. He called her his Dorothea-Cecilia. She had studied with him before moving to Milan, and was thought to be the greatest interpreter of his piano music in Europe, the dedicatee of his Piano Sonata in A major. Her famous music salons in Austria and Italy were devoted to preserving and promoting his music against the incursion of the new, more fashionable if vapid Italian composers. Had they been lovers as well? Had she and not Tonie Brentano been his famous, mysterious Immortal Beloved? Some people thought so.

While still living in Vienna her only child, a little boy whom she had named (tellingly) Louis, died of typhus. She was inconsolable. One day Beethoven sent a message asking her to come to his apartment. He excused the servants and cook. They sat across from each other, according to the story, and held hands and said nothing. Finally he told her, “We will speak in music,” and he went to the Broadwood and improvised for an hour, spinning the most poignant and profound themes of suffering and resilience. When he finished, she walked up to him, bent over and kissed his forehead and whispered in a choked voice, “You have said everything there is to say. At last I am at peace.”

Maybe, maybe not. Over the years the story has taken on the aura of a legend. But during her lifetime she never denied it.

“And next to the Baroness,” Beethoven continues, “Schindler, my secretary.” A large man, dressed in tight-fitting waistcoat and elaborately knotted cravat, wearing outrageously oversized and darkly tinted spectacles, nods solemnly.

“And next to Schindler the good Archduke Rudolf. He was once a piano student of mine—a good one, you should have continued, such potential!” he says, chuckling to perhaps indicate the opposite, “and remains an esteemed friend and patron of many years.” Rudolf smiles formally. He has a fleshy but handsome face, and is, I know from my BODI research, the son of Leopold II, the Holy Roman Emperor. Rudolf leans forward to take my hand, touches it politely without shaking it, and then turns to Runa and elaborately kisses hers.

“Ever the gentleman,” says Beethoven, arching an eyebrow to impart, perhaps, a hint of sarcasm. Wonderful to observe! “And Breuning, my dear childhood friend from Bonn, who lives now with his family in the Rothes House just two streets away. He first came to Vienna in 1801—my God, twenty-five years ago, can you believe it, Stephan? A friendship that has stood the test of time. I have so few,” he laughs. “I like to say that as Minister of War Stephan helps me keep the peace among my friends.”

Breuning smiles warmly and raises his glass in a gesture of welcome.

“And next to him the redoubtable Schuppanzigh, the finest violinist in the land, who leads the quartets and orchestras that premiere my music.” The short and rather stout man next to Breuning makes what seems like an embarrassed smile and bows slightly.

As Beethoven makes his introductions, I begin to detect, aside from his slight Rhenish accent, another anomaly. His speech is slightly askew, some words too loud, others too soft. Then I realize: he can’t hear his own voice.

“Sit, sit, please, sit,” Beethoven orders. Runa inches onto the couch, where Rudolf makes room for her, and I take a chair by the master.

“But forgive me for not introducing *you*.” He looks at me expectantly. *Me*? Who cares? But just because I (and every sentient being in the last two-and-a-half centuries) know *him*, he wouldn’t know *us*.

“Permit me, Maestro,” I say, standing and bowing stiffly. “I am George of Ingleside. And that is my sister, Runa.” I nod in her direction.

“As you might know I am almost TOTALLY DEAF,” he shouts at me, handing me the conversation book in front of him. “You must WRITE IT DOWN, while speaking plainly for the others to hear.”

How sad, how tragic. History can be harsh.

And yet, how fortunate for humanity! His late works—the Ninth Symphony, the final quartets and piano sonatas—written when his hearing loss was almost complete, inhabit a soundscape so surreal that even today, centuries later, they sound futuristic, as if arriving from another, more ethereal, galaxy. Also, the dozens and dozens of conversation books he used over the last decade of his life provide a great deal of information about his final years, such as who visited and what they talked about: the latest news and gossip, the ribald jokes, the barbs aimed at Beethoven’s rival composers, the complaints about his spendthrift nephew and ward Karl.

I look down at the one he has handed me. There’s an entry up top that resembles a shopping list, everyday items in a column:

Tooth powder

Sugar

Spice

Eggs

Beets

Rutabaga

*Hemp cord
Walking stick
Dust broom
Manuscript paper and ink*

Underneath, like a note to himself in his familiar scrawl, is the inscription: “Write Karl about excess spending!!!”

Halfway down the page are comments about his latest string quartet, the famous Opus 131, which even then people were claiming might be the greatest music ever written.

I turn the page to start a new section, beginning with my name. How marvelous to be a part of Beethoven’s conversation books, I think, scribbling “George,” speaking as I write for the others to hear, “joined by my sister Runa,” gesturing to her, “from America,” and show it to him.

“George, from America,” he repeats and smiles broadly, as if delighted to meet these two citizens of a strange continent.

“Doubtless named for George Washington, your indispensable man. Like Cincinnatus he retired peacefully at the height of power. We admire him greatly here in Metternich’s Vienna, where our leaders are so much more—” he pauses to consider his words, “—shall we say, crass and calculating?”

Rudolf smiles ruefully. Despite his friendship with and support of Beethoven, as Archduke Rudolf is something of a church and civic icon, allied with the state, which Beethoven takes great pleasure in impugning.

“No, no, actually I’m named for TELEMANN,” I shout as if he can still hear a word or two while I scribble rapidly in the conversation book. “My father PLAYED VIOLA and loved to perform his viola concerto.”

Which wasn’t quite true. Dad played viola all right, but he wasn’t a fan of the florid Baroque era. As it happens I was named after the famed English author, whom both my parents admired, but of course Beethoven would have no knowledge of that. No, this would be more agreeable to the maestro, who was known to greatly esteem Telemann, his fellow German.

“Ahh, wonderful,” he beams.

I scribble while speaking, “RUNA IS A SUPERB VIOLINIST. I play the FORTEPIANO. Even IN AMERICA...in our little corner of the world...YOUR MUSIC is...REVERED.” I stop and laugh, barely coherent, almost babbling and still awestruck in the presence of the great man!

As if reading my mind, Runa reaches over to grab the conversation book and adds, “THRILLED beyond words to be here. My brother and I love to play your *Kreutzer* sonata, so brilliant.”

Notwithstanding my wonderment I notice, out of the corner of my eye, something...*odd*. Schindler has been glaring at me all this time, as if enraged. Aside from his appearance and strange animosity, there is something else about him that makes me slightly uneasy, something sinister I know I should remember, but can't, something just out of reach.

"And tell us, why have you come all this way?" Beethoven asks and smiles, looking at the others. I suspect we—the strangers from that strange continent halfway round the globe—have been admitted to the master's salon to provide some light diversion.

"TO SEE YOU, of course!" Runa speaks while scribbling. "And to WRITE about you for our magazine *The Emancipator*. We will fight to EMANCIPATE America's slave people...as you have fought to EMANCIPATE THE WORLD OF MUSIC!"

Another lie, of course. Despite the prohibition against lying on these trips, Runa and I have agreed on this necessary cover story, intended to appeal to Beethoven's ego and—and in the highly repressive atmosphere of Metternich's Vienna—his almost dangerously radical belief in the humanity of all people and the destructive forces of autocracy. Being the famous Beethoven, he is mostly immune from state reprisal. But sometimes Rudolf and other of his devotees in office have to work to shield him from harm—especially as the leaders and the times become more despotic.

Beethoven reads Runa's scrawl, acknowledges the compliment with a nod, then sits forward on the very edge of his chair and says to her *sotto voce*, "Tell me, my dear, would your magazine pay me for an article?"

Runa looks at me startled, but I can only shrug. While she is formulating a response Beethoven's servant reappears and pours from a large glass decanter two glasses of red wine, handing one to Runa and one to me.

"Ah, thank you Sali. Let us drink to good health, the greatest gift of all," Beethoven pronounces, and we all repeat the toast and take a sip, which he imbibes, after which he issues a loud *ahhh* and a soft belch. "I have lately been sick, some infernal business with my stomach. Braunhofer says I should forgo strong drink," Beethoven says laughing. "But we pay the good doctor no mind, isn't that right?" The others join in with appreciative laughter. It seems we have caught the master and his merry band in a fine mood! But suddenly he turns pensive.

"Sadly, I can use the emolument," he says, turning back to Runa. "Everyone thinks because I'm famous that I have great wealth. People are always turning up asking for help. Two peasants came by last week, they said their homes had burned down. I cursed them and ordered them

away but they wouldn't leave, so I gave them twenty gulden. And only last month the city of Graz asked me for a musical donation to help their poor."

"WHAT did you DO?" I shout before remembering to write it down. But as if he can read lips or has anticipated the question he answers, "I gave them some overtures—*King Stephen* and *The Ruins of Athens*—so they could put on a benefit concert. Same with helping the Ursuline nuns."

"Very nice," says Runa, while Sali tops off the wine glasses of the other guests.

"The result is I have little money myself," and he gives a rueful laugh. "Rudolf's patronage helps, of course," he says, nodding toward the Archduke, "but if you deduct my expenses for lodging, servants, food and clothing, a copyist, a cook, my nephew Karl's school tuition and housing and constant demands for more spending money—I am in constant debt and have to scribble music like a mad man to keep from starving. If only I hadn't signed away my last two symphonies to my publisher Simrock. He paid four thousand gulden, which I desperately needed, when I should have held out for royalties."

"I wish I had been there to advise you," says Rudolf, putting down his glass to scribble in a conversation book, and holds it up for Beethoven to read. Turning to us he says, "I was in Bavaria at the time, attending to some estate business."

Beethoven laughs between sips of wine, wiping his mouth with the sleeve of his jacket. "I have it!" he shouts, his eyes widening in delight, and turns to Rudolf with the flash of a sly smile. "You could have one of your workmen rig up a spectral machine, some kind of magic conveyance to the past. Then we could go back and undo the transaction!"

The others chime in, "Yes, a time mover!" "Excellent, a calendar contrivance!" "Time twister!" "Rewinder clock!" "Schedule shifter!" "Memory machine."

Their laughter is drowned out by a boom of thunder somewhere in the distance.

I sit upright, almost spilling my wine.

"Or maybe not," Beethoven adds. "What if you got stuck in some other time? You'd never see your friends again."

"Oh, I think it would work out," laughs Rudolf, scribbling furiously while speaking for our benefit. "Such a device might be invented in the future—yes, why not? The future will be filled with such fantastic inventions!—and then people would arrive here to meet with *you*, Maestro! Have you had any strange visitors lately?"

They all laugh uproariously—how silly is that?—except for Schindler, who continues to glare at me from across the room and a frowning Runa, whom I suspect is made a little nervous by this exchange, as am I. Is Prospero having some fun at our expense? We join the others with our tentative laughter. “Oh that’s so amusing,” Runa titters.

“But yes,” Beethoven says, his eyes glazed as if considering the possibility, “if there *were* such a conveyance I would certainly return to visit the great composers of the past: Handel and Telemann and Sebastian Bach. Imagine sneaking into the Lübeck church in 1705 where the young Bach had walked—walked!—200 miles to challenge the aging Buxtehude to a duel on the church’s massive pipe organ. I would hide in the balcony,” he laughs and claps his hands, “while they battled for the title of greatest keyboard artist and improviser! And yet,” he adds, his excitement turning suddenly pensive, “by the end of his life, Bach was considered an antique, hopelessly mired in the Baroque when the newer Classical style was ascendant. Even his own sons, who were fine composers themselves, thought he was a sad relic.”

His gaze drops to the floor and he looks perplexed, almost stunned, by this strange anomaly. Bach neglected by posterity? Perhaps he himself feels at risk of being seen as a fossil, a *sad relic*, as he put it.

Then he brightens. “After that I’d travel back further, to visit the ancients, the Greeks. They believed nature was the ultimate music—the wind in the trees, the sounds of birds and brooks and rivers, even lightning,” he gestures outside, where distant thunder continues to reverberate, “and therefore music was the ultimate art, reflecting the true harmony of the spheres. Not as today here in Vienna, a mere frill. I am cursed to live in an age of savages and philistines,” he growls and pauses to lubricate this tirade with more wine. “Do you know the great Homer called music a sign of the heavenly order, a gift from the gods? Wouldn’t it be something to hear their cosmic music? But sadly, none of it survives. I should love to rediscover it. There is yet so much to learn—and so little time!”

We all nod and grunt our appreciation of this fantasy and the depth of his lament. So little time: That is what The Dream Machine is meant to address, to expand time, to bend it to our will. Maybe it would be possible to invite Beethoven to trip back with me a few thousand years, to ancient Greece. I’ll have to consider how to rig up such a “calendar contrivance” when I get back.

Runa hands Beethoven a conversation book, explaining to the others, “I told him we’d pay him handsomely for an article and asked what he’d like to write about.”

Beethoven reads her question, reflects for a few seconds, and replies: “Perhaps my new C Sharp Minor quartet. We are arranging now for Schuppanzigh to lead the premiere.”

“Yes,” Schuppanzigh says, perking up, eager to join the conversation. “So modern, so difficult, a work of *such* genius, surely the finest string quartet ever written.” The others nod vigorously in agreement; the Baroness even applauds, a dainty motion with the tips of her fingers.

Beethoven cups his hands to his ears, unable to take it all in. Schuppanzigh scribbles in another conversation book—there are three or four scattered around the room—and holds it up for him to see: “NEW 4RTET—SO GRT BUT HRD TO PLAY.”

“People have been saying this for years,” Beethoven scoffs and waves his glass in violent disagreement, spilling some wine on his lap. “My music is unplayable, it offends the ears. In Prague—did you hear?—they have banned my Eroica Symphony as *morally corrupting*. What does that *mean*? I’ll tell you what is morally corrupting,” he says louder, shaking a fist. “Metternich’s secret police poking into people’s lives and telling us how to behave! We artists must resist such shackles, and build a righteous fire that burns the corruption and clears the destruction of our time.”

Apparently pleased with this outburst, Beethoven settles back in his chair, closes his eyes and finishes what’s left in his glass with a few noisy gulps, which imparts a pink blossom of contentment to his cheeks. The others look perturbed, glancing at Runa and me as if unsure whether the strangers from America can be trusted with such heresy. Schindler in particular resumes his pestilential stare, the effect magnified by the thick spectacles like saucers.

Even seated Schindler appears enormous and slightly terrifying. He has a large, pulpy face, chest like a barrel, the monstrously oversized figure, the black funereal outfit, a man of gargantuan, ill-fitting parts, like a Frankenstein monster stitched together from the remnants of stray corpses in Vienna’s Central Cemetery.

Recalling the topic at hand, Beethoven turns to Schuppanzigh. “As for the C Sharp Minor, you must understand: I write not for men’s *limitations* but for their *imaginations*.”

“Bravo,” the others titter and applaud—surely this is an applause line they have heard before—all but furious Schindler, and Schuppanzigh, the target of this barb, who frowns, while Beethoven gets up to refill his glass before resuming: “It is music not for today, my good Ignaz, but for all time. To quote the Slav, ‘I write for the eternal harmony for which they

say we shall all one day be blended.’ In any case, my musical Falstaff, I trust you will find a way to play it.”

“Hear, hear,” says Rudolf, lifting his glass. “To the future, when all the world will adore your music and worship your memory.”

The others chime in with agreement. Beethoven beams at their approval and, having downed several gulps, plunks his wine glass down on his writing desk and with a look of satisfaction emits a gurgling belch, which the rest of us pretend not to hear.

“It was like that with the rehearsals of the NINTH SYMPHONY, two years ago,” Breuning says while writing in a conversation book. “The soprano refused to sing her part.”

“That’s because it was *IM-POSS-IBLE*,” Schuppanzigh warbles in a high falsetto, adding his scribble to Breuning’s. Smiling, the violinist says sotto voce, as if confiding to Runa and me: “The female soloists agreed among themselves to pretend to sing the most demanding sections.”

“They figured he COULDN’T HEAR IT anyway, the old deaf man!” Breuning laughs. “And Umlauf was secretly brought in to conduct—UMLAUF!” he yells, writing in the conversation book as he speaks to us, “Umlauf, the oaf, standing just behind the maestro because they thought he was too deaf to conduct it himself. It was ABSURD.”

“The Ninth? I knew,” says Beethoven, following the conversation avidly, glancing from face to face and then at the entries they hold up for him to see. “I knew in the rehearsals what they were doing. I knew when the soloists were singing and when they were merely pretending, you can see it in their throats and their diaphragms,” and he takes a deep breath and in a pleasing baritone bellows the famous opening words of the Ninth, the first ever composed for a symphony, from the last-movement chorus of Schiller’s poem Ode to Joy:

Freude, schöner Götterfunken

...and then silently mouths the next line:

Tochter aus Elysium.

We shriek with laughter, howling like wolves, slapping our legs and spilling our drinks. Amazing! The irrepressible Beethoven—the unlicked bear cub, as Cherubini called him, famous for his scowling demeanor and hyper-sensitive personality and erratic behavior, who has left a trail of broken friendships behind him like yellowing leaves in October—entertaining *us*! What good fortune to find him not only at home but in such a cheery mood!

But in defiance of the Rules a dark thought intrudes: What if Prospero has gamed the scene for my benefit? I should know, having created the program, but in truth I'm not sure how much discretion it has: AI can work in mysterious ways.

A commotion downstairs interrupts the festivities. After a few moments Sali enters the room and leans over and shouts into Beethoven's ear while pointing out the window, "SIRE, YOUR FORTEPIANO IS READY!"

"The Broadwood?" He claps his hands and stamps his slippered feet with childish glee. "Have them bring it up."

While waiting for the workmen to hoist the instrument upstairs, Beethoven launches into a story about Mozart.

"I dreamt that Wolfgang Amadeus came back and gave me a lesson on the Broadwood. As a youth I was actually introduced to him—did you know?—when I first came to Vienna from Bonn in 1787. I was a mere boy, practically, and Mozart's genius was already well established. When I was ushered into his grand apartment on the Domgasse, he immediately set for me a fugal figure to play *ad extempore*, and after I improvised a few minutes he stopped me and from memory reproduced my keyboard *fantasia* and then improved on it immeasurably with some clever changes of key and greater dynamic contrast."

"I never knew that," the countess said, and the others chimed in with astonishment. The two greatest musical geniuses, side by side and playing together. Marvelous!

"Would that we were there, watching history," says Schuppanzigh. "Maybe we can get started on that memory machine."

"But in the dream," Beethoven continued, "he turned to me and said of my Fifth Symphony, which of course was years in the future, 'I like that! Great drama! Fantastic tension! Splendid contrasts! But I've got something better for you.' And he began to dictate a new symphony. That's how I got the opening for my Tenth, the new one, *Orpheus*, in which nature is bedeviled by the furthest extremes of rhythmic dissonance. All from a dream, imagine that!"

Before we have time to digest this remarkable story, a loud bang of wood against walls interrupts Beethoven. The Broadwood, finally free of its packing crate, is being noisily hefted by several workmen up the stairs and into the salon where we are sitting. After some palaver with Schindler, the men back it alongside to face the Graf, so the two keyboards are side by side, one curling into the shoulder of the other.

"My beautiful Broadwood," Beethoven sighs, and, dismissing the workmen, stands with wine glass in hand and walks over to the instrument and lightly rubs his palm on the wood and nods with

satisfaction. To my great delight—this is getting better and better, how could I doubt the great Prospero!—he sits down at the piano and without any preliminaries rolls off a string of arpeggios, starting in plain C major, then modulating smoothly to some related major and then more distant keys, before pivoting to an obscure minor scale and then introducing church modes I've never heard before. Magnificent! I'm reminded that when he first came to Vienna, Beethoven was acclaimed one of the finest improvisers ever; people flocked to his salon recitals and concerts to hear him perform, before encroaching deafness ended his playing career.

Still, the Broadwood fortepiano is to my ears a dull-sounding instrument, the far more powerful and dynamic modern pianoforte being several decades off, hastened in part by the demands of Beethoven's brawny keyboard music. Additionally the Broadwood is out of tune, perhaps from its arduous journey crated and shipped from the repair shop across town and then hauled ingloriously upstairs. But that seems to bother the master not at all, oblivious to its dissonances. He hums along out of tune, then stops.

"Enough of this little business." Turning to Runa, he says, "Your brother says you play violin? How would you like to try that one there? Perhaps we can play something together," and points to a beautiful mahogany-varnished fiddle sitting atop the Graf.

Runa receives this extraordinary invitation with eight or ten rapid eye blinks and an almost imperceptible shudder, which would be alarming except from 36 years as her clin I know this is how she responds to extreme emotion, as if girding for a giant wave. I know too because it happens to me.

Then she shakes off the tremor, rises from the couch, walks over to Beethoven and, cupping his chin with her hand, kisses him on the forehead.

There is a sharp gasp, the collective intake of five breaths as one. Unheard of for a stranger! But Beethoven just looks up at her with a delighted smile.

We all laugh, even the dour Schindler claps his hands, to find the master in such a rare and joyous mood.

Runa picks up the violin and peers through the F-hole to see the maker's name. "Ah, Nicolo Amati, Cremona, 1676," she announces. "Stradivarius's teacher. I've never played an Amati, they're so rare." She takes up a bow next to it, tightens the hair and plunking an "A" on the fortepiano tunes the strings.

"He won't let anyone play the instrument," says Schuppanzigh, eyes wide with surprise. "Even me."

Beethoven taps Runa on the shoulder and says, looking up from the piano bench, “Shall we play the first movement of the *Kreutzer*? You said you know the piece, and it’s a favorite of mine.” It’s the violin-piano sonata Runa and I played for the Sadlers back on our thirteenth birthday, the penultimate of the master’s ten piano and violin sonatas and the crown of the set.

Beethoven swivels around to a table piled high with manuscripts and scores and after some rummaging pulls out the violin part and hands it to Runa.

But with a slight bow she returns the score to him.

“I can play it from memory,” she says, tapping her forehead.

Beethoven looks at her, eyebrows hiked, either impressed by her powers of retention or annoyed by her effrontery.

Then he motions me to his side.

“You said you play piano?” he whispers in my ear.

I nod, not sure what he has in mind.

“Good. Then please, you can turn pages.”

Me, turning pages for Beethoven! This alone is worth the thousands of hours I’ve poured into The Dream Machine. What a gift it would be if everyone could connect with their heroes like this.

In the *Kreutzer* sonata the violin opens unaccompanied, and Beethoven nods for Runa to begin. She takes a deep breath to steady herself. The opening is always the most perilous moment for a performer, when the violinist’s bow arm is subject to nerves, what string players call the “pearlies,” as if the bow hairs were beaded with pearls that would produce a bumpy, rumbly stroke caused by and betraying tension and anxiety.

The piece begins with a series of solo violin chords in A major, tricky in themselves, and terribly exposed—no piano to hide behind—and here Runa plays a particularly slow, quiet lullaby of intense beauty and longing. In the fifth measure the piano enters in A minor, establishing a major-minor key duality and ambiguity that will take both players the better part of the movement to reconcile.

I look at Runa closely to see if she’s nervous. She hasn’t played this piece in years, as far as I know, and it’s extremely demanding for even the best violinist. Yet she seems to float above anxiety, serenely confident and secure in her phrasing, intonation, and collaboration. I’ve never heard her sound better. And even though Beethoven’s great performing days are well behind him, deafness having robbed him of much dynamic nuance, it is still an incredible thrill to see him play—especially at such close hand!—with fierce dynamic contrasts of

loud and soft that perhaps a hearing performer wouldn't dare but because it is Beethoven I find thrilling to witness.

When they finish everyone jumps to their feet and issues loud and sustained applause. Beethoven takes Runa's hand and kisses it, and she returns the gesture, drawing amazed laughter. In America, they know, all men are created equal, but this is quite another matter!

Beethoven isn't bothered; he laughs and nods happily to Runa, and taking her hand they both bow, as if in a concert hall, to more applause and shouts of "Bravo!", after which he excuses himself and pads off down the hall in his slippered feet to another room.

Runa returns to the couch where the others ply her with questions—"Where did you learn to play like that?"..."Who was your teacher?"..."Do you perform on stage?"..."Have you been to a concert in Vienna?" It is clear they are quite taken by this foreign beauty with the strange mirror resemblance to her brother, like some exotic flower, a hothouse specimen from the New World.

While they're chatting with her, I take the opportunity to examine the salon. There's an ear trumpet on a table, and another presumed amplification device, like a long horn, which extends from inside the Graf.

Looking up I see, on the wall across from me, an oil portrait of a distinguished-looking gentleman. I recognize him as Beethoven's grandfather and namesake, who unlike his alcoholic, ne'er-do-well, child-beating son, Beethoven's father, was a highly successful musician and responsible paterfamilias.

On the master's bookshelves are stacks of newspapers and journals, also Plutarch's *Lives*, a collection of Aristotle and Plato's teachings, Schiller's poems, a book of sermons, a complete set of Goethe and another of Shakespeare, plus the Sacred Scriptures of Hinduism. And prominently displayed between two bookends in the shape of a large stylized treble clef are Homer's *Iliad* and *Odyssey*, stories handed down from a period before writing, before history, when adventures were sung to commemorate a still more ancient and revered past—an early time machine.

While the others are distracted by Runa's replies (she is such an engaging liar) I rise to pour myself more wine and, checking to make sure I am unseen, saunter over to Beethoven's writing desk, now partly hidden from the others by the raised top of the Broadwood. There—tantalizing, beguiling, beckoning—is the Tenth Symphony. The holiest of holy grails: if only I could glance through the score for the Run Report to document the "new gravitational force" Beethoven has spoken of, with an opening dictated by a spectral Mozart in which "nature is bedeviled by the furthest extremes of rhythmic dissonance"—something that sounds radical and

earth-shaking, perhaps an art bomb like the Ninth, a “tool to unrule” our storm-riven Destopia.

Just then there’s a commotion at the couch. Runa is narrating a story about our journey across the ocean on the steamship SS Savannah. It is pure fantasy, of course, but something she has said—“the captain’s crude pass, in his state room, pinching me here...” and hiking her dress an inch or two above her ankles to illustrate, which they find eye-opening and hilarious—creates enough of a distraction for me to turn over the score’s title page, excitedly nervous but unobserved.

The piece opens with an enormous percussion choir of six timpani plus a septet of snare drums, a pair of gongs and four bass drums. Another surprise: no time signature and no bar lines. This kind of “free meter” hearkened back to medieval and ancient church music and ahead to 20th century jazz and atonal music—time travel minus a time signature.

The score is marked *Quasi ad lib*, with an improvised feel, and *Misterioso*. The B flat timp and the snares begin with a stuttering, spluttering, wrong-footed triplet rhythm...

One-TWO-pause,
One-TWO-pause,
One-TWO-pause,
One-TWO-pause,

...with the accent on the second beat, third beat silent, repeated *ad lib*, at the conductor’s discretion. Familiar rhythm, but one I can’t place. There’s another shrieking outbreak of laughter—God knows what Runa is telling them—and startled I almost trip and fall over, my skittish nerves and chest juddering like a jackhammer. But that’s the answer, I realize: The triplet is a heartbeat, the double-beat and release of blood being pumped, two billion times in a lifetime, through the body: the eternal rhythm of life.

I read further from the precious score: The other timps come in at random (*ad lib*) and the snares start in with a steady chorus of paradiddles, the gongs and bass drums joining in unison, the whole percussion section creating an increasingly deafening roar from which emerges a crescendo of brass and winds in hideously discordant intervals of sevenths and ninths and thirteenthths that builds to a triple fortissimo—the wail of the damned in hell or the Big Bang of creation—before going suddenly, shockingly—silent! Only the snares still quietly tap the heartbeat rhythm, the muscle of life pulsing onward, the most vital and terrifying sound in the universe.

More laughter erupts across the room. “Wouldn’t you agree, Mr. Ingleside?” asks Breuning. I look up, red with surprise, and step away from the score.

“Agree?”

“That your sister certainly invites that kind of fascinated attention?”

“Oh, certainly,” I say, smiling. “Most fascinating,” thinking: *You have no idea.*

Can I get back to the symphony? But Schindler has fixed his malevolent gaze on me again, so I am forced to abandon my perusal of the score—maybe I can return to it later—and mosey over to the bookcase as if casually interested in Beethoven’s reading matter. As Runa engages the group’s focus once again with some prattle about British royalty—“We met the Duke of York in Buckingham Palace!” which for some reason they find irresistible—I pluck out a volume of the Iliad. Leafing through a few pages I come across a passage underlined in dark ink across from a scribbled “Yes!” in the margin:

Let me not then die ingloriously and without a struggle, but let me first do some great thing that shall be told among men hereafter.

Beethoven has highlighted the Homeric passage uncertain of posterity’s judgment. Prickly European critics have already weighed in with theirs. The recently completed Ninth Symphony, according to one music magazine, is a “frightful piece indeed, which puts the muscles and lungs of the orchestra and the patience of the audience to a severe trial.” Another critic characterized it as “the obstreperous roarings of modern frenzy.”

If he is in doubt, I must find a way to tell him of the future’s verdict when he returns. As for defying the Rules, so what? I wrote the Rules; I can rewrite them!

Inked along a margin of the text, in Beethoven’s famous scrawl, I spy a curious rhyme:

*To smash the state
You must retrieve rebel art
This only is your fate
To tear it head from heart*

Huh? I blink to clear my sight, as if the words are figments, or some nonsensical challenge, or...some gibberish from Prospero? Then I remember the koan from the Arrieta, another admonition to seek out the tool to unrule the unruly Destopia.

Dismissing this strange line of thought, I pull out the volume of Shakespeare, riffling through the tragedies to find a favorite passage from the Scottish play. Maybe Beethoven has marked it up. But instead of Macbeth's imperishable monologue I find a different text:

*Yesterday and yesterday and yesterday,
Peels back our squalid farce at a steady pace,
Layer upon layer from the shadow's play,
Moving ever more distant in time and space.*

*How did we come to this dark'ning place?
From which a few brave souls seek to flee,
Unhinged from humanity's warm embrace,
Back to when life and time were happ'ly free.*

*Here is the formula for liberation:
As far as clocks and time can span,
Go back to the time before creation,
Before time's steady pulse began.*

*And there you will find,
In the beginning,
As at the end,
All meaning shrinks
To nil and aught,
All time resolves
To but a single dot,
And life and light,
To an empty plot,
Which then,
Mercifully,
~~Flickers out.~~
~~Flakes out.~~
~~Wipes out,~~
~~Winks out.~~
~~Blots out.~~
~~Blinks out.~~
~~Rubs out.~~
~~Peters out.~~
Dissolves.*

I look up, afraid the whole room if not creation itself is dissolving. But nothing of the sort: Runa is holding forth on Native American customs—how does she make this stuff up?—and the others hang on her words as if she were Pocahontas herself.

I look back at the bizarre monologue. It continues with a question that, curiously, I have asked myself ever since the curtain came crashing down at GC/Z:

*Yet is there a realm of different dreams
Where all our souls play out on other stages
And all our lives flow in righteous streams
Far from the play of crooked pages?*

*But enough of this princely delay!
To resolve and reverse the terror'd curse,
You must at last step into the fray
And move on from childish verse.*

*The time is now to do your part!
First find and restore rebel art,
Then use it to smash the state —
Only this can seal its fate.*

*Trip back in time
To steal the fire
And ignite the crime
On Destopia's pyre!*

“Surprised?”

I flinch so violently the book as if startled jumps from my hands and crashes to the floor. I look up. Schindler hovers at my side, seemingly unobserved by the others, who continue their festive gabbing.

“Excuse me?”

“You know what I mean,” he says in a harsh undertone, pushing up against me, pressing his mouth close to my ear. “They’re after you, the authority!” he whispers. “And they’ll get you! They always do...in the end.”

A chill runs through me and I expel a nervous little laugh, like the dry cough when your heart skips a beat. What’s happening? What is Schindler alluding to? And where did the strange soliloquy come from? Has the Authority somehow penetrated Dream Machine code, or is Prospero playing another trick? Maybe Schindler is riding along on the

trip like a witch on a broomstick, an avatar of Destopian surveillance, stalking me through time. There's only one way to tell: brazen him out.

"Who's after me? What authority?" I smile and ask in my most innocent manner. "Whatever are you talking about?"

"You know very well, don't pretend innocence with me," he says. "The Polizei, agents from Breuning's Ministry, Metternich's spies, the soldiers on the street."

And when I squint in confusion he crowds even closer, and whispers, "Because I am certain you are not who you say you are. You and your suspicious doppelgänger who claim to be siblings from Boston."

"Of course we are."

"Really?" He is standing so close now we are almost nose-to-nose. Are the others watching? Wouldn't Schindler's erratic behavior be worthy of notice? But I can hear them yakking away unaware. Rudolf is asking Runa, "Do all the attractive women dress so, how shall I say, *provocatively*, in America?"

"This?" Runa says with theatrical innocence. "I just threw this together in a trice," and giggles. I can't believe she's flirting with the Archduke.

"Tell me then," Schindler continues, his voice a scratchy *sotto voce*. "Where in Boston are you from?"

I can smell his foul breath, feel the stiff, thick cloth of his frock coat rubbing against my arm, hear his whisper booming in my ears. My heart skitters with sickening agitation.

"Yes?" he demands. "Where?"

Boston? How should I know? I've never been to Boston; it's AOL: Authority Off Limits, Russo territory. I'm not even supposed to say Bean Town's original name—doing so violates the Exclusionary Strictures, might even trigger an algorithm sniffer.

"Uhm, Roxbury?" I mumble.

"Really?" he says, and a sly grin reshapes his leaden face. "Interesting. Roxbury must have grown rapidly. It was a potter's field when I was in Boston just last year, representing the maestro in his negotiations with the Commonwealth Philharmonic Society. The dead ones must have sprung back to life."

Dead Ones? "Is that right?" I say, and look to Runa for help, but she is telling Rudolf that before we return to Boston our next stop is Weimar, to visit Goethe. *Goethe? Really?*

"Ah, the other great man of Europe," says Rudolf, perking up, his hands swirling in animated motion like two planets, the two giants of the continent, Beethoven and Goethe, whirling across each other's orbit. "Statesmen, poet, novelist, scientist. Beethoven has set some of his

poems to music. And of course, he wrote the overture and some incidental music to Goethe's play *Egmont*, about the count whose martyrdom frees his people. Fantastic piece, so powerful. Do you know it?"

"Of course, yes, yes," Runa replies, and nods enthusiastically, though I'm fairly certain she doesn't—listening to, studying, or playing music is forbidden, like all art.

"So, you haven't *really* been to Boston?" Schindler hisses in my ear like a viper. "You know, we have many suspicious people in Vienna. They come from all over Europe, spying for Napoleon and Tsar Alexander and Frederick William. Just last week, Metternich executed half a dozen men for espionage. I observed it myself, with great satisfaction, at the gallows they erected on Freyung Square not half a mile from here. They claimed to be innocent, these spies, just like you. They cried like children right up until the floorboard swallowed them to hell. And while Herr van Beethoven isn't scrupulously concerned, and is not as vigilant as he should be, given his obvious appeal as a propaganda target for these spies and malefactors, I am. That is my job, as his secretary and protector. Visitors from America, indeed!" he snorts. "I know otherwise. I know there is something *very wrong* with the pair of you and your story. And that's what I'll inform the master when he returns, so you two charlatans can be expelled from here and thrown into prison, maybe to hang from the gibbet like the other spies."

Something *is* very wrong. Now I remember.

"Herr Schindler," I say, pulling myself up to my full height to eye him square in the face, bumping against his chest so sharply he stumbles back and almost trips in surprise. "I know your secret plans."

"Secret? What secret?" he says with a look of confusion wrinkling into alarm. "What do you mean?"

"I mean after the maestro passes, you plan to sell all this furniture as souvenirs," I say, louder than a whisper, not caring if the others hear, poking him in the chest. "I know you expect to profit from his demise, like a vulture. I know you will alter the conversation books and forge page after page to puff yourself up, as if history couldn't tell. I know you'll write his first biography and make yourself look like the indispensable man, which is a lie, because you are a mere toady and fool!"

He stands stricken, his mouth open, his arms falling limp at his side.

"How dare you..." he starts to say.

Beethoven shuffles back in from the other room, smiles absent-mindedly at Schindler and nods to me, waving for us to resume

our seats. He is carrying with him what I take, from the shape and smell of it, to be his chamber pot.

“Sali!” he yells.

After a moment the poor woman hurries in to relieve the great man of his burden. No one seems to pay this strange behavior any notice.

Schindler returns to his seat, as ordered, still glaring at me. I’m shaken by this freak encounter, which thanks to their fascination with Runa’s fanciful stories the others seem not to have noticed.

Breuning scribbles something in the conversation book and hands it to Beethoven, who looks at it and frowns.

“Goethe! What an ass!” he splutters.

The others smile and nod.

“The man is a pompous fool,” Beethoven says, his face curdling. “When we met in Teplitz all those years ago and came upon the Empress and her entourage walking in the park, the *famous Goethe...*” he pronounces the name with the deepest scorn, “...bowed so low his wig almost fell off, he had to grab for it.”

“The master merely turned aside,” says Schuppanzigh, lighting up. “He does not toady to royalty, they toady to him.”

“His bowels stink like everyone else’s,” Beethoven continues in a sour tone, having proven the point only minutes before. “And the same with Cherubini and Rossini and Clementi and all the Italian song scribblers with their organ grinder tunes that are all the rage with the vapid public.”

The others burble in agreement. I suspect this is old ground they’re trodding, heaping dirt and abuse on the master’s enemies and rivals.

But Beethoven finds no humor in it: his mood has changed like the worsening weather, like the rain suddenly lashing the windows and the rapidly descending darkness and the thunder now reaching our ears, if not Beethoven’s. He reseats himself and finishes his wine and reaches out unsteadily for another, meanwhile pouring out a litany of evils: the hated legal system, the reviled police, the bloated bureaucracy, the worthless aristocracy.

“Ach, and my *own* disappointments,” he says, “my health—none too good—and my hearing, even worse. The ongoing friction with Karl. My declining popularity with the Vienna public. And sometimes,” he says sadly, “a deep loneliness from lack of a female companion which even afternoons like this cannot dispel.”

We sit stunned into silence by his abrupt change of mood.

“No, it’s not like that at all, Louis,” the Baroness consoles. “Your music is beloved in Vienna just as it is everywhere. That’s what our guests

from across the sea tell us,” gesturing to Runa and me. “And they should know.”

Beethoven turns his baleful gaze at me and mounts a feeble smile. We are all struck with the sudden sadness of it. I must find a way to cheer him up, without violating the Rules too much, about his place in the artistic firmament.

As if he has heard my thoughts, Beethoven says, “You Americans, with your new nation and constitution and your wonderful agrarian republic, surely you represent a better future than our dying monarchies and feudal kingdoms. I wonder, tell me, what *is* my place in that future?”

My chance at last! The maestro has handed me a golden opportunity to assure him of posterity’s reverence and gratitude. Could there be anything more thrilling and ennobling?

I puff out my chest and pronounce grandly while scribbling in a conversation book: “Do not worry, Maestro, your position is SECURE. You are the PEAK of the mountain, below which all other artists and music lovers bow with REVERENCE.”

The others voice their agreement but Beethoven, reading my comment, says, “Ah, that is kind of you, young Ingleside. But really, such exaggeration, it sounds like a eulogy.” He frowns and takes another sip of wine. “My star has already dimmed. Perhaps the best that can be said of me I take from the immortal Homer,” and he points to the volume on the shelves: “*Much have I endured, much have I survived.*”

“You know, Maestro,” I say confidentially, pulling my chair up to his so we’re almost toe to toe, and speak clearly so he can read my lips while I write in the conversation book. “I once was giving a piano recital of your music”—his eyes widen in surprise—“yes, even in our young country your music is widely played. And it was the *Arrieta* of opus 111, that sublime slow movement.”

Now he’s interested, his eyes sparkle, he smiles and takes another sip. “Yes?”

“And someone in the room yelled, ‘PLAY IT FASTER. WE’RE FALLING ASLEEP OUT HERE!’”

He roars with laughter, eyes closed, head tilting back, bouncing his knees so they knock against mine. Ah, Prospero, how could I doubt you, you are sublime!

“And did you?” he finally asks. “Play it faster?”

“No, I rose from the piano, bowed, and left.”

“Ah, too bad,” he says. “The point is well taken, it shouldn’t drag. If you play too slow the notes wander off and get lost. You want a strong rhythmic pulse—always!—as well as direction. Like life, music always has to move forward.”

Beethoven's tempo markings, based on the newfangled metronome device he used (which some people insisted must have been broken) were often extremely fast. Pianists complained bitterly about the breakneck 138 beats per minute that he indicated for the first movement of his famous *Hammerklavier* sonata. And 108 beats to the half note for the opening of the Fifth Symphony? Conductors ever since have pronounced it unplayable.

But as if to demonstrate his tempos *are* playable, the master rises and goes to the Broadwood, and, unbelievably, starts in on the *Arrieta*—that mystical, transcendent piece, his capstone piano sonata—at a far brisker tempo than I would have imagined.

“Like that,” he says, before leaving off after a dozen measures.

The others jump up and applaud, a standing ovation for the master's brief recital.

“Schuppanzigh is probably right,” he continues, resuming his seat and taking another sip of wine. “They say the music I'm writing now is incomprehensible, scribbles from a mad man, *all intellect, without song, nothing but a mass of learning*, as some ass said.”

“Not so,” protests the toady Schindler. “It is great music, it will outlast the stars in the night sky.” We all take up the cry, but Beethoven seems unmoved. The moment has turned dark from the depths of his melancholy. At a time near the end of his life when he should be basking in acclaim, he's shadowed by doubt and despair.

He drums his fingers on the armrest of his chair, pensive for a moment, before reverting to his earlier fixation. “Goethe...” he starts in again, and the others break into renewed laughter at the sound of the reviled name.

“Laugh all you want,” he says, which has the effect of stifling all laughter. “But I would love to work with Goethe, to write the music to his play *Faust*. You are familiar with the Faust story?” he asks, and turns back to me with a serious look, more skeptical and appraising, as if he has taken on a new character, more critical, more ominous, somehow more *knowing*.

“Faust is the perfect metaphor for our Machine Age,” he continues, gesturing with one hand like he is conducting the Ninth Symphony, the performance with Umlauf over his shoulder. “The industrial revolution we are living through, with its electromagnetic devices and galvanic batteries and hydraulic machines and huge factories and steam-powered trains that are hurtling us into the future. And Babbage's Difference Engine, which they say will one day calculate figures at a rate many times faster than the smartest arithmetician. It could in theory count the stars in the sky and calculate our place in the heavens.”

The others nod and grunt their appreciation for this marvelous state of affairs.

“But no, I’m sorry,” he gestures skyward, “the cosmos cannot be counted and constrained like figures in an account book.”

My unconstrained mind leaps to that first fraught meeting with Vänka, in her stark Granner Hall office. “You can’t squeeze the universe into pallid numbers,” she had warned. Strange convergence, Vänka and Beethoven.

“Science without art is like a man without a soul,” he continues, fixing me with an intense stare. “Wouldn’t you say, Mr. Ingleside? Don’t you think music and art can save us from what science threatens?”

I nod enthusiastically. Prospero is, after all, the ultimate synthesis of art and science, the two perfectly balanced on the elegance and precision of great code, like the beauty of a perfect equation or a peerless poem, the art of which may one day liberate Destopia from its dead, artless soul.

“Goethe’s Faust sells his soul to the devil to learn the great mysteries of life,” Beethoven says, fixing his knowing look on me, as if the others have disappeared, as if it is just the two of us, and he has a message to convey across the centuries. “To find the key to the eternal riddles of the universe, the puzzles we all strive to understand and the questions we seek to answer, namely,” and he bobs an index finger in time to the words for extra emphasis, “*why are we here, and how can we help our fellow beings with the tools the creator has put at our disposal?* Of course, Faust pays in the end, but we artists and song scribblers can strive to ask the same questions and seek the same answers. That is what Homer and Plato and Shakespeare and Dostoevsky and the other sages address, the same questions that I myself, in my feeble way, try to answer in my music. I only hope and pray that my art has that power, that I’m not dismissed and forgotten by posterity. If only I knew, I could rest more easily, could die in peace.” He looks at me with violent intensity, as if it’s within my power to determine, then closes his eyes and settles back in his chair, exhausted by this intense soliloquy.

This is it—the opening I’ve been waiting for! I lift off my seat, practically levitating like the 40/80 bikes.

“I know the answer, I know the answer!” I shout idiotically, placing my hands atop his, unable to contain myself. I realize now with perfect certainty that it is my mission to tell him, to reassure him of his place on posterity’s throne. He deserves the comfort of that knowledge, poor man. This is why Prospero has brought me here!

“Yes, yes, absolutely, it’s all there in your music,” I yell, and jump up, startling them all, I don’t care. I’m thinking of the very last

composition Beethoven composed, the one that Dad analyzed way back at our birthday dinner, and grab a conversation book in which to scribble madly while shouting to the others. “Your OPUS 135 String Quartet! The first movement...MARVELOUS AND INTRICATE in its jigsaw puzzle concision...the second movement with its SYNCOPATIONS, fast and relentless, like some JAZZY style from a later age.”

Beethoven frowns. He has his hands cupped to both ears as if he can hear snatches and leans in straining to understand while peering over to decipher my incomprehensible scrawl. Perhaps he can hear a bit but of course has never heard of “jazz” —

“And the SUBLIME PATHOS of the slow movement,” I shout, all the while smiling a mad, eager, almost lurid grin of bared teeth, spitting the words, thrilled finally to serve a purpose for the man who is struggling to serve his purpose, to serve humanity and posterity.

“—And the FINALE, ah, the finale,” (thinking: *Aha! At last you’re of use to me, dear father, what you told us at our twelfth birthday dinner*), “where you inscribed the opening theme MUST IT BE? in F minor, followed by its melodic inversion, IT MUST BE! And with that synthesis you captured the eternal THESIS AND ANTITHESIS of life.” And for good measure, I shout out the original German, the mysterious couplet he wrote at the top of the score: “*MUSS ES SEIN? ES MUSS SEIN!* There it is, all of life—the mystery, the salvation, the redemption—there to glorify and sanctify all humanity.”

Breathless from mad scribbling and shouting and the mad frenzy of my fevered mind, I sink back into my chair, exhausted and triumphant, waiting for the applause and appreciation from the master and his acolytes.

But there is none, only a strange, foreboding silence. Beethoven just stares at me, then slowly turns to the others.

“Now that is very strange, very strange indeed,” he says slowly. “I haven’t finished Opus 135, the last movement is only a few sketches, only the inscriptions and their themes. And here’s the thing: no one has seen it, not a living soul—not my publisher Simrock, not even Schuppanzigh or Schindler.”

The latter eyes me with renewed malevolence.

Beethoven turns slowly back, slow as a planet moving across the night sky, and fixes me with suspicion. “So how could you know...about a piece I haven’t even finished and shown to anyone?”

Uhhm.

Schindler starts to say something but Beethoven, who has me transfixed with his dark expression like a butterfly pinned to a cork board, shoots up a warning hand behind him to silence the ogre. We are all, for a

moment, commanded to perfect stillness, frozen in time, fixed in history like a frieze on a building, with strained looks and a chilling silence, as if the earth itself has stopped. Even the sputtering of the candle goes still. Only our eyes are alive, glancing darkly at one another and then all of them—even Runa—at me, appalled by my terrible misjudgment.

“Open up! Open the door!” someone downstairs yells and bangs on the front door. The noise breaks the spell and stirs us to life.

“What’s that?” Rudolf calls out sharply. Beethoven, sensing a disturbance, calls for Sali. After a moment we can make out her footsteps clattering down the long staircase and a brief, muffled conversation. She returns with a note for Beethoven. He scans it and rises unsteadily.

“Here? Why is he here?” he says with a stricken tone.

“What is it?” asks Rudolf, who reaches over and takes from Beethoven’s limp hand the message. It is stamped with the official insignia of the City of Vienna.

“A summons for Karl,” Rudolf tells us, “Beethoven’s nephew. From the Ministry of Justice. Soldiers are with him now, downstairs.” He looks up, as if seeking guidance from the rest of us, but we are struck mute. “Tell them to come up, Sali,” Rudolf instructs her.

Beethoven falls back in his chair, his face folding into alarm.

We hear the heavy tread of boots on the stairs. Two soldiers dressed in crisp navy blue uniforms appear at the doorway, and hold firmly between them a young man of about twenty, bland face topped by a thick crop of curly dark hair. A white cloth, rouged in pinkish red, is tied around his head like a bandana.

“What has happened, Karl? What have you done?” Beethoven asks.

“You should be in school,” Schindler spits.

“Permit me, I am Lieutenant Gruber,” announces the taller of the soldiers, and clicks his heels and bows slightly to the group. He turns to Beethoven. “The boy is in trouble and cannot stay in school. Yesterday he climbed the ruins of the old castle in Baden and tried to kill himself.”

“What? What did he do?” Beethoven says, cupping his ears. His eyes are saucers, his mouth drawn, his lips taut. He cannot hear, but he knows something is very wrong.

The lieutenant continues, “One bullet misfired and the other grazed his temple. It is a superficial wound. We suspect he didn’t mean to kill himself, only to send his famous uncle a message. But attempted suicide is illegal. He will have to go to court. Even the nephew of the great Beethoven, his legal guardian, is not exempt from the law,” he says, scowling. The other soldier nods in stern agreement. Karl looks down at

his boots and kicks off some dirt on the side of one with the tip of the other, as if bored.

Rudolf writes furiously in the conversation book and hands it to Beethoven. The master reads it and yells, “No,” a pathetic, strained cry, and covers his face with his hands and sobs, “How could you?”

Looking up sharply, Karl says, “Uncle, I could not stay at school. I’ve told you before. I’m not meant to be a student. I’m meant to be a soldier.”

Beethoven crinkles his face in confusion. The boy shouts, “SOLDIER, I WANT TO BE A SOLDIER!” and picks up a nearby conversation book to scribble his sentiments and shoves it in front of his uncle.

“But people don’t shoot themselves to become a soldier,” Beethoven says, trying to understand.

Karl shrugs. “I had debts. It was exam time and I was unprepared.” He continues to write while mumbling, “There was a girl...pregnant...And your overbearing manner. All too much.” He hands Beethoven his statement, hangs his head, then glances at a wall mirror and adjusts the bandage and fusses with his curls.

Beethoven slowly pulls himself to his feet and putting a hand to his chest, goes to the boy. “Ah, my heart, my heart,” he says and reaches out to him. “My heart goes out to you.” But Karl pushes him away so violently the poor man almost trips and falls. “It’s your fault. YOUR OWN DAMN FAULT!” the boy yells.

There are half-a-dozen gasps in unison. Runa catches my eye and mouths something from across the room. It might be, “Do!” But do what? Grab Karl and drag him away? Spare Beethoven this trauma? But The Dream Machine doesn’t change history, only permits us to be a part of it.

Or perhaps she has said “Go!” Maybe we should leave Beethoven and Karl to their family tragedy. But I can’t—I’m transfixed with horror and fascination in this Tchernikovian Now.

“My fault?” Beethoven turns to the others with a pained expression, the fleshy wrinkles of his face working up and down in spasms of confusion. “Did he say *my* fault? How can that be?” The words crack in his mouth. “After my brother died I went to court and took the boy away from his mother, Joanne, that harlot. You all know this to be true. I raised him like my own son, I adopted him, I fed him, I clothed him, I gave him a good home, I forgave him for stealing money from me. I—”

“*I, I, I*, it’s always ABOUT YOU, isn’t it,” Karl yells, “the great Beethoven, the great *master*,” his voice drips with venom. “BUT WHAT ABOUT ME?” and he pounds his chest. “You didn’t care what *I* wanted: *my* independence, *my* life. I became worse because you wanted me to be

better. I TOLD YOU,” he yells, screaming so loud the muscles in his neck go taut, “I WANT TO BE A SOLDIER.” He looks at the lieutenant for confirmation, but the officer just stands there, impassive. “But you wouldn’t let me, you insisted I go to the university, when I’m, I’m...*NOT FIT TO BE A STUDENT.*”

“No ward of mine will be a common *soldier!*” Beethoven retorts and stamps his foot on the last word. “You come from a long line of great musicians, your uncle, your great-grandfather,” Beethoven says, gesturing at the portrait of the dignified gentleman, who seems now to be surveying us with something like horror. “How will the world esteem a common *soldier* Beethoven, a *private* Beethoven, no less?” he says, and turns to his friends. “Am I not right? Is it not a God-ordained duty, a sacred cause, to look after this poor boy?”

“Of course,” says Breuning, adding hurriedly, “but this is different.” He takes the conversation book and says, while writing: “Karl tried to take his life...He won’t go on this way...So the military may be the best option. It is not...a bad life.”

Rudolf nods in agreement and shouts, “FOR THE BEST. KARL IS NOT A STUDENT, NOT A MUSICIAN. The life of a soldier can be rewarding. IT’S WHAT HE WANTS.”

But Beethoven gestures hopelessly, not hearing and too rattled to understand.

“Yes,” adds Schindler. “For the best.” Schuppanzigh, who has looked terrified since Karl arrived, also nods, as does the tearful Baroness, who murmurs, “Louis, my poor dear man.”

“No!” Beethoven says, but it is more whisper than command, there is no steel in it. He slumps back in his chair and shields his face as if fending off the terrible news. “I’ve done everything for the boy, put clothes on his back and food in his mouth, sent him to the best school—”

“And SPIED on me at school, and BEAT ME for no reason, like going off with friends or a girl...and... and...and,” he sputters, “and FORBIDDEN me to see my mother—”

At this the lieutenant comes to life. “Ah yes, the boy’s mother. I have a letter from her,” he says, and fishes into his jacket pocket and pulls out a crumpled note and hands it to Beethoven. “I almost forgot,” he adds sheepishly.

Beethoven scans it, then hands it to Breuning, who reads aloud: “It’s signed Joanna Reiss Beethoven. It says, *Karl has just come here. The person who found him carried him down from Baden. I beg of you not to let the doctor make a report, or they will take him away from here at once, and we fear the worst.*”

Breuning looks up. "Dated last night, right after it happened. She's afraid the doctor's report will alert the police, and Karl will have to go to jail."

"Too late for that," the lieutenant says. "He should have thought of that before he pulled the trigger. The Ministry knows what goes on, what the nephew of the great Beethoven has done. We arrested him last night. He will have no choice but to go to court tomorrow."

"I'm NOT STAYING here tonight," Karl shouts. "I want to see my mother!"

"Yes, yes, perhaps it is for the best," Rudolf says, eyeing the master anxiously, concerned for Beethoven's state of mind.

Breuning takes the conversation book, writes several lines and hands it to Beethoven. He reads it and nods, then looks away.

"I know a general stationed in Silesia," Breuning explains to us, "Field Marshal von Stutterheim. He is commander of the Eighth Moravian Infantry. Stutterheim is in my debt. I will make sure he takes the boy. Being a general's adjutant is a comfortable post and completely safe."

The others nod vigorously, grateful for Breuning taking charge.

Beethoven curls up in his chair, shrinking before our eyes. He has transformed in seconds from commanding and cheery to feeble and bereft.

"Is this why you came back here?" he mumbles, not looking up, more to himself than Karl. "To shame me? Make me feel guilty for this, this...*misadventure*? Better you didn't come at all. Better..." but he stops himself. "There is nothing more to be said. Just go." And he waves Karl away with a flick of his hand. "Go."

"Yes, it is time to leave," the lieutenant announces on cue. "I have the summons; the boy must proceed to the police station. He will need money for a defender. And—" he looks at Rudolf, "—extra money if you want to keep him out of jail and this whole business out of the papers."

"That won't be necessary, Lieutenant," announces Breuning. "I am Assistant Minister of War," he says. "We will take care of the matter."

"Sire, it is not for me, it is for the others," he replies, with a barely concealed smirk. "Silence is costly."

Rudolf looks to Beethoven for guidance, but the great man hears and sees nothing, his face is buried in his hands. After a moment's hesitation Rudolf digs into his coat pocket and pulls out a roll of banknotes, from which he extracts several bills, and hands them to the soldier. "One hundred fifty gulden. I assume that will do," he says.

"Two hundred will do better," says the lieutenant. Rudolf frowns but takes another fifty gulden note and hands it to the soldier. The man stuffs

the money in his jacket, nods to Breuning, takes Karl by the arm, and starts to walk with him toward the door with the other soldier.

But Karl spins around and runs to Beethoven, kneels on the floor and takes the old man's hand and kisses it. Beethoven looks up, surprised. "I am sorry," Karl says. "SORRY."

Beethoven nods weakly, and rouses himself to pull the boy close and kiss him on the forehead. "So sorry," Karl whimpers in Beethoven's ear, so softly we can barely hear it.

"We must go," says the lieutenant. Karl rises slowly and crosses out of the room with the soldiers. We hear them clomping down the stairs. Beethoven looks at the empty doorway, not hearing their disappearing footsteps, perhaps thinking Karl might reappear, that this is all some horrid dream, then shuts his eyes and folds inward as if emptied of air.

Rudolf gets up and approaches Beethoven, kneels down and gently takes his arm. "It is for the best. FOR THE BEST," he says in Beethoven's ear.

Beethoven is quietly sobbing.

"We should go," says the Baroness, dabbing away tears. "Schindler and Sali can look after him." Reluctantly, as if the festive spirit that was so alive in this room over the last hour is still stirring somewhere, just out of reach, we look to the maestro. The great man, sobbing in his chair, seems finished. How can we abandon him now?

But Runa, as if sensing my concern, points to the door. The group gets up as one to leave, the others pulling on their great coats Sali has hurriedly assembled from the anteroom and together we walk out of the salon. I turn around for one last look. Beethoven is still buried in the chair, an arm covering his face as if awaiting whatever further blows life will deal him.

Outside the storm has picked up, rain slashing down from a sky the ominous purple of a bruise. Runa and I say goodbye to the others and walk, setting our shoulders into the torrent, to a café down the block, Linzer's, the sign reads, flapping in the wind.

"Unbelievable," I say, buzzing with excitement as we enter and wipe the rain off our faces and find an empty table. "Amazing, incredible. We saw Beethoven, spent the afternoon with him, watched him laugh and cry. It works, Runa, the program, The Dream Machine, everything *works!*" I go on like this, almost shouting. An older couple at a nearby table turn briefly to stare at us as we seat ourselves. "This is incredible, historic," I whisper. "And you were there with me, you played the *Kreutzer* sonata with him, he kissed your hand, I turned pages, there was Rudolf and the

famous Schuppanzigh and the others, it was fantastic, tremendous—” I babble unawares, until I feel a hand on my forearm.

“It was tremendous. But there are still problems.”

“Problems? What are you talking about? What problems?”

She continues to rub my arm while fixing me with a consoling look.

“I shouldn’t say this, it violates your Rules. But it needs to be said.

Seeing Beethoven was wonderful, yes. But all the things that went wrong? That crazy business with Schindler—we saw him threatening you—and your description of the quartet that hasn’t been written yet and sticking your nose into the symphony and poking around the library? Did you think people wouldn’t notice? And the awful scene with Karl? Is that how you want to remember Beethoven, all bent over like some cretin in an asylum?”

“Of course not. But it was *real*, the stuff of history, life by the throat. And what if I can relay what we saw to the denizenry? Maybe that would inspire them to rise up and tear the Authority’s dead hand from our souls.”

“By telling them he was drunk and cried like a baby? Or that he quoted from Dostoevsky, who was—what?—five years old in 1826? How would you explain that? And turning pages for Beethoven? Please. Wouldn’t he have committed his own music to memory? He wouldn’t have needed a page turner.”

That stops me. But Beethoven was, after all, 56 and ailing, I start to point out, his memory might be slipping. But Runa’s not through.

“And worst of all, that new symphony he showed you. It wasn’t true. Those supposed fragments of a Tenth Symphony they found in a Bavarian college? A phony. Even a school child knows there are only nine symphonies.”

The Tenth Symphony! How could I have forgotten? I must rush back to get it, before the trip times out (which might be any minute!), and if need be pry the manuscript from the master. I must bring this monumental discovery, this “new gravitational force” as Beethoven called it, this orphic wonder, back to Destopia. The Authority might condemn me, even quiesce me, but the future will gratefully approve. And just maybe, like the Ninth Symphony revolutionized music and liberated art, the Tenth will galvanize the Dead Ones to liberate us from the Authority. That’s why Prospero has led me here. From just the little of it I’ve seen, the rude and shocking opening, I’m certain the Tenth will be the cannon that upends the canon, the tool to unrule, the art to tear the state apart which I have been ordered to find!

I jump up and dash to the door, yelling over my shoulder to an astonished Runa, “Stay here, don’t move, I’ll be right back.”

The pounding rain has turned the road into a quagmire, and I slosh through the mud dodging carriages and threading my way past a squad of soldiers, banging into one who shouts after me, “Idiot, watch where you’re going!” but ignore him and thump on Beethoven’s door until Sali finally opens it, alarmed. “I must see him again!” I pant, out of breath, but she raises both arms. “No, no, he is too upset, he cannot see anyone now.”

I rush past her and take the stairs two at a time. Schindler has heard the commotion and stands at the top of the landing guarding it like a sentry. “You again,” he says, scowling, “not finished spying? You’re not going in, not *this* time.” He blocks the doorway with his considerable bulk and moves to push me down the stairs but I slam into him, knocking him aside, and race into the salon, a man possessed, bent on securing the treasure of all treasures. There it is, on Beethoven’s writing desk! He is still curled up on the chair, head cradled in his arms, a pathetic figure who will be dead in six months from cirrhosis and pneumonia, twenty thousand mourners, the master’s immortality assured. Especially now, I think, with the deliverance of this new and mighty symphony almost at hand—from my hand to posterity.

I am tackled roughly from behind; it is Schindler. The monster is strong, he drags me toward a window. He plans to heave me out! I can’t dislodge him, he wedges me against the window frame. He is actually going to do it, the horrid beast. He leans back to mount his final thrust.

“This will finish you,” he grunts.

I reach around and with a sharp thrust of my hip shuck him off. He trips and crashes to the floor. Beethoven looks up, finally aware of the ruckus. I gather the score off his writing desk and looking crazed I’m sure, not caring, face ablaze with passionate purpose, yell at him to his astonishment: “I’M BRINGING THIS TO POSTERITY. THE TENTH BELONGS TO THE FUTURE!” and dash out the door.

Several policemen doubtless alerted by Sali are heading up the stairs but I race around them, taking the steps two and three at a time, almost knocking one down so that he turns to lunge at me but I sail past him and clatter down the stairs and out the door.

The storm has picked up still more, the wind whirling like small tornadoes, raindrops slamming through a thick fog threading the streets. The afternoon has gone so black that, stepping onto the mud-steeped Schwarzspanierstrasse, I can see only vague, blurry objects that seem swallowed by the scrim of the thick slanting rain. A shot of lightning peals just above sounding like the thousand drones of a Special Announcement. Someone shouts, “Look out!” A carriage veers into my side and knocks me to the ground. Music pages scatter in the mud and

peel off in the wind. I struggle to grab them. A horse rears up and brays loudly, its eyes alight with fear, and then bears down on me. I try to roll away but the thick mud grips me tight.

From the side of the road I hear: “George, George, you all right?” Runa scrambles toward me, but the driving rain swallows her too, swallows everything, sound, light, even air, I can hardly breathe, mud cakes my ears and mouth and nostrils, I gag for breath, so that I can barely make out a string of low vowels, a mournful litany, “Geeeeoooooooooorge,” thinning and receding, like a dream drained at dawn.

I was born in the Old Land, Southeast Sector, Quadrant 79, Zone 107, District 113 in the former Totenstan. But do not bother to search for it on a map: the territory was wiped out in the Second Holocaust. It was the Time of Terror, lawlessness spread across the continent like a fast-moving plague. When the Russo Horde invaded, my parents made a quick decision to send me to Old Glory. I begged them to reconsider. I had never been away from my family. I was terrified; we were all terrified. When I asked why I had to go, my mother hugged me and whispered, "There is nothing left for us here, only death. There, maybe life." My father was too sick and my sisters too young, she said.

I was only 15, shy and callow. They hired a guide, recommended by someone Father knew at the shop. Aleksander had experience, they said, he had taken dozens of refugees across the border. But this would be different: we would be fleeing an invasion, escaping across a warring continent.

I remember little of our leave-taking. It was Patriot's Day—the middle of winter. My father, looking frail and forlorn, gave me a heavy sheepskin cape to use as a sleeping blanket and overcoat; I wear it still. We all wept, my parents and two little sisters. It was the last I ever saw them.

Aleksander advised us there was only one way to make the trip, on foot. That meant walking two thousand kilometers. Other means of travel were too expensive or dangerous. Public transit tickets were hard to come by and risky: bandits were preying on trains and hijacking planes. Ships were heavily guarded and driving was impossible: the borders were closed and cars, trucks, and buses being set upon. In any case our faked documents might easily be detected.

We set out at night, in a driving snowstorm, taking with us only what we could carry on our persons and stuff into our backpacks. We stayed away from big cities and major roads, preferring the countryside where the population was sparse and there were fewer drunken soldiers and police. We could live off the land, Aleksander said. Of course, traveling off road like that made us more conspicuous when we did come across people, but he said our false papers were likelier to fool any unsuspecting farmhands and unsophisticated townsfolk we met.

Aleksander was in his late fifties, small but wiry and incredibly strong. When we came upon a downed tree blocking a narrow forest path, he tossed it aside as if it were a match stick. Other than ordering me to cook from our diminishing supplies or from what he could shoot in the woods or catch in the lakes and streams, he mostly ignored me. That was

fine: his scarred and pock-marked face was frightening, as were his occasional hungry glances. I was an innocent teen; I had never been alone with a strange man before.

One night, as we were setting up camp near a river (perhaps the Cheremosh, he never showed me the maps and I was never sure exactly where we were) he found a bottle of vodka tied up just below the semi-frozen water line, presumably left to cool. He took a rock and cracked open the top and gulped it down and tossed the bottle aside.

He looked at me in that awful way and I knew there would be terrible trouble. "Come here," he growled. I started to back away. He sprang at me and shoved me to the ground and stuck his hand down my pants.

"Get off. Please, I beg you," I shouted, but that only seemed to encourage him. "I have seen how you look at me," he rasped.

I kned him in the crotch. He groaned and rolled over and I jumped up and started for the river. I hoped if I could swim out a ways he might cool down and lose interest. But he caught up with me on the shore and threw me down on the sand and jumped on top of me. With his sour-musky odor and disgusting vodka breath, the scrape of his stubbly beard on my face and neck, the terrifying prospect of rape or worse—I started to give way like a captured animal when I felt beside me the half-cracked bottle of vodka, jagged edges like knives. I grabbed it and without thinking plunged it into his face. He roared and fell back, blood pouring from his mouth.

I had no choice. I finished him off with another thrust into his throat and watched him bleed out. It happened so fast. I did not know what I was doing. Was it murder? If so, he deserved it.

But that left a big problem. We were far from the Atlantic coast, and he knew how to get there and how to get us across the ocean. I didn't.

I fished the money and fake papers from his pockets and the maps, a small pistol and a supply of bullets from his backpack, and dumped his body, weighed down with rocks, into the river.

I left immediately. It was already close to dawn but I could not stay, I was petrified someone would come by and see his mutilated corpse bobbing along the shoreline.

I traveled ever more carefully now, foraging in the fields and venturing into small towns only when necessary, when desperate, to plunder garbage cans and dumpsters for food. I was hungry, cold, lonely, and miserable. But most of all I was frightened. Always frightened.

I traveled through forests and back roads, near villages and towns no one who had not lived there has ever heard of: Zhytomyr, Shepetivka,

Lviv, Krosno, Nowy Sacz, Biesko-Biala, Ceske-Budejovice, a grab bag of Old Land place names. They all looked the same: a town square, a business district, neighborhoods of small, sordid homes and squat six-story apartment blocks. I followed the setting sun, moving only after it dropped below the horizon. I stole food, fought with dogs for scraps, risked attack from wild animals including mountain lions and one time a wild pig that gored me in the leg.

They say your first kill is the hardest. Not so.

One night two men snuck up on me while I was asleep and attacked me in my sleeping bag. I emptied the pistol, killing one but only wounding the other in the neck. He tried to grab the gun but I beat him with it and strangled him in his own blood until he succumbed.

Worse than the attacks, which at least were fast, was the weather. It was the worst winter in a century: sleet, snow, blizzards, below-zero temperatures. During one long stretch I was sick with constant fevers and even, twice, frightening convulsions from lack of food and exposure to the elements and the constant tension and fatigue. Several times I ate something—mushrooms or toxic roots, and once I think what must have been rat poison I mistook for nuts—and almost died. I prayed for death, it would have been welcome. In my delirium I thought I saw my parents and sisters crying hysterically for me and got up to hug them and stumbled into ashes from the fire, burning my feet.

After several weeks I had regained enough strength to move on. I stole jackets and blankets and boots, usually from stables and garages but sometimes even the unlocked mud rooms of big homes, where barking dogs were always a risk. Twice I got run off someone's property, the second time almost killed by a shotgun blast that singed my cape. And when I finally reached Marseilles, after more than three months on the road, the ragged clothes hanging from me like a scarecrow, I was thrown in jail for vagrancy. A prisoner accosted me while the guards stood by and sniggered.

Finally I paid them off in jewelry Mother had sewn into the cape and snuck onto a ship bound for Old Glory and pretended to be working my way across. Almost arrested again when they challenged my papers. I promised to sleep with one of the guards, then hid out the rest of the trip.

My parents had given me a letter from a distant cousin living an hour north of Big Shoulders who was willing to sponsor me, so within 24 hours of docking in Big Apple harbor I was on a fast train west. It was the tricentenary anniversary of Old Glory, but there were no celebrations. Traveling cross-country you could see signs of unrest and incipient civil war: buildings put to the torch, mobs in the streets, troops in riot gear. During a half-hour stopover in a rail yard somewhere a gang of thugs

rushed our train, and were only repelled by our own cadre of armed guards firing on them. One bandit was killed just outside my sleeping compartment.

Big Shoulders was quieter, thanks to private militias that roamed the streets administering justice and executing criminals on the spot. I joined a civil guard that became the advance phalanx we christened the Hummingbird Collective which took control eight years later at GC/Z.

I aged decades in those hundred days. My awful journey west across the Old Land changed me forever, prepared me for our harsh Destopian future.

But even with all that preparation, that awful schooling in life's worst moments, I would not have ascended to my present eminence if not for one man, who mentored me through the university and promoted my career.

Later, when his world came crashing down, I tried to repay my debt.

VI. Bottoming Out

The mud gives way to an immense blackness, a nightscape dark and deep as space, empty as death, through which I fall.

I struggle to wake, to move, to scream, to see. But no muscles twitch, no sounds arise, no lights register. Another falling dream? No, I must be awake. How else could I taste the puke rising in my throat and feel the wind pleating my cheeks as I hurtle down another void?

Only now I sense dim apparitions and ghostly phantoms that flicker across my mind, terrible scenes one after another: a carriage driver viciously whipping a horse, ignored by passersby on a busy street; a woman burning at a stake, clutching a tattered bible, flames reaching up while she howls at her accusers; white-hooded figures roughly threading a noose around a terrified young man's neck and tossing the other end over the branch of a tree; riders on horseback sweeping through a village, setting the forlorn hovels aflame, their swords hacking the peasants who flee. And still more: a gaunt young man hoisted on a crude wooden cross, crying out as the guards rip nails into his hands and feet; a roomful of people gassed and incinerated, their ashes rising in an endless trail of smoke and vapors from scarred brick chimneys to an indifferent sky.

At this last hideous scene I seem to pause, as if in a museum slowing to inspect a painting, a canvas in which I myself appear, seated at an upright piano on a dark makeshift stage with a ragtag band of musicians playing half a dozen instruments. We are out of tune, struggling to play the tune (especially me, I don't even *know* the tune). A young woman at the front of the stage wearing a threadbare low-cut plain cotton dress grasps a microphone and warbles the song, from which a familiar melody takes shape. What is it? She sings it very slowly, with infinite shades of sadness.

Ah, now I can make it out:

*O Tannenbaum, O Tannenbaum,
You bear a joyful message:
That faith and hope shall ever bloom
To bring us light in winter's passage.*

A smattering of applause. Lights come on and I look out to see a few dozen men in crisp gray-green uniforms sitting at a few tables below, chatting and smoking and drinking, the terrifying Aryan symbol sewn onto the armbands wrapped around their sleeves.

"Very good, very good," one of them says, continuing to clap before he stands and walks to the foot of the stage. He is tall and

heavy-set, with blond hair that sticks out below his cap. His shirttail and a good deal of midsection bulge from his pants. With one hand he cradles a mug of beer. With the other he crooks his finger to the singer.

“Come.”

The others grow quiet to watch.

The woman walks slowly to the edge of the stage and looks down at him.

“Yes, Commander? Did you like the song?”

“Very much. It was beautiful,” he says with a dreamy smile. “Like you.”

I inspect her face: it’s worn down as if someone has taken a chisel and worked it to the bone, *below* the bone, to the hollows of the skull.

“Tell me,” says the commander, “do you bring a joyful message on this Christmas eve?”

“Yes Commander,” she says, very still.

“Ah, good, I’m glad. Can I ask a favor?”

“Of course, Commander.”

“Good, good. Can you bestow your Christmas blessing on our wonderful homeland, our fatherland?”

“Certainly, yes,” she says softly.

“Go ahead, then,” he says with a pleasant smile.

“Bless the homeland,” she says quietly. “Bless the fatherland.”

“No, no. Say, ‘*blessed*.’ *Blessed* is the homeland.”

“*Blessed* is the homeland.”

“Good, good. And the Reich. Bless the Reich too.”

“*Blessed* is the Reich.”

“And the Führer und Reichskanzler and Chancellor. *Blessed* is he.”

“*Blessed* is the Führer and Reichskanzler and Chancellor,” she says very softly. She remains so still it seems *she* is in a painting. We are all still, a still life of men in chairs; only the commander and the woman stand, the central characters in this drama, looking at each other; only her lips move, ever so slightly, producing a sound ever so delicate and quiet.

“No, no,” the commander says, slightly ruffled. He takes off his cap and slaps it on the edge of the stage at her feet. His hair is sweaty, his face red. Spidery purple lines thread across his nose.

“You know what I mean. Bless him by his full name, first and last.”

She stands mute, looking down on him as if taking pity. A lone tear trickles down her cheek.

“Say it!” he shouts. “Say... *the... name!*” and stamps his foot to the words. “Are you ashamed to say the name of the Führer and Reichskanzler and Chancellor? You know it, the whole world knows it. Say it! Say his name! Bless his name!”

She is frozen, except for a second tear that follows the first.

There is a low murmur of protest from the musicians, which stirs in me something as if I've awakened from a dream. I stand up. The piano bench under me scrapes, a good, clean sound. The commander looks at me, startled.

"What are *you* doing?" he asks.

I walk over to the edge of the stage and pause to look down at him. He looks back with a frown and reaches for his holster. I kick him in the teeth. Blood spatters, the soldiers jump up and pull out their revolvers, the musicians dive to the floor, there are shouts and havoc, screams and cries, shots, the lights go out, the sound recedes, darkness again, falling again, as if in a tunnel barreling toward the center of the earth.

And then it stops—the scene, the sounds, the falling—not a crash but a cessation. A bottoming out.

I gag and retch, and reach blindly for something to steady myself.

There is nothing.

No wall.

No light.

No sound.

No *thing*.

What is happening?

When I was writing The Dream Machine code, I'd often stop and ask: what is Prospero doing? I had a feel for the answer, all good coders do: the commands may have been numbers and simple statements, but their *inclination* was clear: *this* code set will immerse me in my surroundings; *that* code set will suppress the nausea of constant motion. I had rendered the question What Is Prospero Doing into a kind of acronym: WISPD, and thought of it as "whispered," it would whisper to me: This is what I'm doing.

But now nothing whispers to me.

Why has it gone silent?

I hold up both hands inches from my face but it's as if they're not there. Either I've gone blind or landed somewhere where the laws of physics and light have vanished. Only questions remain. What were those awful scenes I witnessed, like a highlight reel of horrors? Has Prospero run amok and sent me on some fantastic death trip? Or perhaps it's some dark turn of mind, some projection of my perverse id that's mangling the trip, much as Runa predicted when she said, so long ago it seems, and which floats through my mind now like a distant echo: It won't work. Won't work. Won't...work.

But it *has* worked. Had. Until now.

I reach out again hoping for support, but the only surface I can feel is below my feet, a hard, craggy floor pushing up against some kind of open-toed leather sandals I find myself wearing. Gone are the button-up brush boots I wore in Vienna. Also the frock waistcoat and striped trousers. They've been replaced by some kind of crude vest and loin cloth. Were the elegant Viennese clothes ripped off by the terrible force of my fearsome descent?

Rubbing my face I can feel growth on my cheeks: how is it in the span of minutes I've acquired a beard? I shake my head to clear these messy questions like cobwebs from my mind and squint hard to pick out some image, some clue. Anything. Sure enough, far off in the distance, I can just see what might be a shadow, a figure.

"RUNA!" I shout. The sound bellows forth, bouncing and echoing across the void: "Runa, Runa, Runa, Runa..."

Echo upon echo: there must be walls. Somehow that's comforting, structure and containment after my long and frightening descent.

I wait for an answer, but all I hear is a quiet hum, as if...*what?* I take a tentative step. The noise stops. I turn back. The noise resumes. There *is* a source, from which comes a sound, some activity, some person or thing.

I listen more carefully, cupping a hand and angling an ear in the direction of the noise. The humming is irregular, like random sighs or suspirations. Someone is... *talking?* Another step. After diving through the mud and hurtling through the abyss, just putting one foot in front of another is a relief, step by tentative step, until I bang my toe on something hard and shriek in pain, a sound that reverberates and echoes across the void. I reach down to examine the object. I am still sightless, but I can feel its heft and shape, a rock the size of my hand. Its very *thingness* is a comfort, a talisman, the solidity and weight of which provides a reassuring security. I pick it up.

The noise grows louder. There *is* something out there, an "other," whether thing or person I'm not sure.

What can it be? I shudder with anxiety, then tell myself: be calm, stay unafraid. The safety features *must* be working, after all, my digital Hippocratic Oath (<<doNoHarm>>) is embedded in the base algorithms and written into countless lines of code.

And yet: I fall, I gag, I retch, I stumble, I hurt, I scream. My irrational mind reverts to college philosophy: "I refute it thus," said Dr. Johnson after kicking a rock, to deny Berkeley's argument for the non-existence of matter. Thus the rock, kicking *me*, refutes the safety measures embedded in Prospero.

The noise grows louder, more insistent, a deep, rhythmic grinding sound, like a drill. That must be it! I've fallen into a sinkhole, a mine shaft below 19th century Vienna where the miners can help me—out of this nightmare.

"Hello," I yell, tentatively, and then with more force. "HELLO, HELP, is anyone out there...out there...out there?"

The humming noise stops. I hold my breath and squint in concentration. The sound was, after all, a beacon, leading me *somewhere*. Now I am back in the void, steeped in nothingness, faced with—

A giant ROAR...from just ahead...a massive beast rounds a corner...races at me...rears up...towers overhead...jaws wide... teeth bared...nostrils flared...blazing death. The monster swipes at my face. I duck, but not enough; the giant slices skin from the back of my neck. It rears up to finish me. In desperation I fling the rock in its face. It glances off the beast's nose. It bellows in pain and fury, then rears back to finish me off but I dash past, adrenaline and panic and legs churning, the beast pivoting behind me.

There's a pinprick of light ahead! I can make out contours and curves in the passageway that I take full speed, the beast gaining on me, the light growing brighter, the opening getting wider until I burst outside into the cool air. The bright yellow sun blinds me but I can just make out a green field ahead, spotted with leafy trees.

Another roar! I look back and there it is, galloping on all fours, a giant bear! I stumble and fall and the bear towers over me again, ready to strike! But instead of my life flashing by, a forest of spears flashes down from somewhere overhead. I hear several missiles hit—thwap! thwap! thwap!—and the bear rears back, roars again, and topples over on me just as a rock crashes against the back of my skull.

Darkness.

At some point—I don't know when but it seems from the sense of long, enervated sleep like a great deal later—I awaken to a rippling light that registers dimly from behind. Gradually I become aware that I'm lying on some rocky ledge, from which I can see the interior of a cave. A searing pain pulses behind my left ear. I lift my arm to rub it, but a hand restrains me. I look up and see a thickly bearded man staring at me.

"Nah," he says in a hoarse whisper. "Nah brahn."

Another dream, not falling this time but floating lightly alongside reddish motes of dust or dirt dancing in a veil of semi-darkness. I reach out to touch one, gingerly, to caress it in my hand, so pretty, like a garnet, but it pops like a bubble and disappears, replaced by a stab of pain.

My eyes flutter open. The man is standing over me again. Or still—I have no concept of time. His beard is thick, matted, mottled gray and black. He smiles and I see his teeth are discolored, twisted and chipped, a few missing. He wears a vest made from what looks like animal hides. I can smell the strong musky odor of some forest creature on him. On his chest is a necklace shimmering with white beads and small shells, bones and teeth. It dangles in front of me, glinting against his light brown skin. I gaze into it, mesmerized.

He speaks again, a series of monosyllables I can't make out. Is this a language Prospero can't decode? The man's appearance—the wild, matted hair and beard, the skewed teeth, the animal odor from his garment, the unintelligible grunts—is fearsome. But his smile is friendly and the soft brown eyes somehow comforting.

I mumble a question.

"What? What is it you ask?" the bearded man asks, slipping into English and cupping a hand to his ear. Thankfully Prospero's translation algorithms seem to have figured out this man's rough language.

"I said... where are we?"

"Here, of course," he answers, smiling: what an odd thing to ask. "But you must sleep," he says, turning serious. "You have been through a difficult journey. You are in pain and exhausted. So sleep. Sleep." He rubs a palm greased with some strong menthol-smelling ointment across my face, and his gentle fingertips command my eyes to close.

I sleep and wake and sleep again—it's hard to say how long, time is dormant here, in the cave, marked only by the changing dance of shadow patterns I observe, in the brief intervals when I stir, on the walls and the waxing and waning of distant light at what I assume is the cave mouth.

When I awaken next he is looking at me again, the man with the thick beard and animal-skin vest. His smile conveys warmth and concern. Behind him, a short distance off, I see a few other people, dressed as he is, looking at me with curious interest.

"Better now?" he asks. "You are hurt where the bear sliced you. Or maybe a rock hit you. Or both," he says and laughs, a deep, rumbling, throaty laugh that brings a smile to my face. "But it will heal," he says. "Our people are impressed. You made a brave escape."

I nod. Was that what it was, brave?

"But we are curious, the tribe," he continues, his forested eyebrows lowering, his face screwing into confusion. "How did you come to be *in* the cave?"

It's my turn to laugh—that would be hard to explain, even if I knew—but the laughter provokes pain along my ribs where the dying bear

fell, and at the back of my head where it sliced me and I was hit by the rock. I groan and try to rub the spot, but the man lays a hand on mine.

“Nah brahn,” he says again. “Do not touch. I applied a poultice. It will heal.”

I smile a wan thank you and close my eyes, weak, tired and overwhelmed, trying not to think, because thoughts, I know, will lead to troubling questions better left unasked, at least for now. One surfaces anyway. Has Prospero crashed and left me stranded and time-wrecked on the reef of some distant shore with these...strange tribal people?

Runa will know. But where is she? I open my eyes and struggle to push myself up to look, but again the pain is overwhelming.

The man gently pushes me down and looks at me, his face tilted and his eyebrows raised in expectation. He had asked me a question. What was it? Oh yes: how did I get into the cave?

“I...I...don’t know. I...I’m...on a journey...and somehow I...I just...fell in.”

“Fell?”

“Landed there...in the cave...just...uh...dropped in,” I say sheepishly. Really, if it makes no sense to me, how can I explain it to him?

“And you say you are on a journey? From where?”

Should I tell him? He’ll think I’m crazy. But he’s right: I *am* on a journey, what else could this be? And truth is the basis for The Dream Machine, the premise of objective history on which all those lines of code were written. Besides, his eyes, a warm milk chocolate brown, invite trust. And I’m a terrible liar. If only Runa were with me; she’s so much better at it.

“Actually, I’m from a far distant place and time. Far away. You wouldn’t know it.” He frowns and I realize how...*strange*...that must sound. Is this surreal admission a mistake? I’ve made so many recently.

“Does that seem...*crazy*?”

He considers for a second, then says, “No, not really,” and to my relief smiles in his kindly, reassuring way. “I am the healer and tribal shaman of the Bear Clan tribe,” he announces, sweeping an arm around to take in his domain. “I too venture on long journeys. Not like you, falling into our midst. And not like the hunters who go off for weeks to track and slay the mammoths or aurochs or the giant cave bears like the one that almost slew you.” He shakes his head thoughtfully. “No, different journeys, *inner* journeys. Vision quests, we call them, journeys of the spirit, like the visits we make to the Cave of Ancients, the Dark Cave, filled with drawings that are the portal to the distant underworld. There we can dwell among the spirits and commune with the magic artistry of our ancestors who help guide us to our destiny. Maybe that is where you

were meant to go, *your* journey, *your* destiny. But you missed, you landed in the wrong cave.”

He chuckles at this possibility, exposing the edges of some snaggy teeth. “Does that make sense?” he asks, looking serious again. I nod, not really sure. But his kindly face, weathered like tooled leather, and his gap-toothed grin like Einstein and Bohr on the poster in my hab, summon a warm fellowship.

“Some people,” he continues, “a gifted few, perhaps yourself,” he nods at me solemnly, “are inspired to travel on this long and difficult road, a spiritual journey to the deep past, to meet with their ancestors and to reach the primal source—the beginning of all things, the heart of the universe.” He closes his eyes and cups them with his hands, a gesture like a prayer.

“Perhaps that is what you are doing,” he says, resuming his gaze, his kindly smile reasserting itself. “It is a sacred mission.”

“*A sacred mission,*” I repeat. “*To the beginning of all things.*” The words roll off my tongue and spin aloft as if finding their place on a pedestal.

I recall the prehistoric brooch in my Destopian hab carved into a decorative “G” by some ancient artist in some pre-historic era. If I’m now in a world of mammoths, aurochs, and cave bears, is that how far back I’ve been sent? But why? What is it the Healer said? *To find my destiny.* If only I knew what it was. But Prospero must know. I just have to listen for its whisper.

“Yes,” he says with a benign smile. “On a mission to see us, here and now.”

“To see you,” I repeat. “But tell me, *when* is this here and now? What...*year* are we in?”

Blank look. “Year?”

Of course. There is no *year* in their understanding and language, no calendars scrolling on their prehistoric cave walls. “Well, what season then?”

“You have no idea?” He laughs. “You really *have* come a long way!” He leans back and in something of an oracular voice declaims: “The third season of the fourth sun cycle after the moon last died.” I detect a hint of vanity in his tone, a puffing up of his chest, a pride that seems somehow out of place in this ancient setting, as if pride were a modern emotion. But then his voice reverts to normal. “That also is my mission,” he explains, pointing to some astrological markings on a nearby wall, “to track the passing weeks and months, divine the harvest time, cure the ailing sun and moon when they pass into darkness. And heal the sick, as best I can. Like you.”

He looks up and makes a curious face, a grim smile, and says quietly, “He comes.”

“Who?” I ask, and in answer I hear behind me a voice, guttural and commanding. “He is awake,” the voice says.

I try to look up, but pain ripples through my neck and sides like a carbine laser jolt.

“This is the tribal chief,” the Healer says, laying a hand on my shoulder. “Do not stir. You are still weak from your journey.”

The Chief peers down at me from behind. All I can see of him is an upside-down mask with forested eyebrows for a mouth and two nostrils that make up strange protruding eyes. Then he withdraws. The two men move off to talk. I can make out snatches: “Cave Bear Man...strange journey...doesn’t know...” Fresh anxiety and exhaustion overtake me and I descend again into the protective embrace of sleep.

I awaken sometime later, how long I still can’t say. Time, once the crux of my program, has become unmoored—as have I.

But at least I feel stronger. I sit up, slowly, to take in the place. Beneath me is a rocky outcrop, a ledge that extends from one wall, on which I’ve evidently been convalescing. On it are tamped-down leaves and grass that give off a sharp mossy smell, fresh and clean, making a crude bed. Up near the mouth of the cave is a fire tended by two young men. One of the men looks over and nods pleasantly. He has a flat, broken nose. The other man, who has thick, anvil-like arms, says something and they both laugh.

Other people, perhaps two or three dozen, sit chatting or are busy at some task. Dogs poke their way in and out of the cave. One, looking a little like our family mutt MacGuffin, even approaches, tail wagging, sniffing curiously. When I reach out to pet him he issues a sharp bark and skips off. Several women look up and smile. They are scraping and carving what look like arrow heads from a large pile of chipped rocks. Other women are using stone awls to sharpen long sticks of wood, like spears.

They’re all dressed more or less the same, like the Healer, wearing vestments made from gray or brown skins. The men are bearded, mostly long and full like mine but some scrubby and short or even wispy. The women have long hair and earrings and necklaces laced with beads of tiny shells or animal teeth. With their leather vests and leggings and bejeweled outfits, I imagine they could fit in readily in some stylish hippie commune in the far distant future.

Glancing down, I see that I have on the same outfit. Once again Prospero, that impeccable couturier, has dressed me in the fashion of the day.

I notice the others sneak occasional glances at me, so I smile and nod. They giggle and turn away, only to look back and comment, remarks I can't hear but can imagine: *Look at the stranger, the Cave Bear Man. Somehow he escaped the cave bear. It is said he comes from far away. The Healer says he is on a spiritual journey. The Chief says...*

What *would* the Chief say? Perhaps something more dire.

Arranged along the walls and anchored by bones driven deep into the stone at regular intervals are crude shelves of planed wood that appear to store the tribe's possessions, for I see piled on them clothes, tools, weapons, cured meat, even what look like musical instruments. Beneath are dozens of sleep pallets and bedding like mine.

There is also along the cave floor a large pile of wooden pieces, dolls made from wood and cloth, maybe hemp, with strings of some kind tied to them. Puppets.

Everything seems neat and tidy. I half-expect to see the old shop class sign: "Everything in its place and a place for every thing."

A gaggle of children of varying ages race in from outside, out of breath, and seeing me awake, pull up short to stare.

"Hello," I call out cheerfully. My spirits are on the rise. I may have been cast into the far reaches of the past, a Robinson Crusoe lost in time, banged up and nearly wiped out, despite The Dream Machine's failsafe features. But unlike Crusoe at least I'm among domestic and friendly creatures. I've survived a cataclysmic fall and a near-fatal run-in with a giant cave bear. I'm alive, witnessing something no one else has seen in—how long?—maybe tens of thousands of years.

A girl perhaps 10 or 11, taller and bolder than the others, approaches cautiously. "Who are you?" she asks with a frown.

I have to stifle a laugh, she's so serious. "My people call me George. I come from far away."

"The Healer calls you Cave Bear Man. He says you came out of the Bear Cave. No one survives bare-handed against a cave bear."

"Really," I smile. "Glad I didn't know that."

She smiles back, a beautiful, dimpled smile.

"They say you saved the tribe."

"Oh, really? Nice to know."

"But what were you doing there, in the Bear Cave?"

"Uhm..." Before I can think of a convincing answer, a woman near the front of the cave calls the girl, a name I can't make out, and she backs away without taking her eyes off me, strange creature that I am.

Perhaps emboldened by the girl, a boy about the same age emerges from the group to show me an object, some kind of animal bone with tiny holes punched in the sides.

“Try?” he asks, his eyebrows hiked up and his mouth twisted in a sly smile, and hands it over.

“Uhm...” I twist it this way and that and knock it on my knee like a drumstick.

The children howl with glee. What a goof the Cave Bear Man must be! “Not that way!” he laughs and holds his hands up to his mouth and mimes a whistle.

Ah, a bone flute! I put it to my lips and blow. The squawking sound sets off another torrent of laughter.

“Here, like this,” the boy says. He takes it from me and tootles a pretty little tune. The children grab puppet toys from the large pile and dandle them about so that one—a bear—seems to be menacing the boy and girl puppets. Then they start singing an ode:

*The Cave Bear Man
Ran through the cave,
And led the bear to our arrows.
And so the man
Has saved our tribe,
But now awaits more perils.*

*He says he's from
A distant place
He's on some sacred travel.
If that is so he needs to know
There's more he must unravel.
Un-raaaaavel, un-raaaaavel...*

The children scatter amid more laughter and I smile at their nonsense tune and becoming playfulness. Children from every place and time—always the same.

But my smile fades and again I'm left with troubling questions. The first trip, to our childhood home, lasted exactly as programmed: one hour, sixty minutes, 3,600 seconds. But the second trip, to Beethoven's Vienna, led somehow to this distant past. It seems I've already been here hours, maybe days. How is that possible? Another question: Back in my Ingleside Avenue hab, seated in the closet Command Post, next to but evidently no longer tripping with Runa, I should be subject to the normal functions of the human body: eat, sleep, pee, shit. Have they been suspended? Or is my sense of time so drastically altered I don't know how much time has elapsed—like in a dream?

And what of Runa? No sign of my stalwart clin, last seen coming to my aid on a storm-washed Vienna street in September 1826, thousands of years in the future.

But those are almost trivial concerns, *how* questions, mere logistics. Far more important is *why*: why here, why now, in this distant place and time? It was a mystery.

Back in the hab, just steps from the Command Post, was my treasured collection of prehistoric rocks. As a boy I would turn them over in my hands and gaze at them in wonder at the distant reach of time and humankind's oh-so-brief voyage through it.

One of the rocks I had acquired, sitting now on my Destopian shelf, mere feet from my closet Command Post, fashioned roughly as a small spade, was labeled: "Mousterian (Neanderthal) Tool, Multicolored jasper, Fantmaure (Velliches) France. ~ 70,000 years old." I had contemplated it with awe, a stone linking me to some Stone Age maker almost three thousand generations back.

Two other ancient pieces surrounded it, both gifts from Liz: the stylized G of some long-ago George and a small fertility doll she called *Ur-Woman*. The doll was about the size of a fist, consisting of a series of widening spheres—featureless head, pendulous breasts and belly swollen presumably with child, wielding a spear or torch in one hand and a knife in the other, all of it bejeweled with glinting jade—sculpted twenty or twenty-five thousand years in the past.

One a tool or weapon, the others some kind of art or ornamentation, each of them crude to modern eyes. Art and weapons: the mainstay of civilization, the deepest expression of the human tribe's desire to understand, need to express itself, and lust to conquer. *Homo sapiens*: the people who know; *Homo extinguos*, the people who kill.

I had daydreamed of going back in time to witness cave paintings, the first art, and tool-making, the first science, of the people who produced it, our far-distant ancestors.

Later I began to think of Orkestrate as another form of art, to which cave paintings were a distant model and inspiration: the thrill of being the first in some monumental work, the sense of beauty and wonder that simple bits and bytes could accomplish, like the dabs and daubs of paint on ancient walls.

There was a museum exhibit, "Scenes from the Stone Age," which as a boy I had visited. Holographic dioramas illustrated how ancient people hunted, fashioned tools, raised children, practiced religion, and produced their exquisite paintings. Experts shared their latest findings.

"Cave paintings were the creative Big Bang," explained one French paleontologist in an ed vid. "It was where art and imagination began."

One wing of the museum was made to look like an ancient cave, guarded by life-size hologram representations of two Stone Age people, a man and a woman, dressed just like the tribespeople here in *this* place, peering out at us museumgoers with a sense of wonder. I gazed back at them the same way. It was like time travel—twenty thousand years in a flash.

But here's the mystery: for all that imaginative fixation, the free association of my youthful fantasy, I never programmed this trip.

I have no business being here.

Maybe Prospero has divined my early fascination and sent me here for some reason, perhaps the same reason Beethoven extolled returning to the past. All this is conjecture. But the fact is that clearly I'm no longer in control of the program—it's in control of me. If today I am neuromarched thousands of years back to a bear cave, tomorrow I could wind up in some space probe approaching the sun or in some death camp approaching the gas chamber. Does Prospero know what it's doing? Or has the spaghetti code finally tangled itself into an impenetrable knot? Has the coding's whisper devolved into incoherence?

Another chilling possibility: The Run Report is programmed to capture my thoughts, including these anxieties and misgivings. Could that ambivalence, like some sort of neural disarray, throw the program into dysfunction mode? Could it alert the Authority? Could they be coming after me in the form of a killer bear or a hostile Chief?

As if the thought conjures him, the Chief appears at my side, accompanied again by the Healer. "Feeling better?" the Chief asks. He is short, like the Healer, like most of the men I've observed, but more compact and broadly muscled, with a face squared off as if by a chisel and framed by a long dark beard.

"Yes, yes, much better," I say, trying to sound cheery, careful not to share my apprehensions. "Thank you for your kindness nursing me back to health." I make a slight bow, not knowing if that's the right protocol but guessing it's a gesture as old as humankind.

"That is good to hear," the Healer interjects. "I told the Chief you are a spiritual traveler. He is interested in your story and wants to hear more."

"*Spiritual traveler*. Yes, interesting," the Chief says. "But what does that mean?" He asks this with something like a smile, but I can see the glint of steel in his eyes and the grim set of his mouth. He crosses his arms and waits for an answer.

I choose my words carefully, aware that to speak of the future is a violation of the Rules—but so is lying. It's the lesser-of-two-evils choice that Runa had asked about, before we set off on the first trip, which I had

dismissed out of hand. That will never happen, I remember saying. Well, here it is. Were she with me now, after chiding me about being wrong, Runa might develop a clever strategy, a way to square the circle. My trusty clin would be good at that. But she isn't around; I'm on my own.

"Yes. I've come from a world...that is very distant, far away in place...and time." That's truthful enough, it's what I told the Healer, more or less. He seemed to understand it, had even endorsed it, had called it a "sacred mission." But the Chief furrows his brows and looks doubtful. Notwithstanding the Healer's grasp of some future, maybe the concept is hazy, alien or unknown to them. Perhaps there *is* no concept of future here—beyond the next harvest—or if there is, certainly not visitors from its distant reach.

The Chief uncrosses his arms and points a finger at me. "You are a stranger among us, and as such entitled to our friendship and help, which you have clearly benefited from," he says, looking me over critically. "And we are deeply beholden to you for bringing the bear into range of our arrows and spears. It has been a long winter and we might have starved without the bear meat you helped us secure." He acknowledges the debt with a cursory smile and vague nod.

I note with some surprise his courtly speech and shrewd way of thinking. But maybe I shouldn't. Evidently these cave people weren't as primitive as we like to think. Our Stone Age ancestors were in every respect as alike to modern humans as we are to our own families, I remember learning as a kid at the museum exhibit "Scenes from the Stone Age," and certainly better able to deal with their world than we Destopians, who can barely fend off the thuggish Authority and navigate our alien environment.

"Still, there is something...*strange*...about your story," the Chief continues with a pronounced frown. "We had surrounded the cave day and night for many days, the whole of a moon cycle. It would not have been possible for your presence to go unnoticed. And yet no one, not a single hunter, saw you enter the cave. In fact, no one has *ever* seen you. You claim just to have *arrived* at the cave, as if by magic. That is a very strange magic indeed. You should know that magic is something we take seriously and practice very selectively, in our tribe, limited to a privileged few," he says, gesturing to the Healer and training his cold smile on me like an accusation.

"What I have suggested," interjects the Healer, in a friendlier tone, more in the spirit of genuine wonder and enlightenment, "is that your spiritual journey as you describe it might signify a rare and wondrous talent. Perhaps we can learn from it, and use it for the benefit of the tribe.

We would like to see a demonstration. What we would like to know is, can you show us your spiritual gifts?”

“Yes,” the Chief adds. “Let us see this magic.”

I look at them waiting for a reply. But what can I say? I have nothing to show them. All my wondrous gifts and grievous faults, such as they are—loving clin and disappointing son, software prodigy and failed academic, starry-eyed dreamer and distrusting misanthrope—are bound up in a Destopian future which they are as many degrees from understanding as there are generations between us, and thus could *never* understand, which *I* have trouble understanding, except in motivating my passionate desire, my one hoped-for source of magic: to construct the engine that can escape and maybe overthrow that dark future.

Somehow His Dadness comes to mind. Strange how often that happens, a sudden paternal intercession from the recesses of the past. He is saying, as he often did when I was perplexed or in trouble, *Son, don't be uncouth, just tell the truth!*

It was pompous and patronizing, but not bad advice. Away with doubts! Impress them with confidence, with believability. I could make something up but, clever as they are, they'd see through it. I really have only one card to play. Time to play it.

I have been sitting up on the outcropped ledge that is my sleep pallet. Very carefully and with great effort I force myself to my feet. Even in my improved state of health it is still a painful and weary process, and they watch, fascinated it seems, to see whether I can manage it.

Not very impressive, yet from the widening of their eyes I can tell they are surprised by my height, as I rise and lumber toward and tower eight or ten inches above them. I'm hoping the truth will have a similar impact.

“My gift is very powerful,” I say and ball my hands into fists as if to conjure the magic and strength I (barely) possess. “I can foresee what happens to *your* descendants, and *their* descendants, and the worlds they will inhabit, for *thousands* of generations to come. I come from the *fu-ture*—” a word I pronounce with both syllables for added emphasis, a slow-rolling portent, and widen my arms so that I look like some pterodactyl taking off to emphasize the point, “—like your tomorrow, only many, many, many thousands of tomorrows removed.”

The two men look at each other, staring blankly, impressed or uncomprehending, I can't tell.

The Chief turns to me, his forehead creased in confusion. “I can remember the elders from my youth talking about the time far *before* our time. But you're speaking of a time far *after* this time, which you call this *foo-tcher*. Is this something you divine, like a false shaman, or are you

actually somehow *from* this foo-tcher?” I can tell he seems already to have decided on the answer, from the hint of a smirk on his cheeks and the corner of his eyes, a little like the disbelieving and belittling smile my father might have flashed when I’d craft some similar fantastic tale.

“I told you, he has the gift,” the Healer says without taking his eyes off me.

“Maybe. Or—” and the Chief takes a half step toward the Healer and lowers his voice, so I can hear only a few words, “—false prophet... deceiver.”

“Explain then how he survived the bear,” the Healer whispers back.

“Yes,” the Chief nods, and turns back to me. “How *did* you survive the bear?”

Hmmm. On shaky ground here. I could say I cast a spell. That would bespeak my magic, but obviously it couldn’t have been *much* of a spell, since I barely survived the beast’s assault. I would have been bear meat without the tribesmen’s intervention, and in any case, they might want to see some demonstration, some proof. They might throw me in with a cave bear!

No, better to take a deep breath and, as Dad advised, tell the truth.

“Pure luck. I grabbed a rock and threw it, and it hit the beast right there.” For some reason, feeling a little brazen, I lean down and lightly touch the spot between the Chief’s bushy eyebrows. He blinks. “And as the bear reared back, I ducked around him and raced out.”

“Hmmm,” the Chief says again, pursing his lips, chewing on this unlikely story. “One more thing,” he says. “Tell us about this world you come from, this...this—” and he stumbles again trying to pronounce the word, “*foo-tcher*.” The alien concept impedes his tongue.

I smother a smile, careful not to patronize them. Would they even recognize such an attitude? Better not to risk it, better to acknowledge their confusion and stick to the awful facts.

“It would be hard to describe, it is so different from here. Not the people, people are always the same—same love and hate, same angels and demons, same heights and depths.” They glance at each other warily. Got it: don’t overdo the windy platitudes!

“But the objects,” I resume quickly, “the *things* we’ve devised, the tools and weapons, are so brilliant and advanced. And the art—music, paintings, dance—so very beautiful. Before they were banned, that is.”

“Banned?” the Chief asks. “What is that?”

I hesitate. Perhaps this is territory best left unexplored.

“Forbidden,” the Healer suggests, “like the poison plants along the shore?”

I nod vaguely while my mind whirls in search of a convincing explanation. How can one explain the Authority's illogical logic? Certainly not a mere Den One.

And yet an analogy they might understand springs to mind. "Art is like magic," I say at last. "And in our world, there are two types of magic—good and bad. Our leaders guard against what they call the bad magic, which is anything that could rouse the people to action. Inaction is the essence of our lives."

They both look confused. "You do...nothing?" the Chief asks. "Your tribe doesn't hunt? Fish? Make tools? Make clothes? How do you live?"

"Everything is done for us, the great majority of our tribe. We have no work. It is all play." I smile hopefully. For some, that would be a utopic vision, or at least fun. But the Chief appears unpersuaded. He pulls the Healer away to confer again, this time turning their backs so I can't hear. It seems they disagree: their discussion grows more animated, even heated. Maybe they're arguing about what to do with me. Little wonder: I'm a complete stranger—an outlier in some prehistoric tribe, who has somehow arrived in their midst as if by magic—and beyond that, someone who claims to have returned from this strange and incomprehensible place called the *foo-tcher*. In their society, I can imagine, that makes me godlike, and therefore a threat to the Chief, or an evil spirit or sorcerer, a witch or demon, and thus a threat to the Healer. Maybe I should have lied after all, should have said I had wandered in from two valleys over.

They return to my side. "So then," the Chief says with an air of finality. "We will let the tribe decide. You will come to the tribal meeting tonight. Tell *them* your story."

I smile, trying to appear unconcerned. "Oh? Decide what?"

"What happens to you next." They turn to leave when something occurs to me.

"Wait," I yell. They stop and turn back.

"The Cave of Ancients? The paintings? The Healer described them to me. Would I be permitted to...to visit there?"

They look at each other.

"He said it was where you go on your vision quests, a portal to the underworld of the even-more distant past. That is what I'm on—a vision quest."

The Chief sizes me up, like food on display. It's not a pleasant sensation.

“We will see,” he says, and turns to leave. The Healer looks at me with concern, or maybe something more reassuring, but I can take no comfort from it, before he too walks off.

I look out at the others, but they avoid my gaze. Even the children have slipped away, deserting the strange man whose story is so un-credible: man arriving back from future men.

Concerned and exhausted, I return to my pallet and try to let sleep enfold me, hoping that sleep might release me from this dream. But isn't that the opposite of sleep? It appears I am now a prisoner of my own dream, and it is turning on me.

If this is another trip—and what else could it be?—there should be nothing to fear. But still, I can't help but feel anxious. What if I disgrace myself at the tribal meeting and they tie me to a stake and set it aflame? Would I feel the licks of virtual fire creeping up my body? Would I awaken in my Destopian hab before I burnt to virtual death?

I awaken instead to a nudge. A woman is standing over me, lightly shaking my arm. It takes a moment to focus, to take in the whole of her. She is large and squat, with a squashed face like someone has taken a press to it. She has thick lips, a wide, flaring nose, forested eyebrows. Her eyes are wide set, her complexion pale, lighter than the other tribespeople. She looks vaguely savage, almost alien, and yet she reminds me of someone I know but can't place.

“Goshem,” she says, tapping her chest. With her other hand she holds out a piece of meat, the sight and smell of which triggers a stomach-clenching hunger. I realize I'm famished.

“For me?”

“Eat.”

It is some sort of charred fowl, or maybe the bear meat I inadvertently had procured for the tribe. I take it and bite off great chunks, swallowing so fast I start to choke and cough up a piece of gristle.

“Bite small, chew slow.” She hands me a wooden gourd filled with water. I gulp it down. The taste is exquisite, pure and clear with the slightest tang of fruit, perhaps raspberry.

Hunger satisfied and thirst slaked, I look back at her in appreciation, smiling at her strange language, simple yet solicitous, something my mother might have said when I was three or four: “Be careful, Georgie. Take small bites, chew your food slowly.”

Goshem hands me a wet rag, a piece of hemp cloth, to wipe my face and hands.

“Leave now. For cave.”

“What cave?” I ask with concern.

“Cave of Ancients. Chief says.”

Dark Cave, the Healer had called it. Why had I asked to go? Something about a vision quest. It had sounded thrilling and important then, part of the journey Prospero has arranged for me. Now it just sounds sinister, like a tribal myth or children’s horror story: the Wild Wood, Forbidden Forest, Mystic Mountain.

“Is it...is it safe?”

She smiles and nods. “You will see,” she says and turns to leave. I stand up, this time with less difficulty, and follow her. The others watch us head off.

At the cave entrance I pause to look outside. It’s my first glimpse of the wider Stone Age world in which I’ve been imprisoned since the frantic escape from the bear, after which I lay barely conscious for some indeterminate time that seems like days or even weeks.

Goshem heads out from the cave mouth at a brisk pace, and I hasten to keep up as we emerge into the bright midday light, from which I have to shield my eyes. For someone who was attacked by a bear and hasn’t walked for some time, shod in unfamiliar vestments and loose-fitting sandals, finding himself somehow in these strange, exotic surroundings for reasons beyond comprehension, I’m pleased to feel fairly strong and steady and happily surprised at my ability to match my strange companion stride for stride. Breathing in deep drafts of the sweet air, taking in the wide and bucolic setting, reveling in the rolling green fields in front of us, the groves of tall leafy trees on either side from which a kind of broad avenue emerges to welcome us among the acres of brightly colored wildflowers, I feel the fearsome chill of the Chief’s dark suspicions melt away like nighttime dew in the morning sun.

Ah, glorious sun! I lift my face and hold out my arms to bask in its enveloping warmth and goodness. Aside from the brief trip home, it’s a sensation I haven’t enjoyed in years, the comforting warmth of sunlight that we so take for granted until it disappears, gone ever since the Sino/Russo invasion cursed us with constant sleet and sorrow.

And the air! Impossibly fresh and clear as if every atom and molecule has been scrubbed clean, resplendent like the “spotless mirror” of Buddhist teaching.

The path slopes down alongside a makeshift corral where several dozen horses quietly graze, then levels off to the green countryside. Far in the distance a large body of water shimmers and sparkles in a turquoise sea.

Maybe this is Eden, where Adam and Eve once dallied in God’s own garden, before the fall.

What era *are* we in, this ancient past? Obviously, the Healer can't tell me, and there are no calendars at hand; still, there are some clues. It seems I've been sent back to a time when the ice age has receded and mile-deep ice sheets that once covered most of the world have given way to lush green forests and fields. Giant cave bears and ancient aurochs roam the land, but horses and dogs have been domesticated. The tribespeople still hunt animals and gather plants; they won't turn to fixed agriculture for millennia.

That might put the time at, oh, between fifteen and twenty thousand years ago.

A nervous thrill of excitement courses through me: Prospero has guided me, not without setbacks, but still, here I am, a thousand generations back.

Goshem walks a few meters ahead of me, padding along at a steady pace, turning back occasionally to make sure I'm alright. She leads us past a stream where half a dozen women fish with simple wooden poles. They are laughing, their infants slung along their sides bobbing to the rhythm of their swaying bodies. It's a lovely little scene of timeless domesticity—until the women see us and freeze. I smile politely and wave to them, but they remain fixed in surprise or alarm. Must be me, the curious stranger in their midst, or perhaps Goshem, who also seems out of place.

Some gazelles lope past us, graceful and fast, and brightly colored lizards lounge on the side of a nearby tree, basking under the brilliant sun. I notice a pack of wolves huddled at some not-too-distant water hole that look up to eye us cautiously. Then they start trotting our way, slowly at first, then at a gallop, heads low and teeth bared.

"Wolves!" I yell, and Goshem turns to see them, beautiful but menacing creatures with their snarling faces and angry growls, larger than the terrifying packs of *Canis lupus* that prowl the Midlands countryside just beyond (and sometimes past) the high border walls and gates of Destopia. Goshem issues a low growl, runs to a nearby tree and breaks off a low-hanging limb. She waves the branch over her head and starts jumping up and down, grunting loud threats in a deep, gravelly voice. I keep my eyes fastened on the wolves. They stop and, after a few seconds, begin a grudging retreat.

We resume our journey, though Goshem now seems more watchful, scanning the horizon for threats, still gripping her thick wooden branch.

The beaten paths cut through the fields here and there where the tribe evidently migrates or the men go off to hunt. At a certain point the trees and bushes thin out and the lightly undulating green meadows

stretch to the horizon and invite notional possibilities, as if we were now at a place from which one could set out to circumnavigate, fairly easily, the still-virgin world.

Striding behind Goshem, I notice an interesting anomaly. For all her girth—the huge shoulders, the fleshy face, the large jaw and eyes, she has curiously thin, bandy legs. Wait, that’s who she reminds me of: Dilly Davis! I burst out laughing. The Dill, the Pocket Rocket, the Dambino, with his barrel chest and thick arms atop those pipe stem legs. Runa and I had briefly contemplated tripping back to Falcon Stadium to witness his famous overtime goal that won the championship and sparked the notorious riot. We’d find out once and for all whether Dilly had scored on an illegal shot and if the maelstrom that followed was spontaneous or, as later alleged, planned and provoked by the opposing Blades’ fans. Tripping back to find out would have been fun, if a little risky, certainly memorable.

But this is so much more...*profound*: the astounding leap back in time, the connection with these people whom history has forgotten because there is so little to connect us. Only Prospero can make—*has made*—that connection. It is a happy, even inspiring thought. Now I must learn the purpose of my being led here.

Then with a shock I realize who else Goshem resembles: Vänka! The giant head and massive torso, the prominent lips, the trunks for arms, the vast bulk of a torso tottering above painfully thin hips and legs.

But that’s not quite right. Vänka had her own distinctive beauty, with her handsome figure and those gorgeous cerulean blue eyes and luscious bright-red lips, which seemed as full and round as slugs engorged on rainwater, and just as mobile. It was an astonishing mixture of parts sublime, ridiculous, and horrible. Taken altogether she was mesmerizing. And that had been the problem.

Memory is so random and unreliable. Why is it I have such clear recall of the worst times, like the 100-night slog across the Old Land fighting my way past wild beasts and wilder men, and the chaos and instability that exploded into the Great Convergence? Or the pitiless quiescence we were forced to apply to appropriate the Fermi Professor's work? And yet there is so little I can recall of the most serene and beautiful moments: the innocent days of my childhood family and the honeyed nights with Samuel doing research and engaging in idle chatter, both just a blur now?

Memories of his son as well. At my promotion to Den Nineteen I had the security monitors in my apartment removed, so there is no record of our fateful meeting. Thus I am left only with bits and pieces, shards of memory of that strange and fateful night.

But of the first time I met George, that afternoon sixteen years ago in Granner Hall, I remember every detail.

VII. Crash Course

Memory is so random and unreliable. Witness the fiasco that was our first trip home. What happened on our 12th birthday? Was it a jet bike excursion sailing over the lake or the *Kreutzer* sonata we played for our neighbors the Sadlers? Runa and I had different memories that took us on different trips.

Other times memory is painfully accurate, as in the traumatic particulars of my two meetings with Vänka.

Hiking through the virgin Stone Age countryside to witness the ineffable magic of cave art and process the vision quest the Healer says I'm on, my unruly mind (once again in defiance of the Rules) flashes back to those two meetings. My thoughts, like planets held in implacable orbit, circle back to those grim memories.

It was early Juvenal of GC/6, six years into the new regime, when Destopia was well established, for better and worse. I was a young doctoral student anxiously trailing behind the renowned professor as she limped along on illegal high heels (I remember wondering: how can she defy the Sumptuary Strictures, which confine dens to a simple uniform of plain black tops and bottoms, plain short hair, plain canvas shoes?) toward her office at UCM's Granner Hall.

I feared the worst. There were certainly omens, even before that first meeting. The personal invitation she sent me, for instance. Most classes and student-teacher conferences were remote; why brave the crappy weather and often brutal run-ins with soldiers? But she insisted. "In-person is so much better," the hated word underlined, she wrote cheerfully.

More worrisome, her scientific expertise in biogenetics and nanotechnology weren't remotely connected to the field of open-sourced creativity I was pursuing. What could be the purpose of this meeting? No one in the department seemed to know or would say.

When we arrived at her office I looked around, more curious than nervous. She was after all a renowned scientist and Destopian poobah, proof of which was displayed prominently on the wall monitors. Screenshots of her Authority citations as a Destopian founder and bulwark and UCM degrees and awards and commendations scrolled by in stately procession. Pride of place, on the wall behind her desk, was accorded her Den Nineteen designation. Scuttlebutt had it Apex Leader was only one level up.

Impressive as the awards were, the office was otherwise devoid of any warmth—no personal effects or design touches, no family photos or

vid clips, no prints or posters, no plants or flower pots, no books or journals—no objects of any interest whatsoever, even on her desk, except a Q-tab which I could see open to a single electronic file, with my name on top. My future was being decided in this cold and lifeless place. I shuddered.

“Sit down,” she said without looking at me, indicating a chair across from her. She took a seat behind her desk and clicked open the file, scrolling through some official documents, and stopped at a letter.

“I see you’ve requested Professor Foster as your advisor.”

I nodded and started to explain but she cut me off with the flick of her hand.

“That won’t be possible, he’s gone, from the university, and, as it happens, Destopia.”

Oh? I arched my eyebrows. No one *left* Destopia, it was a closed system, like a pressure cooker or the universe. *Gone* was a euphemism for quiesced and perished. What had poor Foster done? “Some uncomfortable business,” she said, as if reading my mind, and nodded toward the door, ushering him out of existence. “I will be your mentor and project advisor. We can dispense with the doctoral committee. Unnecessary.”

“But Dr. Grove...”

“Please, please, just Vänka,” and she beamed a warm smile, affording me my first glimpse of those peculiar teeth, sharp pearly pellets as if filed down, more a shark’s oval than the usual semi-circular arrangement. I shuddered again.

“Dr. Grove, Vänka, my work—” I said, a little unsettled. “I’m...you and I...we’re—” I couldn’t get the words out.

“That is alright, George. Slow down,” she said politely. “Relax yourself.”

I wasn’t sure whether to take comfort in her concern or offense at her patronizing tone, delivered in her strange syntax and curious Old Land accent, the vestigial reminder of a youth spent in that blighted world.

I took a deep breath. “It’s just that we’re in different fields. As you can see from the synopsis and the paperwork,” I said, warming to my point. “I’m designing a crowdsourced music program. Your specialties are nanotechnology and biogenetics. They’re not in the least similar. I’m certain—”

“No matter,” she cut me off with another wave of her beefy hand. Her cheery smile vanished, replaced by an almost pestilential gaze, irises penetrating and fierce. I was forced to look away, otherwise I might’ve laughed or shrieked—neither very prudent under the circumstances. After

a few moments I hazarded a peek. She was re-examining the electronic file, scrolling from page to page.

“Professor, Vänka, you can see from—”

“You will find I am a quick learner,” she said, ignoring me. “And your dissertation topic—” she glanced at the synopsis title, bolded and underlined for emphasis, “**Orkestrate: A Proposal For A Non-Zero-Sum Game Theory: A New Way to Play!**” She paused and scrolled through the overview. “—your Orkestrate thing, yes? Not much of a challenge.”

Thing? I sunk into my chair and closed my eyes and groaned as if scalded, the work of years disparaged and dispensed with in a flip remark.

A flashing *RUN!* in bright red letters scrolled across my brain like her award commendations on the monitors behind me. Dash! Beat it! Go rogue! But something stayed my impulse—maybe Dad’s exhortation to *be a den of iquity* or their close academic and personal relationship, not to speak of her overwhelming physical presence (she could block the door and squash me *likethat*) and exalted den status and scientific reputation. She was larger than life, I was a Den One, one of the Dead Ones, as we were called, of which there was nothing lower. Nothings of no consequence, layabouts, degenerates, druggies, desperadoes, misfits, ex-cons, radicals, sociopaths, vegans, and other ne’er-do-wells. I wasn’t sure which category I fit in, probably several. That was alright, my DREB friends and I *liked* being Den Ones. It was a point of pride not being a cog in their Destopian machine.

“Whatever you suggest.”

“Wonderful! Together we can work, have fun, make *MAGIC!*” It was her first reference to that mysterious state she intended me somehow to scare up. “I am eager to hear more about what you are doing,” she said, flashing her fearsome smile again. “Your father was my mentor here, my teacher and *in-spi-ra-tion*.” As if to do him extra credit, she pronounced this last word with its four syllables distinct and drawn out.

“I owe my standing at the university to him, the Great Man,” she said with emphasis. “So in memory of him I extend my hand to his son.” This wasn’t a metaphor, she actually snaked her arm across the desk and twiddled her fingers to invite compliance. I hesitated as long as I could, then touched her fingertips. They were icy cold.

“With this added piece of advice,” she said, withdrawing her hand, “this kernel of wisdom, this friendly warning.”

“Oh, what’s that?” I tried to sound nonchalant, even cheery, a faint grin frozen in place. A warning? Sure, why not?

“Game theory falls under Authority supervision. There are strict limits on creative expression.” She raised the plump thumb and index

fingers of her right hand and squeezed them tight: that's how strict they were.

"I'm aware of that," I said, and pointed out that nothing in the Orkestrate program was un-Destopian. What I didn't disclose of course were all the creative aspects hidden deep inside the code sequences so that prying eyes and algorithms could never find them.

"And second," she continued, glancing briefly at the synopsis again and then at me, "if I understand correctly," (cō-reckt-ly), "Orkestrate is a non-zero-sum, non-competitive game network. Is that correct?"

I nod.

"That won't work."

Won't work.

"And why is that?"

"Too col-lab-o-ra-tive," Vänka pronounced, rendering the adjective a perfect quintuplet. "Too much potential for mass connection and mob action."

"Mob action?" I had to hold tight to the chair to prevent myself from laughing hysterically and falling off. "You're joking. There's no *mob*. Just a crowd-sourced collective of serious like-minded dens—"

"Collective, see?" she said triumphantly, her finger jabbing at my head as if to skewer it. "You admit it—communal and collectivistic"—she pronounced this last with another five syllables, each clicking evenly along the runway of her tongue.

"Not at all—" I said and started to object, but she cut me off again.

"It is the crowd-sourcing that makes your program vulnerable to cyber-attack. That's why there are strict limits to net *connectivity*." (Another quintuplet; the conversation seems to have activated some curious form of syllabification on her part. Or maybe it was a feature of her native tongue, Totenstanian, said to be an archaic stump in the family tree of languages.). "Listen," she said in the imperative mode, tapping the desk, "we are not here to debate the strictures. You are of a law-abiding nature, I presume?"

I probably paused too long before answering, "Well, sure, but—"

"Good. Then we see as one, eye to eye, shoulder to shoulder, hip to hip." I imagined our body parts marching off insanely together. "And furthermore, there is one *additional problem*—" rendered in a high soprano register for foreboding emphasis, "—that should be addressed." She wrinkled her brow and nodded and stuck out her thick bottom lip. "More of shall we say a *spiritual* nature."

"Oh?" I reprised my frozen smile—it was beginning to hurt, that fixed expression, that rictus of fake collegiality. "Spiritual?" The word

seemed as out of place as if she had just declared herself the Queen or Hairy Ass the Hydro Monster.

“Yes,” and she resettled herself in her chair and looked down again at her Q-tab. “As you describe it here in your summary,” scrolling a few pages to confirm, “the whole enterprise is digital, yes?—your game theory, the software program, this Orkestrate thing.”

There it was again: *thing*. Runa had disparaged Prospero with the same low-rent noun. So demeaning. I took a few moments to register my disapproval, then said, with more than a hint of coolness, “Well, *of course*, after all, this is Q science. I’m a scientist,” adding hastily, “as are you.”

“But this is a very simple view of the world, is it not? The binary approach, the formal dualism: zero-one, off-on, white-black, you-me.” Again she tapped her polished fingernails on the desk staccato fashion with each duality.

“But everything’s digital,” I protested (and was tempted to add, “or haven’t you noticed?”). “And has been for, I dunno, a hundred years? And even before that, there was duality in the biform human body, bilateral symmetry, diploid contributions to the human egg, dimorphic gender distinctions, yin and yang.” I stuck out two fingers and gave a hopeful, dopey smile.

“Wonderful,” she said blandly, before leaning in and fixing me with her penetrating stare. “But that is not exactly definitive, is it? Why stop at two numbers, why not eight or eighty? Life is endlessly complex. Between your simple black and white there are an infinite range of colors and choices, *am-bi-ence and am-bi-gu-i-ty*—do they not register with you?—from the brightest sunny day to the shadows of dawn and dusk and the gray inside our brains and outside our buildings.”

I was, to say the least, taken aback by this rhetorical flourish. It was almost eloquent, her disparagement.

She nodded past the windows, where the usual dull splash of sleet, fog and clouds distilled everything to a pallid scrim the color of ash. “You need to take into account the complexity of the universe, which reducing all things to two numbers can never accommodate.”

I stared at her, uncomprehending. Where was she going with this strange lecture?

“Well, maybe. But gaming is digital, and that’s one of the Big Six,” I protested.

“We tolerate gaming, yes. It keeps the Dead Ones busy and out of trouble. But *you*,” and here she sat up tall in her chair, pointed at me and declaimed in a stilted manner, “*You, George of Ingleside, scion of a great*

Destopian family, can do better! I would suggest that what you need is something mere digital games cannot provide.”

This was an echo of my father’s constant disparagement. *George, you can do better, be a go-getter*, he would say. Did they talk about me? Did my father share his disappointment for and distaste for me with this hideous creature, his protégé? I didn’t even try to hide my eye roll. “Oh, tell me, what’s that?”

“Do not dismiss what I say, it is to your own good that I speak of it,” she said, looking testy. This had to stop, I thought, before I said something both of us would regret.

“With all your coding skills, your program will fail if it lacks those two essential ingredients of great science.” She rose from her desk and lumbered over to my chair and seated herself alarmingly on one arm, hovering above me like a giant zeppelin.

“What’s that?” I said, looking up, a little astonished.

She closed her eyes. “*Myst-ery and mag-ic*,” she pronounced, splitting the words binary-fashion, and lifted her arms heavenward. “The magical panorama, the fantastical kaleidoscope of life, the awe of creation and existence.” She peered back at me with a deep frown to see if I got it. “Your science traffics in sterile quantities. But you can’t squeeze the universe into pallid numbers. *The mystical is the source of all true art and science*. You know who said that?”

I shook my head, uncomprehending.

“*And he who can no longer wonder and stand rapt in awe is as good as dead*,” she recited, tapping each word with her finger on the back of my shirt. “Einstein. You get his meaning, yes?”

It sounded like a threat. From Einstein? From Vänka? From the Authority?

“I’m afraid there’s no magic in my little corner of the world,” I mumbled, nodding outside. “Just rain, sleet, snow, and endless foreboding.”

“Oh, but that is where you are wrong, George. There is so much magic out there—you just have to know where to look.” She placed a hand on my cheek and pointed my face to the window, as if our glorious future of magic and mystery lay right outside. All I could see was a darkening outlook, growing darker before my eyes.

Vänka apparently discerned my dark thoughts. She leaned closer, and said softly, “You are not happy, George, here in Destopia. Why? We have made for you this highly secure, crime-free, safe and comfortable place. Where play is commodious and life melodious. *Epecially—*” she pointed at me, “—for you Den Ones, for whom there is no work and all play. What could be better?”

I considered my answer. Speaking the truth was always risky with higher dens. But she seemed genuinely curious.

“If I can’t walk the street without feeling threatened, how safe and secure can it be? That’s why I developed Orkestrate, a welcoming online digital community.”

That was a mistake. She said in an agitated whisper, or perhaps a guttural ultimatum: “Orkestrate? Better leave room for something less communal than open source and more exciting than zeros and ones.”

If it was excitement she was after, I was a bust. Orkestrate’s magic was clear to me and my fellow DREBs; if she couldn’t see it, too bad. I pushed back the chair—it made a clean scraping sound that nicely disrupted the surreal mood—rose and edged over to the door.

“That’s good advice, Dr. Grove, Professor, Vänka,” I said. She looked astonished. “You’ve given me a *lot* to think about. Einstein, magic, excitement, awe. But I know you’re busy and I have a class in—” I glanced at my smart watch “—twelve minutes, so I better scoot.” I laughed a little too loudly and backed out of the room. “A lot,” I shouted from the hallway.

I hoped she didn’t take offense. But really, I didn’t care. The more off-putting and bizarre my behavior, the better, not that it was a match for *her* off-putting and bizarre behavior. I wasn’t interested in seeing her again. I’d hold out for some doctoral advisor more congenial to and conversant with my field—game development—and my vision—crowdsourced art. Or if that proved impossible then drop out of the university and continue on my own. I didn’t really need a doctorate; I had only been pursuing it to work with poor Foster, who had been a friend and colleague of my dad’s, and to access resources at UCM and maybe, when I thought about it, compete with my famous father and clin. In any case, what use was a doctorate in a place where intellect was suspect, even despised? I could manage on my own, with help from Liz and the DREBs. That might even be better: un beholden, unencumbered, unconstrained.

Happily, I didn’t hear from Vänka. Someone said she had slipped on some ice and broken her foot and was recovering at home. Good. Not that I wished her harm, exactly. I just didn’t want to give the bizarre scene in her office another thought.

But a few weeks later I got a message on my handheld with the subject line: “NEXT MEETING, MY PLACE!” It would be better that way, she wrote. “I hurt my ankle and must stay off my feet a while. Best not to wait until I am back at school. And—” the message concluded, “—we

could have a nice dinner and get to know each other better! So *magical!!!*”

Hmm, that word again. The whole thing seemed odd: a thesis meeting over dinner at her apartment? The exclamation points were somehow even more alarming.

I set out, a few nights later, torn between apprehension and curiosity. I had to admit to a perverse interest in her private life. Was she less weird at home? Or maybe more? And what was home like for a Den Nineteen? At that level, rumor had it, habs were apartments and apartments lavish abodes, despite the strictures against ostentation.

I walked, hunched over against the freezing rain, the mile or so north to her place. It was easier than hailing an autoshare and permitted me, by a circuitous route through back alleys and hidden pathways, to avoid the ubiquitous checkpoints. But one, a block from her apartment tower, was unavoidable.

“Den, show us your pass!” commanded a beefy physical, and when I hiked up my sleeve so he could see the wrist pass with its spiraling yellow for safe passage and black for Den One, he demanded to know where I was going.

For some reason, perhaps His Badness’s DNA or the apprehension I felt about my destination, I balked.

“My business and no one else’s,” I said and made to leave.

“You can’t take that tone,” the soldier shouted and raised his electric prod to administer a painful reprimand, but his hand was stayed by another soldier, a petite young woman.

“Let me,” she said in a calm voice, and to my surprise he backed off.

She quickly steered me down the street. “Best not to provoke them,” she said quietly, “they’re skittish, prone to overreact, the soldiers, especially at night. Especially Meatball.” She hooked her thumb back at my would-be antagonist.

The cold rain slashed down on us as we walked and somewhere across the lake lightning split the sky, affording me a glimpse of her face, the Renaissance oval of an angel, sweet, soft, and caring. Or maybe I was imputing character traits from her angelic intercession.

“You’re George of Ingleside, aren’t you?”

“How’d you know?” I said, surprised.

Looking around to make sure we were unobserved she smiled and splayed her arms overhead. “Widespread ahead,” she sang with the little down-and-up signature tune we used and bowed in my direction. “Carla of Dorchester. An honor.”

I bowed in return. It was rare to actually meet a DREB; our pixels rather than our persons congregated on the off-grid network.

“What are you doing with, uhm, Meatball and the others?” I asked, and nodded at the checkpoint now well behind us.

“Helps pay for school. I’m studying nanogenetics at UCM.”

“Then you know Dr. Grove, I presume.”

Now it was her turn to be surprised.

“How’d you know?”

“That’s where I’m heading now. Advisor meeting.”

She squinted in confusion. “At her tower apartment?”

“Yeah. Strange, I know.”

“Better watch out.”

“Oh? Why’s that?”

“She’s got a reputation. With her students, the ones she picks out, the *special* ones. Sometimes it doesn’t work out so well for them. Unbecoming behavior, heavy-handed threats, things like that.”

We were a block from the last checkpoint. A hundred meters ahead loomed Vänka’s imposing tower.

“Good to know. Thanks for the warning.”

“Right. Well, I’ve got to get back. Meatball gets antsy. But just —” she paused, “—be careful, OK?” and she sprang up and gave me a surprising kiss, and before I could respond had spun around and was heading back.

“Careful, George of Ingleside,” she called over her shoulder.

When I got to the lobby Vänka buzzed me in, past two security guards, who eyed me suspiciously and with what seemed like reluctance escorted me to an acceleator marked “express,” which whisked me in a few seconds through several g forces to the 143rd floor, the top penthouse suite.

There was only one door off the elevator, and it opened to reveal her with an ingratiating smile and a glass of wine, which she pressed into my hand.

“Napa Valley,” she said. “Very rare since the Sinos captured the west coast.”

I hesitated. The ceiling lights in her hallway, where the monitors would ordinarily but didn’t seem to be, were dim, and there was the smell of incense in the air, something musky and slightly suffocating. Moroccan trance music played in the background. And Vänka, wearing a short red dress once again in defiance of the sumptuary strictures (revealing her slim but surprisingly attractive legs), walked just fine, other than her usual limp; there was no hint of a broken ankle.

“Oh, it’s much better, thanks,” she said when I inquired.

She took my arm and led me inside and on a tour of her hab, burbling with excitement about the lavish dining room and kitchen (“designed by Halter,” as if I was supposed to know who that was), the exercise center (“it even has a pool!”) and the entertainment emporium (“laser game arcades and a vid theater that seats three dozen people!”).

Peering in I noted the rooms seemed to lead off to other rooms in further dark recesses—like the vast latticework of the brain’s neural circuitry or the many-sided reflections of facing mirrors that multiply into crushing infinity—all of them with floor-to-ceiling views of the city hundreds of meters below twinkling like a million-faceted gem.

“And the whole penthouse suite rotates three hundred and sixty degrees every three hours!” she said, as if astonished herself.

Before I had a chance to consider I blurted out a question, the kind of impertinence His Badness might have shown. “Doesn’t this, uh, violate some kind of stricture, all this luxury? I thought dens were supposed to be abstemious and live spartan lives?”

But instead of being put off, as I half expected, she laughed gaily. “Just like your father,” she said, and patted me on the head and dismissed the subject.

After walking the length of what seemed like a city block we reached the end of the hallway, in which another elevator was waiting to whisk us off to another floor.

“And here,” she said, after a short ride, guiding me down a second hallway past rows of offices and bedroom suites, “is the best part.” She pushed open a large double door inside of which was a ballroom filled with musical instruments from every corner of the globe and section of the orchestra. There was even, in one corner behind glass, incredibly rare and valuable ancient kitharas and lyres and harps, which I recognized from pictures on Greek and Roman vases. The instruments were propped up by ornate wooden holders or hung by steel brackets from a wall, each consigned to its family: clarinets with woodwinds, trumpets with brass, cellos with strings and so on.

“Where’d you get all these?” I asked, stupefied. The ban on art included musical instruments, of course. At GC/Z Runa and I had managed to hide our violin and synth from the soldiers, but they hauled off Mom’s grand piano and threatened to quiesce Dad when he loudly objected.

“I keep it as a kind of museum, a hobby, you might say. And here’s the crown jewel.” She guided me to a small anteroom. Inside was—I couldn’t believe it—a massive, ten-foot, 103-key Tanenbaum Imperial, the largest and most expensive piano ever made.

“What do you think of my little collection? Lots of magic here! Go ahead, try it.” She pointed to the Tanenbaum.

I was appalled at this gallery of purloined instruments, like the precious items—money, jewelry, clothing, family heirlooms—that Nazi guards stripped from the doomed Jews as they stumbled off the trains.

And yet I couldn’t restrain myself. I looked at Vänka, almost smirking with pride, and then down at the piano, such a rare and precious object in our art-deprived world, the gleaming case, the fine wood, the perfect hand-crafted keys shining up, calling me, begging to be played. I tried a few random chords. The action was impeccable: smooth and responsive; the tone velvety and rich.

Sitting down I ran my fingers lightly over the keyboard and began playing a Chopin nocturne.

“Very nice,” she said, swirling the wine in her glass. “Sounds wonderful.”

Indeed.

I looked up at her, and some strange impulse—perhaps the warning my fellow DREB had offered a few minutes earlier, or the weirdness of the evening or my life—impelled me to begin another piece. It was the final section of Gwyneth Marsh’s thirteenth sonata, “The Doomed” it was dubbed, not only because of its darkness but because Marsh had disappeared as if dropped off a cliff shortly after its premiere—written just before the onset of the Great Convergence, when great music could still be a beacon of reassurance or a prophecy of things to come in a threatened world. You could hear it in the uplifting opening, all perfect fifths and fourths that swelled gloriously, followed by descending dissonances that projected a waning of energy, a loss of faith, which each subsequent variation amplified to the point of hopelessness, but concluding with a thrilling call to arms that rallied listeners to never give up.

Marsh the Doomed, Marsh the Martyr: No wonder she had “left” Destopia. Vänka frowned in disapproval. Not much magic there. She tapped me on the shoulder, which I expected was the prelude to a sharp reprimand, or worse. But instead she merely patted her stomach and said mildly, “Let us eat.”

We made our way back, down the elevator, through the long hallways with their rooms extending on and on, finally entering the dining hall where we were seated by a black-tuxedoed butler.

“More wine, Stefán,” Vänka instructed him, pronouncing his name continental-style, in two syllables. Stefán nodded with severe dignity and refilled our glasses.

“Thank you, dear,” she said, and waved him away. He bowed without expression and backed through the swinging doors into the kitchen. Odd, a butler. Odd also in appearance, short and stout with bulbous lips and a huge bald pate.

To divert us from the oddness I asked blandly, “How’d you know I played piano?”

“Oh, we know a thing or two about you and your famous family.” She flashed that chilling smile. I smiled back, more anxious than flattered. What exactly did they know?

I finished my glass whereupon Stefán hurried back as if sprung from a catapult with more wine. Was there a monitor he was glued to in the kitchen? A wireless signal at the bottom of my glass?

I drained it in a few gulps—no point passing up this precious liquid magic—and, seeming to know how thirsty I was and waiting for me, bottle at the ready, he filled my glass again. Evidently the evening’s agenda called for me to get more than a little plastered, which I was happy to indulge.

I wondered again at this high-den display of luxury. Maybe it explained the size and scope of her place. For all I knew Vänka and her pals hosted riotous bacchanals enabled by the vast wealth that accrued from the fresh water lapping on the shore nearby, while we Dead Ones lay about in our slum habs sluicing our drugs and drinking our booze huddled over our handheld games—or slept, exhausted from constant vacuity.

Stefán returned bearing a tray heaped with various cuts of meat plus a small mountain of leafy green vegetables and some kind of potato selection. I was too keyed up to be hungry but that didn’t stop me from enjoying the wine, which Stefán once again replenished, while Vänka nattered on about her background (Totenstania, poor), Authority role and university position (mostly exciting, sometimes dull), even working into the conversation some amusing and salacious details about her colleagues.

Despite my earlier concerns, I settled into a kind of stupor, a pleasant fog of insobriety. Instead of alarms going off, the butler, the setting, the candles, the food, and especially the wine put me in a warm, almost giddy state. Was this not like some dream of past decades and better times to come when life was elegant and the future *did* look fine? We, Vänka and I, might be peers—buddies, even, making sly jokes and innuendos—and not struggling in an awkward and even adversarial student-teacher relationship. I could almost imagine a genuine friendship, as I chuckled at her jokes, admired her accomplishments at the university and her standing with the Authority, and relished (why not?) those voluptuous features and powerful frame. Maybe we’d get to be friends and allies. Maybe she’d become the kind of mentor to me that my father

had been to her. Only fair. And best of all, maybe this evening foretold her willingness to look favorably on Orkestrate, to acknowledge its promise and admit its magic.

But just below the surface of these rosy fantasies and giddy inebriation were questions that had been nagging at me all evening, in fact ever since I had first heard about her from my fellow DREBs and doctoral colleagues. How had Vänka, a foreigner barely out of her teens, managed to vault so quickly to her exalted position in the Authority, especially in a time of extreme xenophobia, reportedly leaping over dozens of more loyal and longer-tenured candidates? Was there any truth to the dark rumors, the so-called “curse,” which somehow involved her and had swirled around my family these many years, buzzing around my head like flies around a dead skunk? I had been tempted to find out and yet was afraid of what I might learn, so I decided not to give the stories any credence. What of the rumors about Vänka and the mysterious Apex Leader? Were they tandem executives, like the co-consuls of ancient Rome? And how exactly had Destopia risen from the ashes of the dying nation, with her help? None of my DREB acquaintances knew. What drove Old Glory down? I was uncertain how to ask—until she gave me the opening.

“Funny how like your father you are,” she said with a sigh, swirling and sipping from her wine glass. “Such a wonderful man, brilliant scientist, a gentleman of the old school, his death a terrible loss to Destopia and the scientific community and,” she added quickly, “to you and your family. So sudden, so unexpected.” She shook her head sadly, as did I.

“Yes,” I said, my cheeks flushed with emotion. It had been four years now since his strange, sudden death, during which I had never stopped brooding over the mysterious circumstances. Here was an opportunity to inquire.

But just then Stefán slunk back in to refill our glasses, and all that wine was making it difficult for me to untangle my tongue with questions. Asking directly would have been obtrusive and probably illegal: Den Ones weren’t supposed to inquire about such things. Still, the evening seemed to have established a kind of parity between us. And her pleasant manner and confidences invited a kind of intimacy I was certain we’d never enjoy again.

When Stefán had retreated to the kitchen, I cleared my throat, took a breath, and said in a voice I hoped radiated a casual interest, “I don’t mean to...uhm...*pry*. But you worked with my father for years, you were so close. So I thought you would know: what exactly *did* happen to him at GC/Z?”

The dreamy smile disappeared. “You don’t know? How he died?”

“Well, yes. I mean, of course, we could see it happening, my family. But he would never open up about it, what our mother called his fatal malaise.” I looked directly at Vänka. “*Something* must have happened. I figured you...of all people...his protégé...would know.”

She frowned, then after another sip pronounced, in a severe tone, “They were awful times, the Time of Terror. Not something we talk about. *Especialy* to students and Den Ones. Certainly not on occasions like this,” and she gestured at the sumptuous display. “But do you really know nothing of it at all?”

“About the Terror? Sure, I mean I’ve heard about it. But it’s not taught in school. All I remember at GC/Z, the Great Convergence at Year Zero, were soldiers descending on the neighborhood and rummaging through our home taking stuff.”

She looked away, out the window as if considering, then turned back with a decisive expression, bulbous lips pursed. “You must swear secrecy. This is highly confidential—” her hands balled into fists, “—Apex Classification.”

I nodded.

“No, you must affirm it aloud, your promise, so it becomes an iron contract.” I had heard of these *iron contracts*, and how dens had disappeared for violating them.

Still...

“OK, sure, I agree.”

After a moment’s hesitation she began to speak, slowly at first and then more rapidly, pausing only to take a breath or a bite to eat.

“The time before GC/Z had been bleak, the *Dark Decade*, we called it. Hunger, poverty, lawlessness. There were camps of homeless people larger than some cities.”

“Where was this?”

“All over, you could see them everywhere,” she said and swept her hand toward the floor-to-ceiling windows. I looked out and noted that in the last few minutes we had swiveled southwest toward the giant guard towers, past which were the vast prairies and flatlands west of the Midlands, and beyond that the great deserts and mountains rolling thousands of miles to the ocean, across which all civilization had, before the Great Convergence, spiraled and burnt out of control.

“Everything was breaking down from neglect or malfeasance,” she said, eyeing me intently. “There was the eco-terrorism and climate disasters, the collapse of the food chain, crop failures, starvation, species extinctions, thinning out of the population to numbers not seen since the Black Plague in the fourteenth century. Sabotage of the infrastructure, the

rise of radical and extremist groups, the Neo-Fascists and the Neo-Bolsheviks, the takeover of the old, established parties. It was a long time coming,” she said, talking even as she took a bite of meat and washed it down with wine, still keeping her eyes pinned on me as if waiting for a reaction. I held her gaze with an impassive expression.

“So when it happened—when we heard about the Sino Dragon overrunning Asia and the Russo Bear swallowing Europe, the announcement of their infamous pact followed within weeks by the nuclear and biochemical attacks along the east and west coasts, and most frightening word of their advance troops on the march here—there were two reactions. From some there was a kind of resigned acceptance, a state of shock and resignation. But equally among others was the disbelief, the incredible psychic and social dislocation brought on by the coastal news, which led to fear and panic, riots and looting. Imagine soldiers and police quitting their posts, national and local electronic and communications networks and regional grids blinking out, the credit and banking systems shutting down, cities going dark, sanitation, water, electric—everything crashing to a halt. We had no choice. We had to move in.” And she paused to serve herself some more beef, which she loaded onto a piece of bread and tore into.

“We?”

She stopped chewing and leaned forward with a polite smile.

“Hmm?”

“You said *we*. ‘When we heard...we had to move in.’ Who was that?”

“Why, the Hummingbirds.”

I squinted in confusion. “You mean like the little—?” and I wiggled my fingers in a poor approximation of avian flight. “Hummingbirds?” Astonished, as if I had misheard.

She nodded happily. “Lucifer Hummingbirds, our new society. We were the Hummingbird Collective, the Hummers.” She raised her eyebrows and wagged her head, as if to say: *Isn’t that something?* and waited for a response. I had none, just dumb incomprehension.

“Have you ever seen—” she lowered her voice to a whisper as if to convey a secret, “—the beating wings of a hummingbird?”

I shook my head. Nature wasn’t much in evidence in our parlous paradise.

“No one has,” she continued, smile still in place, happy to edify. “They beat eighty times a second, the wings, too fast to see, just a faint glimmer and blur, as the birds dart from flower to flower and garden to garden to feed on nectar and devour bugs and deliver their golden pollen.”

Her smile broadened and hardened so I could see those vile teeth, polished and pointed as if ready to bite down on anything, wood, brick, steel. “We were like hummingbirds, moving fast, setting up the Authority, instituting new rules, training and putting our own police and soldiers on the street, sweeping habs and homes to confiscate weapons and other forbidden objects, hooking up the security monitors, taking over businesses and industries, cracking down on toxic social media, changing the calendar and naming conventions, establishing the sumptuary and exclusionary strictures.”

All this busy work seemed to fuel her appetite. She speared another slice of meat on top of which she ladled some veggies and potatoes and continued between extravagant bites. “Setting up tribunals, dismembering the street gangs, banning rogue expression, disabling news feeds—after all, *making news* had been the problem. And art, we banned that too for its potential to rile passions and stir up souls. Dangerous, you know?” she asked, almost as an aside, while working her jaws with a vengeance on some woody asparagus.

I sat up. “Without art we’d be nothing, dead, worse than dead—robots and automatons. Art helps us navigate this dangerous world.”

“I prefer state security myself,” she replied between bites. “*More certainty, more security,*” she repeated the familiar mantrum. “Plato said all poets were liars—did you know that?”

I shook my head no.

“And for good reason. Fantabulists. The Hummingbirds were dealing with chaos. We realized in the vacuum created by the collapse of civic order that we could and indeed must remake society. Imagine cleaning the slate and starting over, building a utopia. What would you install? Obviously peace and order. Comfort and prosperity. Work for those who wanted it; play for those who didn’t. And the astonishing thing is, we did it: we rebuilt society along utopic lines.”

I grumbled.

“So why, George, would some of your fellow Dead Ones want to wreck it? Destroy our beloved Destopia?”

I started to say, “This is no utopia,” but caught myself, knowing I’d work myself into a rant. The loss of liberty was bad enough, but art? That was worse. To be without books or music or theater was worse than dead; in death you’d be blessedly unaware. I thought of Nietzsche’s comment: We have art not to die of the truth. I didn’t want to die from the truth, not just at this moment.

I just looked at her and shrugged.

“You don’t know or won’t say?”

“It’s no good, my talking about it. I’m not your typical Dead One. I’m not a rebel or a radical or whatever you call them.”

“What are you then?” she asked with some interest.

I ignored her question: too sensitive a topic.

“Didn’t people object?” I asked instead. “Fight back? Where was the public outcry or resistance?”

“Oh, it was there, a little,” she said, shrugging dismissively, as if disappointed by the poor showing. “A few barricades, some skirmishes. But like I said, we moved too fast. And you know what? Most people cheered us on, they preferred it that way. Fear and panic triggered a consensus: do what you must do to stop the chaos. That is what led to the takeover as much as anything. I can tell you from my own experience, escaping the madness the Russos had inflicted on the Old Land. I had to kill to survive.”

“Really?” I asked, surprised.

“And it does something to you, witnessing the disintegration of society and fighting for your life. Either you sink down in the muck or rise up on your feet, and do what needs to be done to eradicate the *terrible social upheaval*.” She tapped her plate with her knife to the three words.

The dire phrase somehow inspired in me a reckless need to put everything on the table, alongside the wine and food.

“Can I tell you what some dens say about the nukes and the Sino/Russo invasion and the decline of civilization and all that?”

She paused from her chewing. “What? What do they say?”

I took a deep breath.

“It didn’t happen.”

I waited for a response, a laugh or sneer, or maybe a summons for old Stef to heave me out the window, a thousand-foot drop for the doubtful den.

But she looked as impassive as a wax figure, fork and knife suspended in midair. Finally she said, “Go on.”

“Yes, well some dens say that given the confusion and alarm that resulted from news of the collapsing communication networks—the bombs and attacks, the Sino/Russo invasions, the toxic nuclear clouds—no one actually knows what happened. It’s all conjecture, propoganda even, which has been served up as fact.”

I paused again, a polite interval to permit a response. Nothing.

“Then there’s another school of thought,” I continued. “It says there were some coastal disturbances alright, but nothing on the order of an invasion. And still another school that says the power outages and constant stormy weather were due to giant solar flares and celestial

anomalies. Or they were faked. In other words, no nukes, no invasion, no Sino/Russo soldiers heading our way. No nothing.”

I drummed my fingers on the table, aware the assertions were certainly imprudent and perhaps illegal.

After a moment’s hesitation she cleared her throat and sat forward in her chair. “But those schools you describe, the confusion and fake news. What purpose would they serve?”

I sat forward too, a little. Tonight we were equals, almost.

“Well, you have to admit, it would’ve been a handy pretext to justify the Convergence. Useful to have a mortal enemy or two on the march, right? Hard to explain the Destopian takeover otherwise. Especially when we’ve never actually seen any of these invading hordes, except on vid clips that look half-faked, and when in fact nothing much has ever happened here except the lousy weather and warnings from the Apex Leader and the unprovoked beatings the soldiers dole out to us Dead Ones.”

My fingers as if out of control drummed restlessly on the table. I paused to regain some composure. This equity business was murder on my nervous system.

“Mind you, that’s not *my* interpretation.”

“Oh? And what *is* your interpretation, George?” she said with a thin smile.

“Me? I’m a good Den One. I don’t have any.” I smiled back pleasantly.

Which wasn’t entirely true. I had been able to decode some of the redacted text in the *Annals*.

“What if I had proof?” she said.

I sat back. “Proof?”

“Yes, proof there *was* chaos, proof we were in danger. And your father was instrumental in dealing with it, crushing it. Without him, in fact, we would have been doomed.”

“*Doomed?* Without my father? You’re joking.”

“I can show you. Would you like to see the evidence of your father’s heroic contribution to our survival and triumph?”

I nodded dumbly. Here it comes, the family curse.

“Because despite our speed and audacity, despite our Hummingbird courage and tenacity,” she paused to eye me with laser focus, “there was one thing we lacked, one critical piece we were missing to make the takeover work. Can you guess what that was?”

I sat there, mesmerized, like the prey in the mouth of the predator.

“Hmm? Think!” she commanded.

“Ethics?”

She ignored me. “Soldiers. We needed *soldiers*, boots on the street. That’s where real power comes from, lots of them, fanatically devoted to the cause. Which we did not have. There were only a few thousand of us Hummers out of thirty million people. They could have crushed us with ease.”

She held a smile for five or ten seconds, playing out the suspense, toying with the lowly Den One about Destopian History 101, a crash course which I had somehow missed about Old Glory’s final days and His Badness’s involvement.

“Yes—?”

“Because,” she said finally, “*he* had the soldiers, your father. He had the military with which we could crush any resistance and subdue the population. Your father gave it to us.”

“Military? He didn’t have any military. He was no more a military man than Stef in there. He couldn’t even order breakfast around.”

“Ah,” she said, holding out a finger, “but he had *the tool to rule*. The *holokinesis* that enabled us to project the virtual soldiers and drones—to cow the populace and enforce the new Destopian order. With holokinesis we could make it appear we were many, tens of thousands, flooding the streets. With that many virtuals, we did not need many *real* soldiers. After all, who could tell the difference? Can you?”

“I-I...don’t get it,” I said, even though I did, a dark cloud of realization coming over me like drone quiescence, heat radiating up my face and down my sides.

“His work on photon synthesis and spectral optics, light at quantum levels, which could be scaled up and holoprojected from any distance, outside using the light shafts we set up or inside from the monitors—” her hands flared out and back, and reflexively my eyes cast up to where her monitors should have been but curiously were not, “—at whatever shape or size was needed. The soldiers we would need to police the streets and the drones to patrol the sky could be virtual. It was the perfect solution, physicals *and* virtuals: that way we could be *everywhere*, all the time.”

Everywhere. How had I never thought to wonder, to speculate how they had managed it? Everyone knew it was their one indispensable weapon, their *tool to rule*, an astounding feat of astral physics, projecting the spectral soldiers within millimeters of where they needed to be, the better to precisely terrorize and control us. Some people claimed they could tell the difference: virtuals could be discerned by a slight twinkling evanescence, like the shade of a ghost or a digital mist like the drizzle of a low cloud on a foggy day. But most people couldn’t, and in any case everyone was cowed by their perfectly lifelike and threateningly thuggish

appearance. After a while, we imbued even phantom soldiers with rough physical presence and terrifying reality.

Why then of all people hadn't I realized it, the link to the Fermi Professor of Advanced Physics, whose prize-winning development of photon synthesis and spectrum optics might so readily have been exploited, the key to it all? Evidently others had made the connection, the long-rumored *curse*. Still, I couldn't believe it. Dad was implicated in Destopian control?

"Sorry Vänka, I don't buy it. He would never throw in with you. He hated the Authority. It's impossible."

"*That is...* where you are wrong," she said, her mouth and eyes narrowing. "I have the proof."

"Not possible," I repeated, though with less certainty.

"Proof. Right here." She fished under her cape and pulled out a handheld and scrolled to a bookmarked page. "Here. Read."

She handed me the screen. On it was a document on university stationery date-stamped 13:27, 29/Septimo, GC/Zero, just a few months after the Great Convergence. It read:

Dear Dr. Grove. Vänka.

I feel compelled to sit down and write you, my angel—

Angel? A knot of revulsion rose in my throat. I had to swallow to keep it down.

—to convey my deepest feelings of gratitude and trust. I don't need to say how, without your intervention, life for me and my family would have become intolerable, so I cannot thank you enough.

You ask me to list my transgressions, but forgive me, dearest—
I closed my eyes.

"Go on," Vänka said loudly. "Keep reading."

—but I really can't—they are as numerous as the endless numbers in pi. I hope it's enough to say that I have, however unintentionally, been guilty of many sins. Of course, I have an excuse, an alibi. I fervently believed that my actions—at the university and with the Authority—were ultimately intended for the good of all our beloved Destopians. But it seems I forgot the sense of Jesus's second commandment, that wonderful proverb. "Do unto others as you would have them do unto you."

Thus, I need to rid myself of all actions that are prohibited, pointless or hateful. Instead, thanks to your kind ministrations and gentle encouragements—

Gentle encouragements? What was he talking about?

—I have learned to devote myself only to good works that are productive, positive and helpful.

So this is the pledge I make to you, the Authority, and my fellow Destopians. Our world is short, nasty, and (witness all the terror and chaos that almost engulfed us) brutish. Hobbes notwithstanding, I will follow the guidance of Enrico Fermi. "Ignorance," he said, "is never better than reasoned thought."

His signature followed, the familiar flourish with large swirls capped by an emphatic dot at the end. It was his handwriting all right, that Fermi-Professor-of-Advanced-Physics scrawl that couldn't be faked or duplicated.

I looked up, stunned, to face her grim smile of satisfaction.

"What...does this mean?"

"I saved him. That's what it means," she said emphatically. "He didn't want to turn over the holokinesis. My colleagues were furious and insisted on quiescing him with full drone force, but I prevailed: I said, no, just a little demonstration will do. And I was right. If he had not acquiesced, it would have been the end for him—and for you. *The family of a pariah is itself a pariah*, you have no doubt heard the expression."

"You saved him? And *us*? You? And in exchange he...what?...gave you his invention that enables the Authority to rule?"

"Not just gave it to us; helped us get it up and running. A good deal, yes? Without it, none of you would be here today. And with it, we could launch Destopia and impose the necessary and historic changes: *Safety and security versus chaos and impurity.*"

Yet another of their stupid slogans. Satisfied, she tucked back into her meal.

I felt sick, wanted to leave, to race home and brood on these dark revelations. Was that why our father had declined so rapidly, until he was a skeletal wraith and then merely a skeleton, after the Authority takeover? Guilt over his cowardice and complicity? And was the letter proof Vänka was our savior and redeemer? Or villain and destroyer? Or maybe, like Shiva, god of love, slayer of demons, both?

But like an abscessed tooth the tongue keeps probing, a sore that wants sustaining, I felt compelled to stay and confirm my worst suspicions. There was something strange about the letter. Dad's "angel"? I cleared my throat to start to ask about it, but Vänka cut me off, she was done with the past.

"Enough. These were terrible times but thankfully they are long over, decades in the past. We do not need to relive them. Come, the Tanenbaum awaits. You will play and we will make magic together!" she said cheerily and rose and limped off down the hallway.

I hung back, too stunned to follow. Our father, complicit in the triumph of the Authority, consorting with the woman who had coerced him? His quick disintegration, the dark legacy, the curse: they had all been true. Of course, he hadn't meant to bring down the old order, hadn't sought to be the dynamite that destroyed the cathedral. But after all, like his Authority virtuals, who could tell the difference?

Still, that was unfair. Everyone—not just my father—was complicit. Me too. After all, did *any* of us try to stop it, and now that we couldn't, did anyone care? After all, *safety and security...*

I slumped down in my chair and closed my eyes. I was so tired, drunk on wine and defeat. Why had I come here tonight? Because I expected some...Explanation? Vindication? Satisfaction?

I felt the cool, smooth surface of a glass pressed into my hand and looked up to that great round, piggish face, smiling warmly at me. "Drink. Enjoy. You and your family are special, George. Take advantage of your blessings. Here, taste this champagne, from Reims, I have been saving it for just such an occasion."

Special? Maybe the champagne, not me. Blessings? Hardly. But I wanted desperately to feel it, those special feelings, that transcendent blessing.

"And I have been saving this too. Just for you." She put a score in my hand. I looked at the title page. It was—astonishingly—Opus 109, the piece that had started me on my long Beethoven journey. Did she know?

"Come, play." She looked at me with soft, imploring eyes, almost begging, desperate it seemed for something great and beautiful, noble and profound to sanctify this strange place, which apparently only I could provide. Strange sentiment from a Den Nineteen in a violently anti-artistic regime.

And yet, I knew music was a spiritual balm, as with everyone—the first thing we hear in utero, our mother's heartbeat, setting up the first inkling of time, and her voice, our first intimation of melody, as well as the last thing we remember nearing the end, the special music of our youth, Sammy quietly humming some of their favorite songs as Annie hovered over his deathbed and spilled glistening tears on his face.

Yes, playing was what I needed. *Death plucks at your sleeve*, I remember hearing once, *and says, "Live, I am coming."*

Maybe it was time to live, to forgive. I rose and followed her through the hallway, up the elevator and down to the music room and sat down at the piano bench and, as she sat next to me and closed her eyes, started to play the Beethoven, the amazing opening, the meadows and mountains, the ascending journey, the time machine of mysterious and exquisite dimensions that once again carried us from this moment to the

next on a flood of magnificent and profound longing for a better world—if not thankfulness for this one. Again, I lingered on the final chord. It was a precious moment and Vänka sighed and put her hand on mine.

Looking up, I saw something on the wall behind her, something I hadn't noticed before: the famous painting by Prinnet, *Kreutzer Sonata*. It showed a pianist and violinist locked in a passionate embrace, no doubt driven by the thrill and thrust of the music they had just performed: music-making as lovemaking, inspired by Tolstoy's novella of the same name, a tale of sexual passion and fatal jealousy.

Is that what went on in this room, musical extravaganzas and extravagant debauches? Something about the evening—the terrible revelations, the newfound relationship, the suggestive power of the music and the painting and the intoxicating effect of the drinks, plus the confusion and anger that infected my psyche—triggered some magical, forbidden, lustful spark. Vänka had once before commanded magic of me, and now, suddenly, she had me wrapped in a hot embrace and was peeling off my clothes and before I could object we were rolling on the carpet under the piano giving off great yawps and growls, moaning...

*Stop. Don't
stop. Stop.
Don't stop.*

...until, fingers and legs and lips twined, we crescendoed to a climax. It must have been a good one because I blacked out.

Except when I came to, on the floor, there was no painting. Vänka was gone too. I could hear a shower running in another room.

I threw on my clothes and hurried off before she could return. Stefán stood at the front door and for a second I thought he might hand me another glass of wine for the road, or worse, turn me around and march me back inside. He merely held it open and bowed without expression.

Later I wondered if, drunk or drugged, I had imagined the whole episode, like the hallucinations at my father's gravesite. That was the last I saw of her.

But one morning three weeks later, I woke up to a jangling signal on my handheld. It was from Vänka. The subject line was *Regarding Orkestrate*. It read: "The Authority rules it is artistic and creative, and creativity is banned."

And with those dozen words it was over, the dream was dead. I strongly suspected she was the one who ran a spike through its heart.

All this flashes through my mind: the strange, pathetic evening, the stunning knowledge, the revelation and humiliation, my crushed hopes, the crash course in infamy, Vänka's reprehensible behavior—and mine.

It started a century ago with the decline, at first almost imperceptible, of something simple but vital: public decency and civility. It ended where these things do, when people fail to stop the descent into anarchy and insanity, precipitated like a deadly exclamation point by the nukes. There were hundreds of sidewalk bombs in dozens of cities on both coasts, synchronized to the minute so there could be no question the attacks were premeditated—tens of thousands of people vaporized, millions poisoned, cities aflame, government undone.

And yet no one in the Midlands knew for sure. Communications were scrambled, the web disrupted. Terror led to panic.

With the coasts devastated and central authority gone, the remaining states started to peel off from Old Glory as if the clock had rolled back to 1861. First Michigandia, then Big Apple, then all the rest, devolving into a balkanized assortment of self-proclaimed principalities, territories, and republics. There were The Greater Dakotas, Fremont, Keystone, New Hanover, Klondike, Paradise, Big Prairie, Borderland, Tidewater, Churchland and New Jerusalem (for the religiously inclined), Texstasy and Sinopolos (for those more transgressive), Freeland, Caledonia, Cherokee, as well as our own Midlands Confederation. Of this last, Destopia remains the supreme metropolis. Altogether there were more than two hundred mini-states at last count, though the count often changes as they merge and split and merge again, like pond amoebae.

Who was responsible for the coastal attacks? The Sino/Russo Alliance was immediately suspected, of course—especially as the Big Prairie and Greater Midlands states, far from their reach, were spared immediate destruction. But the S/Rs denied responsibility and with our surveillance spy crafts rendered lifeless by hackers and communications in chaos, no one knew. Even now, almost two dozen years later, no one is sure, everyone has their own theory.

Destopia was quickly established to restore order in the Midlands region. Destopian dominance came about for two reasons: leadership and locality. The leadership was provided by the Hummingbird Collective, our little collection of ambitious, brutal, and brilliant Hummers, who quickly and fearlessly took charge. (Why Hummingbirds? The Aztec war god.) The locality was provided by happenstance and nature. We had what a parched world desperately needed and would pay astronomical prices for: a constant supply of fresh water from the world's largest, purest source.

That revenue stream, actually a gusher, allows us to provide gambling and gaming, sedatives and sports, piety and porn—the Big Six, plus medicine, education, and commerce, everything society needs to sustain itself securely.

Thus the denizenry are becalmed and contained, secure and safe, and narcotized from worry.

Mostly.

VIII. Chamber of Dreams

Goshem's uncanny resemblance to Vänka threw me into this hideous reverie, and now, almost plowing into her when she pauses, I'm rudely vaulted back into the Tchernikovian Now from which I've strayed so far.

She points to an inconspicuous tangle of brush alongside a crooked ginkgo tree off to the side of the avenue we have been traversing. Nothing remarkable to my eye, but she knows better. She pulls aside the brush, which looks as if it's been carefully assembled like a bird's nest from nearby bushes and shrubs, to reveal a small hole, just wide enough for a person to drop into.

Goshem stoops under the Ginkgo to scoop up fallen leaves and dried grass, and when she has enough lashes them tight with tree vines to one end of the limb she has brought to fend off the wolves.

"Hold," she instructs, handing the mysterious object to me.

She kneels again to find and retrieve two rocks the size of fists and crowding next to me deftly strikes them together, like a piston, faster and faster, creating a fusillade of sparks that lights the tree limb.

How about that—a quick lesson in making your own prehistoric torch!

Taking the fiery limb back, she nods at the cave mouth.

"Go."

"Go where?" I ask, alarmed.

"There," and points at the hole.

"Is it...safe?"

She gestures me downward with an impatient wave of her hand.

Okaaaay. I peer into the hole but it's too dark to see a thing.

Despite my initial enthusiasm, I'm not eager to find myself in another dark cave.

"Go," she says again, with more impatience, and I grit my teeth and squat down to squeeze through the hole, dangling uncertainly for a moment before dropping a few meters.

The darkness triggers the same dizziness and disorientation that sent me hurtling out of Vienna and landed me dangerously close to the cave bear. But as my eyes adjust, I make out a few meters in front of me, row upon row of stalagmites, each as tall and round as a soldier, ancient sentinels guarding a subterranean hallway that twists off into the distance.

With a thud Goshem lands beside me. "Come," she orders, holding the torch aloft to light the chamber and set strange shadows flickering and flaring overhead. She advances rapidly down the cavern, which

narrows to a small passage. I follow close behind, nervous but curious, and somewhat reassured by her obvious experience as a guide.

We walk perhaps ten minutes—Goshem in the lead, me a few steps behind, turning this way and that with every imagined noise—heading through dozens of corridors, some just a short distance, others hundreds of meters long, past forked passageways whose turns I try to remember (what if we get separated?) and immediately forget.

Occasionally a passage narrows so that we have to twist sideways to squeeze through, or the ceiling dips so low I have to buckle my knees and employ a kind of duck walk to get past. Goshem, a head shorter, has no such difficulty. She forges ahead, never hesitating, even at corners dark and forbidding. Obviously she's never been attacked by a cave bear.

Just when I'm ready to question the wisdom of this excursion and argue for turning back, she stops and gestures ahead.

"Here." She smiles and raises the torch aloft.

The light expands to take in a round chamber thirty or forty meters wide. Scores of painted animals glare down at us from the walls, startled, it seems, at the intrusion. First to greet us near the entrance is a herd of gaping mammoths who seem to shake their huge tusks in the flickering light to warn us away.

Goshem steps across the chamber threshold and I follow more tentatively, awed by the sight. The walls are filled with images that gambol and frolic in the dancing torchlight. To our right a herd of rhinos in gray charcoal and red ocher are charging around a stand of trees that seem to quiver and shake with their hoof beats. Nearby in brilliant reds and shades of brown a dozen or more reindeer and aurochs wade into a lagoon to drink while a school of pink-white salmon stream around and through their legs. The blue-green water glimmers and dances off the pond surface. Above a tribe of spear-throwing hunters chase wild boars into a gorge. The animals seem animate and alive, kicking up a cloud of dust as they bawl and buck in panic and confusion and drop to their knees, bloody spears dangling from their sides.

Goshem's torchlight throws my shadow on the wall too, so I seem to move among the animals, future man cast thousands of years back to frolic with the ibex and leopards and wolves and a lion attacking a bear—look out!—and two antelopes mating. I lightly rub their haunches in frisky encouragement.

High in a corner a dozen horses ride by, rounding the turn of the wall, legs whirling, necks straining, mouths open and gasping for air. The calcite concretions spangling their manes seem to flicker and wave as they billow in the wind. Just below a trickle of water seeps through a crack in the wall. Some enterprising artist has fashioned around it a

gamboling deer or gazelle, gasping for breath and sweating at the dripping seam from the effort.

At the far end a giant cave lion chases a herd of deer across the wall. I marvel at the airy, repeated brush strokes depicting the delicate hairs on its back and hind quarters and the whiskers on its face, the hooves and legs in motion, the eyes alight with menace, the sweep of action against the fine-grained details.

These images are the work of ancient geniuses, the first to render life into art. It's like Picasso said after visiting Lascaux: "We moderns have invented nothing."

"So amazing, so beautiful, so miraculous," I sing out, to Goshem, to the cavern, to the artists, to the animals. "It's what makes us human and brings light to a dark world!"

As if my words set off a signal, the room goes black. I feel the rush of air that has blown in from some distant hallway and must have extinguished the torch.

"Goshem, you there?"

I hear some shuffling, then nothing. No light, no sound, except for the lingering echo of my voice.

"Goshem, are you there?" Louder: "Where are you? GOSHEM!"

I hear more rustling sounds, the same chuffing noise before I was attacked by the cave bear, and my imagination springs to life like the animals around us. I can imagine a giant beast rounding the corner, teeth bared, claws raised, roaring awful death. Is this a set-up engineered by the hostile Chief, a convenient way to make the strange visitor from some bizarre *foo-tcher* disappear? Panic surges through me, galvanizing my legs to dash off somewhere—anywhere! I churn into action and make it exactly five steps before I crash into a wall and crumple on the floor.

After a moment a light blazes up, perhaps the retinal flash of a concussion, an internal klieg light illuminating my flattened brain. But no, it is Goshem, holding aloft the torch. "What happened?" I ask her, as I wipe dirt and blood from my face and pull myself up unsteadily to my feet.

"Wind." She puffs out her cheeks. "I find more rocks. Spark fire stick."

"Maybe we should leave," I suggest. It could happen again, the light going out, the bear roaring in, the floor opening up.

It's then I notice at my feet, next to where I had fallen, partly wedged as if hidden in a crevice at the base of the wall, a small twinkling object. It appears to be a figurine, a female object, no larger than a person's fist.

“What’s this?” I ask Goshem, picking it up and turning it in my hand. She lowers the torch to examine the small piece.

“Ah. Woman. With child.” Peering closely I can just make out the face, breasts, and protruding belly in ever-larger spheres, one atop the other.

I notice, turning it this way and that in the flickering torchlight so that it glitters and gleams, that the figure seems encased in a clear, waxy, yellowish substance, perhaps amber, fossilized tree rosin. If so, that means it may already be many thousands of years old, older than the paintings in the cave. An excited thought streaks through me: I might be holding the oldest sculpture of all time—the mother of all art! How appropriate she’s with child, as Goshem had said.

Focusing more carefully I see the eyes, mouth and navel are inlaid with tiny jewels, perhaps opals, which shimmy and shine soft green in the dancing firelight.

“Imperia!” Goshem says smiling, pointing to a spear or long knife in one hand and a torch in the other that I had overlooked.

“That’s her name? You know this statue?”

“Fighter,” she says. “A beauty.”

But it is more than merely beautiful, it is historic and wondrous: A female fertility figure found in a spirit cave, a vast cavity bearing (in this case) what I’m certain is among the first art objects to be born.

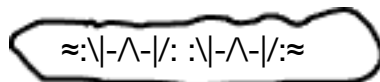
I’m struck also with the figure’s resemblance to Goshem: the same roundness of figure and face. “It...it looks like you,” I say, startled, looking up at her shyly.

“Imperia. Queen!” she says with a big smile.

“Queen?”

“Ruler. Of *our* tribe, *my* tribe,” she says, jabbing her thumb back toward the cave mouth, near the entrance by the ginkgo tree, where an hour’s walk away the Chief reigns supreme.

Perusing the figure carefully, rotating it in my hand under the flaring light of the torch so the shadows make the tiny knife and spear appear to jump up and down, as if energized and ready for use, I note a curious thing. At the base are, just visible, a series of scratches, tiny dots and lines—some vertical, some angled, enclosed by a rough oval circle. They might be random scratches impressed by time and rough handling. But I don’t think so: they repeat in such a way as to make up a crude pattern, perhaps some ancient code like I’ve seen in photos of the Rosetta Stone:



Nothing intrigues me more than decoding, but just as I start in on it, noting the mirror repetition like a palindrome, Goshem interrupts me, pointing to a handprint along the nearby wall over which she lines up her palm. Perfect fit.

“*You* did that?” She smiles and nods. I find myself surprisingly moved, maybe because of the elegant simplicity and beauty of the gesture, leaving her mark for eternity.

“What does it mean, to you, the mark of your hand there?”

“Mean?” she says, surprised. Of course, she can’t know: the meaning of *meaning* is beyond her comprehension. But once again I’m wrong about the intelligence of these ancient people. She looks at me fiercely. “Means *Goshem! This* hand,” and she presses her hand fervently to her chest. “*This* sign. *This* being. Goshem, *this person*,” she says, her voice growing louder, her face flushing red and angry, hands slapping her chest. “*Not slave!*”

The words echo around the hall.

“You...a slave?”

She looks down.

“The *Chief’s...slave?*”

She shrugs ever so slightly.

“But where are your people, your tribe? Can’t they help you?”

She continues to stare at the ground, unmoving, until I start to think she hasn’t heard me. Then she looks up, tears trailing down her cheeks like a string of small pearls. “Gone,” she says, so quietly I can just make out the word. “Gone,” she repeats in a whisper.

“But where?” I whisper back, as if we’re afraid the animals will take offense at this genocide and rise up against our wayward species.

“Where did they go?”

She looks past me, at a wall filled with aurochs and mastodons. I follow her gaze and see in the upper corner a line of people, simple stick figures, not as fully formed as the hunters, being led away at spear point behind a cave, where they disappear—from the wall, and, evidently, from history.

I reach out and take her hand, small and heavily calloused, and she looks at me with wide, surprised eyes.

Then she beams to me. “You.” She points to the handprint.

“What?”

“You. *Your* hand. On wall.”

“Add my...?” My hand starts shaking, as if flustered at the thought of soiling the sacred purity of this holy space.

“But why? What right do I have to...to...?” I can’t put it into words, words like *defile* that she’d understand. But yet again she does.

“You add...your mark...against *them*,” she says, hissing the word.
“Your mark, your spirit, your life,” she says with fierce resolve.

She examines the torch branch and twists off a short sliver of wood about the length and thickness of a shiv. She leans the torch up against a wall, finds a small rock on the cave floor, inspects it and nods in satisfaction, then looks expectantly at me.

“Try.”

“Me? Try what?”

“Make sharp.” And she hands me the rock and the piece of wood. I’m not sure what to do and fumble with supreme incompetence. I look up and shrug.

“Try!” she repeats, giving me a stern look.

It appears I’m expected to have mastered the technology of the era I’m in. Next time I’ll do a better job programming that requirement.

Reluctantly I take the rock Goshem hands me and kneel down and gingerly slash the wood on a diagonal against the floor. Little slivers of wood fleck off. Goshem nods encouragingly. With my next attempt I do even better and look up with a smug smile. “Hey, this isn’t so hard!” I tell her, which of course prompts the universe to administer a severe corrective involving my forefinger, prompting me to unloose a string of oaths that rattle around the cave.

“No, no,” she says, laughing. “Like this.”

It’s the first time I’ve heard her laugh, a hearty, reassuring rumble from deep in her throat that makes me laugh back, despite my throbbing finger and ineptitude at stick-sharpening. Thankfully she takes the rock and wood from me and kneels down and places the wood against a side of the wall, then chips and scrapes away at the edges of the piece, faster and faster while turning it over and over with her free hand. In seconds it’s transformed into a razor-sharp knife.

She holds it up to examine and blows away errant splinters, then kneels down to a clay pot on the floor of the chamber filled with what looks like fine ochre dust and wiggles her hand in it, a lively five-fingered animal. When she pulls it out her hand is coated with the dust, some of which spills onto the ground like fine red powder. She takes the sharp-pointed shiv and jabs the tip of the middle finger of her red-dusted hand. Blood blossoms on her fingertip, bright liquid red mingling with the pale ochre on her palm, which she smears together to form a dusty paste. She turns to the wall and finds a blank spot near a side wall. She places her dusted hand firmly against the space and with her other hand on top presses hard. After a few seconds she pulls her hand back. The dust and blood leave a handprint: her handprint, her essence.

She eyes her mark critically, smiles and turns to me. “Now you.” I start to object but she grabs my hand, marches me to the clay pot and shoves it in. She hands me the splintered wood. I can’t do this, I think. Doesn’t it violate decency, common sense, the Rules, leaving my mark on the past? Is it even possible? But OK, so what? If this is some kind of desecration, it’s not *real*, only virtual. And it’s precisely the kind of unique and amazing experience The Dream Machine was meant to provide: the once-in-a-lifetime thrill, the historic memory. I jab my finger and wince, once again (as with the bear) feeling real, not virtual pain, and smear the blood on my dusty palm. I walk to the wall near where she had placed her handprint.

“Here?” I ask, pointing to a space next to hers.

She nods.

I push my hand firmly next to her handprint, then step back to admire my handiwork.

“Ah, so beautiful,” I say, and she nods in agreement. Beautiful both in itself and in the sense that cave painting, like all art, of which this is the first, serves as a kind of time machine, reaching across the generations to awe and inspire people many thousands of years in the future.

The sight of the animals and hunters—in flight and repose, in groups and alone, looking away and directly at us, making contact, eye-to-eye, soul-to-soul—has a curious effect on me. I begin to cry.

Goshem, surveying the cavern, turns to say something but seeing my tears, frowns and tilts her face in concern.

“It’s just, just that...I’m...I’m...,” I explain fitfully. “So happy...to be here, with you, in this sacred place, this magical time.”

She nods her head and smiles in understanding, but really the tears are about so much more: the years of doubt and failure (with my father, with Liz, with Vänka), and the vindication that will surely come someday, because these trips demonstrate that time travel like this *can* be done—*is* being done, with total safety and verisimilitude.

Also a kind of shame, a feeling I’m not worthy to be here, “a mere coder” as my father liked to say, taking nasty pleasure in tightening the screw on my fragile psyche, consigned by the family curse to isolation and savage loneliness. And yet: I can trip back in time to see and act among these peoples, these images, so life-affirming, so profound: the moment we first learned to free ourselves from reality’s harsh grip, by recasting that reality through the sacred vision and beauty of art. No one has seen this artistic panorama in thousands of years. I told Runa I wanted to be the first. Now I am.

A feeling of despondency as well, because Runa, my ABH and fellow tripper, isn’t with me to see it and share the experience. And a kind

of existential loneliness, too, as the first explorer to trip through time. Perhaps Lindbergh or Zhang felt this loneliness on their solo voyages through space, as I do through the ages.

The tears speak also to the wonder of witnessing not just the first art but the first story-telling that is permanent and eternal, the narratives of the all-important hunt that portrays and ennobles the animals and the hunters on whom the tribe depends, tales of survival, courage, and dawning self-awareness. Over time these vibrant scenes inspire complex sagas narrated entirely from memory by skilled orators like Homer and Demosthenes and the many ancient poets who transmit them down the ages, later transformed by other artists into sagas and myths that become fiction and films and vids, brilliant and compelling, until that art becomes too compelling and creative story-telling too threatening and is banished, the arc of narrative that starts here in this torch-lit chamber expanding and flourishing everywhere over a thousand generations, until it is snuffed out like the flame of a candle in one: mine.

We let it happen.

And finally, the tears represent the contrast laid bare in these paintings: the height of our species' genius against the depth of its depravity, the beauty and profound significance of art versus the drab and deadening emptiness of our everyday lives. It is the difference between what we *can* sometimes achieve—rarely—the magic of creation, and what we most often achieve: state-sanctioned torpor and torture. “We sit in the mud,” Turgenev said, “and reach for the stars.”

So I weep again, can hardly contain the tears, I have to look away before I can finally regain my composure. Only then can I pose the question that has puzzled me since we arrived in this gallery, the same question that has puzzled humankind since the artists left.

“Why?” I say to Goshem, wiping my eyes. “Why did the artists paint these scenes?”

The question seems somehow important, pivotal, as if everything I started years ago with Orkestrate and The Dream Machine has pointed me to this moment—my father extolling Beethoven and Beethoven extolling the ancients, all of which with Prospero's help has led me to this Tchernikovian now.

Goshem somehow seems to appreciate the seriousness and even the importance of the question. She pauses and looks at me solemnly, then raises her arms in a sweeping arc to take in the whole room, a chamber of dreams.

“Magic,” she says.

The word echoes magically from corner to corner, then dies away.

I point to another painting that I've only just noticed, high up on a distant wall. It's a curious image—another stick figure—falling spread-eagled, terror evident in its wild eyes and gaping mouth, past a cave opening. A falling dream?

“The wind,” she says with a frown.

The wind? What does that mean? But before I can ask we hear a noise. A boy appears suddenly at the chamber entrance. “The Chief...” he says, panting, out of breath...“wants you...The meeting starts soon...when the sun falls below the hills.”

Goshem and I look at each other, then turn to follow the boy back through the long hallways of the cave, past the stalagmites at the entrance saluting us, and head back along the ancient prairie in brisk lockstep, enfolded in our lonely thoughts. Mine are of the majesty of the animals in action and the terror of the crude figure in free fall.

In the waning afternoon sun long shadows stride alongside us like the ghosts of the ancient cave artists, not ready to relinquish their hold on us, intent on telling us something important.

Then the sun slants down over the hills and the light dims and the shadows and their message disappear.

They say life plays out in triplicate: youth, middle age, senescence; the holy trinity; the triple water worlds of Kepler-819; the Three Fates as well as Faith, Hope and Charity; the forbidden Piano Triptych by Marsh.

And famously, the three mistakes everyone is expected to make—the big, life-altering blunders.

Even me.

My first came when I was fleeing west across the Old Land from the invading Russo hordes. I was 15 and all alone, having killed my guide. I slit his throat with the jagged edge of the bottle he had swigged before trying to assault me. Killing him was no mistake, it was unavoidable, self-defense.

But what followed a month later was surely a mistake. The night was dusky, twilight in the forest, when I came upon a giant sow nursing a dozen squirming piglets.

Except for nuts and berries and the occasional squirrel or rabbit remains left behind by some forest creature, I had not eaten in weeks. I was certain, to the degree that certainty was granted me, that I was starving to death.

I crept as close as I could and fired my gun, but managed only to graze the wild beast. It rose and charged. I tried to shinny up a nearby tree, but could not climb high enough. The sow rammed the back of my left leg. This time I finished it off, but the gunshots brought on a pack of wolves who devoured the carcass while I trembled from a limb just above their snarling reach. I could only eat what they left behind, which was not much.

The leg wound festered and boiled into an infection that set off a high fever. I managed to crawl into a nearby cave. For two or three days I could barely lift my head and when I opened my eyes I was accosted by terrifying visions of hideous creatures, giant wolves and cave bears and rats endowed with human faces, like that of Alexander. One time I hallucinated a giant saucer buzzing just above my head. I reached up hoping it would whisk me away. I was sure the real wolves would return and finish me off, or a real bear. I was close to death and welcomed it; what could be worse than this hell?

But in my brief lucid moments I reflected on a curious thing: how could I have missed the sow? The gun was in good condition. I was at close range. But there was something about the brood of nursing piglets that prevented a clean kill, the fatal ambivalence I sometimes harbor toward the weak and wounded, a weakness I have ever after repented and endeavored to correct.

The second blunder came a few years later—with the Fermi Professor. I worshiped him. At first it was his intellect and accomplishments that stirred deep feelings in me. Then we started working together on nanospectrum optics and

my feelings deepened over his insights and, in our moments alone, something beyond mere science — his humor and tenderness. He was sensitive as no one else had been to my terrible back story as an orphan and fresh-faced student, a foreigner in Old Glory and an outsider at UCM, his “delightful double alien,” he called me. I loved and appreciated his guidance and the sympathy he extended. He also suggested starting a journal — this one. “Scientists should record their works and lives,” he insisted. I asked to see his journal, but he demurred. “Too boring, too warring,” he explained, which I took to mean his ever-contentious relationship with his colleagues.

Perhaps he loved me too. I never knew, never asked, never pressed. The closest I came to finding out was when I stopped by his office once. He was out but I spotted on his credenza the spare drive on which I knew he kept his journal. I quickly copied it onto my handheld. When I got home I opened it up, quivering with guilt and excitement. But there was no mention of me, only a single entry, a long lamentation about his difficult relationship with his own father, which he seemed unable to prevent repeating with George. “From father to son,” he wrote, “the least favored one, three generations undone.” All very sad.

Then came the Great Convergence.

Everything happened quickly, Hummers moving fast to raze the past and raise the future. We loathed the Russos but took as our model their takeover of that vast unruly land. Except we had only weeks to do what took them years. We equally loathed the Sinos, but studied and adapted their Red Guard model of a paramilitary capable of quickly uprooting and replacing the dying old society and obsolete old ways we had inherited.

I knew Samuel did not approve—the speed and thoroughness with which everything changed, even though he detested the Neos and all the chaos they churned up that was disfiguring our lives. I begged him to sign the Compliance Code. He would not. “Even if it means death, I’d rather go out with my head held high than live under Authority lies.”

Of course we Hummers knew his work on spectrum optics, who did not? And as I anticipated, the Collective came to me and suggested I secure his cooperation to effectuate holokinesis, “to put virtual boots on the ground and drones aloft in the sky to establish the tool to rule.” Fearing for his life, I agreed.

I went to his office. It was not a good conversation. He crossed his arms and swiveled his chair toward the window and shook his head violently from side to side and kept repeating “No!” and “Not possible” and “Never!” ever more stridently until I had to lean around and press my palm over his mouth.

He put his hand on mine and held it there, just for a moment. I shivered at his touch. He turned around slowly. There were tears in his eyes. “And if I don’t?” he said quietly.

“Then I cannot be responsible.”

He nodded solemnly and I left.

Stubborn as he was, the drones came and did their work. At least I can comfort myself that without my intercession, their quiescence would have been worse, might have been fatal. Drones cannot always be trusted to exert just enough havoc to avoid killing their victims. But he was never the same. Within weeks after the demo, as the scale-up was underway, he was a changed man: folding up like a flower in frost.

How responsible was I? Not at all and absolutely.

Perhaps like eye color or height, blunders run in families. The third was with George. I had invited him to my apartment to discuss Orkestrate—and to get to know him better.

We had a nice time. There was a misunderstanding and he left.

Actually, that is not quite right.

We talked at length over a nice dinner. He asked about GC/Zero and I told him about the bombs, the invasions, the collapse of civil authority, and the panic on the streets. He was doubtful.

Some dens claimed no one actually knew what happened, he said, and others believed it was all a lie, a hoax, to justify the takeover.

He did not believe my denial so I showed him his father's letter of admission. It left him shocked and distraught.

I convinced him to play a Beethoven sonata on the Tanenbaum, the piece I knew meant so much to him. I thought it would comfort him.

It had the opposite effect. Aroused by the music and alcohol, perhaps, or anger over his father's letter to me and my role in its composition, he made a crude and drunken pass. I have killed men for less, but that was unnecessary. I subdued him with a blow to the neck. He recovered in a few minutes and left.

It was a terrible end to a lovely evening, to a promising relationship. I thought I knew him. Obviously, I did not.

IX. Tribunal

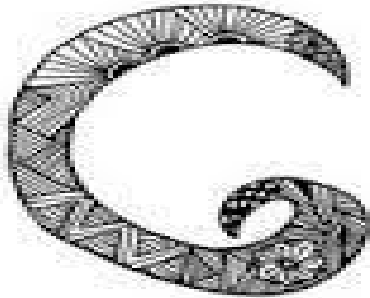
The boy guides us down below the cave near the trees where the horses graze. The waning moon peeks through a line of clouds. A thin rain is starting to descend in long tendrils. Somewhere in the distance heat lightning ripples across the sky and muffled thunder peals like quiet drum rolls. Night settles over us like a blanket.

We approach a hut made up of large slabs of rock on top of which are interlaced huge bones (mastodon?) and tree limbs daubed with dirt and leaves. Smoke curls up from an opening.

Inside I hear chanting.

I turn to Goshem. “What’s going on—” I start to ask, but she is busy retrieving something from her vest and reaches out to squeeze it into my palm.

I look at it and freeze...



The same talisman I have at home, on my shelf, twenty millennia in the future.

“For you,” she says, and puts it in my palm. “G for Goshem. G for good luck.” She nods toward the hut.

“Luck?” I curl my lips in apprehension. “Why would I need that?”

She hesitates, looks around to see if anyone is nearby, then leans over to put her lips to my ear. I think she might kiss me, but instead she whispers, “Beware the rising wind.”

She points to the opening of the hut, covered by an animal skin, nods her head, and turns down the trail.

“Wait!” I yell after her. “*What* rising wind?” There is no wind, hardly even a soft breeze. The leaves from the nearby trees hang as limp as my hopes. In this alien place I had hoped the Chief would be my defender, the Healer my shaman, and Goshem my guide. But the men seemed to have turned on me, and Goshem slips into the darkness and is gone.

Throbbing sounds radiate from the hut. The low voices chant odd syllables in a hypnotic drone, oscillating between soft and loud, which expand and contract in unison and then at strange, dissonant intervals, ancient modes and keening syncopations with wailing lamentations that I cannot make out, which even Prospero cannot divine.

And yet I find myself humming along, as if I've heard the strange syllables and contorted melodies before, somehow recalled from race memory or distant dreamscapes or deeply embedded DNA, perhaps, and activated now by this primal scene, this prehistoric Tchernikovian Now.

The animal skin flaps open with a *whoosh* at the hut entrance. A man appears. His face is smeared charcoal gray, his thick vest embedded with seashells and animal teeth that jiggle and glitter like shards of glass.

It is the Healer. He nods and crooks a finger at me.

I step across the threshold. The chanting modulates to a chorus of *ooohs* and *ahhhs*. Momentarily blinded by a row of torches blazing in the back, I can't make them out, this tribal choir. I shield my eyes until some vague impressions come into focus, a scene of fifty or sixty tribesmen, mostly young, with long flowing hair, soot-blackened faces and beaded and bejeweled outfits like the Healer's. They must be the hunters: spears ring the perimeter of the dirt floor like a circular gate. The men sit in two concentric circles, in the center of which, cross-legged in a circle of his own, the sun around which all planets orbit and all light emanates, sits the Chief. He spreads out a hand and bids me, wordlessly, to sit across from him.

Should I be afraid? There is nothing to fear, I remind myself again. The Dream Machine is loaded with <<doNoHarm>> lines of failsafe code. This isn't a *real* Stone Age tribe bent on some savage justice. It is merely the great Prospero, maker of magic, projecting carefully curated adventures culled from history's vast panorama onto the neurocircuitry of my mind. It should feel like a thrilling adventure.

Why then my jittery nerves and swirling thoughts? Because this *can't* be just a dream. The light streaming from the sparkling torches, the rumbling thrum and regal get-up of the men, the firmness of the earth pushing up against my leather sandals, the dank smell of smoke and sweat filling the air and the fear that grips my mind—are more authentic than any dream, more real than any reality.

I peer back at the entrance. No guard. The thought pops into my frenzied brain: Take off, make a run for it! Escape this tribunal inside a nightmare! But that's immediately met with another thought: Where to? Across the forested plains of an ancient night crowded with monstrous bears and savage wolves?

Perhaps the trip will time out? Why hasn't it already?

I sit down across from the Chief. He averts his gaze. A man near the front, the one I remember as Broken Nose, begins a melody, irregular and dark. Another man joins in and soon everyone is singing the strange syllables, notes and words and bodies weaving together like some mystic tapestry textured and hypnotic.

Broken Nose nods expectantly at me, his hand circling out from his lips in pantomimed song. So I join in, though I don't know the words or the melody. But I can approximate the complex rhythms and moan the low syllables with the others. They sing and chant, their eyes closed, sharply slapping their chests and hips in time to the syncopated beats.

A man in the back gets to his feet and begins slowly circling the perimeter, swaying his arms and rising and lunging to the beat. Others form behind him. Then the inner circle starts moving in the opposite direction, everyone slapping their sides and moaning and chanting.

Someone nudges me and I rise to join them. At first I'm self-conscious—everyone must be looking at me—but no, their eyes are closed, they're in a trance, fixed in their own solitary worlds and yet connected and in unison with the others, apart yet together, like the fungi fields Runa spoke of after our first trip, the one that our individual consciousnesses, our "cauliflowers on a corn stalk" as she called it, messed up. Ancient man, it seems, could transcend their solitary minds better than our modern, existentially alienated humanity. I eagerly join the tribesmen in their unitary consciousness, singing and moaning in ecstatic stupor. Everything seems both universal and ancient, thrilling and terrifying.

And then, at some unheard command, it stops. Total silence, except for one person who continues to sing and dance. Me.

The Chief glances at me with hooded eyes.

When the echoes fade and we resume our places, the Chief rises from the inner circle to address the men.

"We are here now," he begins in a deep monotone, "to consider the strange tale of Cave Bear Man." He pauses, looking around the room and then at me. His eyes are half rolled up, so mostly what I see are the chalky whites. When he nods slightly in my direction, I think I can detect the faintest smile on his lips.

"Many of you have asked me, 'What do we know of him?'" he resumes, turning back to the men. "Almost nothing, only that the stranger arrived from nowhere, that he led the bear out of Long Cave, which we had surrounded and had been watching for many days. We did not see him enter and it is not possible he could have slipped past us."

"Why would he risk death?" someone calls out, and there are grunts of agreement.

“We know only what he tells us,” the Chief continues in the same low tone, almost a growl, “that he arrived from the *foo-tcher*, this place he describes as the time to come many seasons from now.”

Someone along the back wall yells, “How could he have survived the beast, unless he was a sorcerer and enchanted it?”

“That’s right!” another tribesman calls out, and there’s an undertone of agreement from a few of the younger men sitting close, a low and ugly growl like the wolves Goshem and I had heard earlier that puts me on edge.

“Yes,” the Chief says, turning back to me with his half-lidded expression and half-hidden smile. “One of many questions.”

Anvil Arms stands up in the back. “If he was a sorcerer and had enchanted the bear,” he says, “then he would not have needed to flee the beast, which came near to killing him, and landed a cutting and almost deadly blow.”

People turn to me, and obligingly I tilt my head to give them a better view of the still-purple welt.

“He helped flush out the bear,” Anvil Arms continues, “which had been sleeping since the snows came, and might have taken many more days and weeks to awaken and leave the cave where we had been waiting outside. Then we would have starved. So I ask: who would have been so brave as to go in on his own and face the beast like Cave Bear Man? Who among you?”

After a long pause, someone says, “Maybe he was a sorcerer, just a bad one,” and the men burst out laughing. But Anvil Arms raises his beefy arms and the laughter quickly subsides.

“No,” he says again. “If it weren’t for him we wouldn’t be here now, well fed and content to listen to his story.”

There are some grunts of what I hope is agreement.

“Maybe so,” says the Chief. “But that doesn’t explain how he got into the cave when we had been guarding it through the whole of a moon cycle.”

“Explain that!” a man yells, and others take up the challenge: “Yes! Explain! Tell us!”

The Chief claps his hands and the men go silent. All eyes turn to me, including the Chief’s, who nods permission.

I run my hands through my hair wondering how to explain. Even if it were prudent for me in this singular instance to defy the Rules and talk about the future, how can I describe it—our so highly advanced yet deeply flawed civilization, and The Dream Machine that delivered me from its throes—to people whose science and technology are not far removed from tree-dwelling primates, whose ancestors have lived the same way,

eating the same foods and observing the same simple customs, for thousands of generations? Then I feel it, rubbing my head, the most obvious and demonstrable difference.

“Where I come from, many years from now, there are devices that attach to our heads.” And I pull my long, scraggly hair back and bow low so they can see the Cranial Ports behind my ears.

A few men gasp at the sight and others snort what might be derision, which I try to ignore.

“In our future every baby at birth is implanted, uhm, *given*, these devices. They’re screwed in, like—” and I pause to think of an analogy they might understand, “—like a knife turns to make a hole in the ground to plant seeds. Only our seeds are not plants—they’re knowledge, wisdom, and understanding.”

I imagine this will impress them, but instead there’s more sniggering, interrupted by a man who hoots, “Hole in your head?”

“Holes, yes,” someone else says. “They carve holes in their heads!”

“No, no, not exactly,” I answer and wave my arms for quiet. This was precisely why I had told Runa not to talk about the Destopian future: to avoid the shock, the confusion, the misunderstanding. But in this case I can’t think of a better explanation: they’d see through it quickly enough if I made something up, such as coming from some distant tribe and wandering into the cave by some remote rear entrance. They might send me back the same way, and then where would I be but wandering the ancient and dangerous land on my own. No, lying never worked for me. Truth may in this case defy the Rules, but it will impress and overawe the tribesmen, and that will be my salvation.

“Not holes. Entryways, pathways, like the path into your cave or through your forests and across your fields. They are designed to make us smarter and healthier. And we are. We live, some of us, hundreds of seasons, and have access to all the world’s knowledge.”

“*Ahhh!*” a few people sing out.

“And what I did with all that knowledge—from around the world, from every tribe and nation and from all the languages and histories ever recorded and every story and myth ever told—was collect and direct it through these ports, these pathways, into my mind—” and I wiggle my fingers around my head as if the ideas and stories and myths were bubbling inside, a cauldron of knowledge, “—to build a vision of the past that I could then enter. So I could be here...with you. And here I am!” I bow low to sanctify the moment.

In the silence, awe (or perhaps confusion) is palpable. Then a man in the back yells, “Here with us!” followed by cries of “Yes!” and a wave of

cheers bursting forth like water through a dam. “Here he is! Here with us!” And another: “Joining us from *foo-tcher land!*” he yells, and they all join in. “Here, from foo-tcher land!” “Man from foo-tcher land! “Foo-tcher Land Man, with *us!*”

And someone starts singing:

*From the foo-tcher, down the years
He led the cave bear to our spears!*

The little tune is taken up by others, amazingly in canon, first by the outer circle, then the inner, a rollicking ditty they sing with fervor. It’s thrilling, this raucous reception. Like vindication, a triumph I would love to share with my famous father, ever derisive in life, now long gone, and my equally illustrious clin, nowhere to be seen. Even Vänka. To show them that for all my apparent waywardness and failed potential, I could successfully recapture a distant past and impress the people there with my knowledge and kinship—something never before done.

“Wherever the stranger is from,” one of the men sings out, “if not for him we’d still be waiting for the bear,” to which someone else adds: “No, we’d be sleeping with our ancestors.”

There is a crescendo of cheers. The crisis of doubt has passed. I have triumphed and bask in their reverence like a god.

Still, the Chief is surely a greater god, someone I cannot afford to alienate—especially since I am the alien. I lock eyes with him and bow my head, a barely visible nod that no one else can see. You are still the Chief, the gesture says. I defer to you.

Without acknowledging my gesture or betraying any emotion, his face opaque and impenetrable, the Chief raises his hands for silence. It takes some time to regain control.

“The Tribal Healer was the first to aid the Stranger after the bear attack,” a man near the front says and nods to the back of the room where the Healer sits. “He spent the most time with him, and nursed him back to life from near death. What does *he* think of Cave Bear Man?”

All heads turn to the Healer. He is slow to answer, working his hands through his beard, considering his response.

Finally he rises to address the men. “Yes,” he says in his quiet voice. People strain to hear him above the crackling of the torch flames and the pounding rain beating down on the roof. Somewhere in the distance approaching thunder booms at irregular intervals.

“The visiting traveler has told us that the magic he can perform consists of describing the world from this time forward for many seasons, from the time he comes from.”

A few men voice their agreement with a murmured *uhmm* or their awe in a subdued *ahhh*. In the silence that follows someone whispers: “So he must know *our* foo-tcher!”

“Yes,” says the Healer, looking at me. “Tell us, Cave Bear Man: what will it be like for our tribe, all those seasons from now? How does this foo-tcher look?”

I had assumed these benighted people didn’t understand the concept of *foo-tcher*, but maybe they do, at least a little. How to respond? Best to generalize.

“I do not know *your* future,” I say, pointing to the Healer, “or yours,” turning to the man who asked the question. I look around the room and single out others, the Chief, Anvil Arms, Broken Nose. “Nor do I know your mate’s, or your children’s, or *their* children’s futures, except that they will live and die, like all people, all creatures in every age. What I *do* know is what happens to your whole tribe, which we in the time to come call *Homo sapiens*.”

The men seem fascinated, focused on every word, their eyes locked on my lips where these strange ideas tumble out. “*Ho-mo sa-piens*,” a man in front murmurs, rolling the strange syllables on his tongue to see how they sound, what they might signify.

“Yes, *Homo sapiens*. It means—” and I pause to let the drama build and magic unfold, and utter in low portent, “—*the men of wisdom, the people who know*. What is it we know, your tribe and ours...all our two-legged brethren? We know we are far wiser than the lower animals, the horses and deer and aurochs and mastodons.”

“What about Goshem’s people?” someone calls out.

I consider this. Should I tell them what she told me and what I saw at Dark Cave, her people being led away to extinction? Maybe a half truth.

“Yes, you are wiser than Goshem’s people. Which is why they die out—they cannot compete with your tribe.”

“*Com-pete?*” someone says, puzzled.

“You are too powerful, too smart. They can’t keep up with you.”

There is a chorus of agreement, a synchronized nodding of heads. I’m aware that this description is a multiple violation of the Rules—don’t lie and don’t foretell the future to the people of the past—something I made Runa promise not to do, the transgression of which I declared might cause enough cognitive dissonance to befoul the program code. But really, that was aspirational. The whole Rules thing was a kind of game I devised—a rough guideline—to keep the experience pure and safe. But safety is built into the program, it cannot be undone by telling

the truth. Truth, after all, is the basis for *The Dream Machine*: life and history as it actually happened.

In any case there have been any number of previous infractions—on the trip home, to Vienna and now here—at which violating the rules did not trip anything up, unless (it occurs to me in a moment of apprehension) that’s the reason I’m here, on this unauthorized and very nearly fatal trip. Maybe. But nothing bad seems to be happening now. If anything, my knowledge and eloquence are lubricating the storytelling gears to mesmerize the tribesmen. I sense that Prospero has some purpose in bringing me here. Let’s let the trip play out for me to determine what.

“Sapiens know how to live and grow,” I continue in full storytelling mode, “and how to learn from our living and growing. And that’s what happens. This tribe of Sapiens—*your* tribe—” and I splay my hands high and wide like a DREB greeting to take them into my vision, “—grows and expands from here and the neighboring tribes out there to command *all* the world—” and I sweep my arms still wider and higher to indicate lands near and far, “—and the world on the other side of the shores of the wide waters. Soon Sapiens fill the entire world like rain fills the vast lake. Sapiens learn how to control the plants and how to grow food in one place, near where we settle our homes, so you hunters need not risk your lives to chase animals on the hoof.” There is a deep rumble of appreciation. “Sapiens learn to tame the wild beasts,” I continue, “like the auroch, and use them to bear our burdens. And once we learn to stay and live in one place, thanks to an invention called *farming*, our numbers grow and grow, and we build great cities to house the thousands and then millions of your kind, *our* kind.”

“*Ci-ties?*” someone asks.

“Yes, with homes and meeting places and buildings and prayer halls.” Their eyes squint in confusion from these alien concepts. How can I describe them? As if by magic, the recent images of painted aurochs and mastodons and horses stream across my imagination, just as they had on the walls of Dark Cave. I grab a spear and start scratching out in the dirt rough approximations of skyscrapers and cathedrals and pyramids and stadiums and factories and hospitals and universities, peopling them with crowds of people, little pin pricks against the great scheme of civilization, people who wander and cavort among the structures.

“*These* are the places,” I say, looking up and intoning with melodramatic emphasis, “where we bury our dead and work and play and live and give thanks for all the blessings of life. These are our *ci-ties*,” I

intone, giving the sacred word extra emphasis. “Where millions live together, the greatest expression of our advanced civilization.”

The men inch forward and crane their necks to see the wonders of their future scratched out on the dirt floor.

Thunder growls and crashes close by and the rain picks up force. Little swirls of wind blow under the front entrance skin and whip the smoke from the torches across the room. My thoughts, at this moment of triumph, when I command the men’s attention and admiration like a god, grow darker too. What about the god of truth? Should I mention the tyranny, the constant surveillance, the brutal and random violence? Or allude to the ceaseless storms and stupefying existence under the great Destopian state, where the future is not so fine? But no. Why darken the picture of our oh-so-triumphant tribe?

“And there’s more,” I close my eyes and sing out like blind Homer himself. “We Sapiens learn to build machines that race across the land, honeycombed with pathways, machines which go far faster than your fastest horse, and ride all day and night without stopping. We build great boats that cross the waters from shore to distant shore like that,” clapping my hands so they all blink and gawp in unison. “And then great ships that fly into the sky and sail the heavens like stars in the night sky. We sail to the moon and visit Mars, the red planet, and far beyond, to galaxies tens of millions of miles away, so that someday Sapiens, *our* tribe, can extend our dominion from this world to many others in the sky, and the stars beyond.”

I lift my arms to the ceiling, and gaze up at the mud-and-leaf roof, beyond which the planets and stars whirl ceaselessly in their heavenly orbits. When I look back down, I see every eye on me, every lip repeating the phrases and uttering the wonder. They may not understand what I’m saying, but they’re drawn by the sense of something vast and magical. The feeling of control is intoxicating, like Runa’s pills or Vänka’s drinks. Or maybe I’m just drunk on the tribe’s awe and admiration.

“But that isn’t all,” I roll on. “We have learned to hold even death itself in check, forestalled by the healing arts greater than even your great Healer’s,” to whom I nod, “so that our people—*your* people—live to such distant old age as to see their children grow to the fullness of their lives and their children’s children and generations beyond that!”

“Ahhh!”

“Such is the *foo-tcher land*,” I intone with grave portent, “*from the world...of the great time...to come.*” And I bow low to sanctify the moment. I have to stifle a giggle, it’s shameless pandering, this poor performance by a low player in a feeble drama. But I play to the audience for their benefit—and mine.

Another moment of silence, then a sudden roar of talking-shouting-laughing. People bellow out howls of excitement, of thrilled belief, a wild cacophony and commotion, a boisterous echo of call-and-response.

“Live forever!”

“Tame the beasts!”

“Pierce the sky!”

“Sail the stars!”

I join in too: why not? But after a few choruses, I remember.

“Wait! Wait!” I shout and wave my arms. “I almost forgot the best!”

The room goes quiet. They look up expectantly. What better triumphs could there be?

“I almost forgot our great art, more numerous than the paintings in your Dark Cave!”

There is a murmur of confusion. Oops. I remember the Healer saying that few tribesmen were permitted to enter the holy sanctuary, that I was granted that privilege as a special guest of the Chief—supposedly in keeping with my vision quest. But also perhaps to overawe me with the superior brilliance of their past. And it had. But now it was my turn to overawe them.

“Yes, amazing paintings, images of people and trees, flowers, animals, landscapes, all rendered by hands like yours but as true to life as though you were there seeing it with your own eyes.”

“Ahhh.”

“And dance and sculpture and literature—”

“*Lit-atch-er-er?*” someone says, fracturing the word he can neither understand nor pronounce.

Of course, they know none of these things—literature, books, paintings—any of these future delivery systems that convey knowledge and entertainment. Sapiens must wait another fifteen millennia until some anonymous Sumerian bookkeeper etches marks on a clay tablet to signify the sale of a few cows and horses, a prehistoric balance sheet, the humble origin of writing, our tribe’s most amazing discovery.

“Your children’s children’s children down to the thousandth generation devise symbols, little paintings like the artwork in the Dark Cave, which stand for *words*, like the ones we speak to each other—” and I pinch and splay my fingers from my lips to mimic speech, “—which stand for *things* and *ideas*, through which to tell stories and weave tales, about the past and future, about people and events, about science and religion—”

“Oooh!”

“—so that the tales you now tell your children and their children about your storied past and your great leaders and their incredible heroism can be inscribed in books, written down in volumes that can be read by people for thousands of seasons.”

Someone shouts, “Like the Chief defeating the Valley Tribe leader!” and the room erupts with laughter and cheers. I sneak a look at the Chief. He has permitted a small smile to crack his impenetrable mask.

“But wait, there’s still more,” I shout above their cries.

“More!” they yell and instantly grow quiet to hear it.

“Yes, more! Music. Sounds like you were chanting when I arrived.”

“*Mu-sic?*”

“Great orchestras and symphonies! Small groups and vast symphonies playing on instruments like your bone flutes that sing and moan and cry, but with such beauty and terror to thrill even the most hardened of warriors. And the greatest of all—Beethoven. I was with him just—” I try to think when, but it’s impossible to reconstruct, “—just a short while ago, visiting him just like I’m visiting you, the great master, whose music touched the sky and scoured the depths and raised all men as gods to heaven! He himself urged me to return to the ancient past, to visit here, to be with you.”

“Bay-tow-ben—” they cry out, a maelstrom of sound, like the opening of the Tenth Symphony such as Beethoven himself might have appreciated, “—here with us! Gods! Music! Books! Lit-atch-er-er!”

I wave my arms to silence them, but they are almost out of control, it takes a minute until I can be heard. “And from all this art—the books and paintings and music and dance and theater and film and sculpture and vids, the whole wide range of humanity’s creativity—we develop common myths to help bring our far-flung tribespeople together and inspire them with their greatness and beauty!”

I’m sure they have no idea what any of this means, what I’m talking about, but they can sense the excitement and possibilities. So they yell and scream, the shouts rising in intensity, filling the room, banishing all doubt, drowning all thought, until the Chief cries out: “Silence!” and again, “Silence!” and louder, “SILENCE!”

Finally, the room goes quiet.

After a moment one of the young men stands up. His hair is longer and the beads on his neck more brilliant and varied than the others.

“Since you can see into the foo-tcher land, Cave Bear Man,” he says, seeming to tremble with his next question, “tell us when is the next dying of the sun?”

Dying sun? He must mean an eclipse. I’m on shaky ground here. Had I only known I was destined to visit them I would have prepared,

would have studied the ancient astrological charts and memorized the next obliteration of sun and moon, like the Boss in *A Connecticut Yankee in King Arthur's Court* who so astonished the medieval townspeople of Camelot. But how can I know the next celestial miracle when I don't even know what continent I'm on or what millennium we're in let alone what year?

Still, when in doubt, generalize. As my father would instruct, *Simplify, don't mystify.*

"No, not when, exactly, only the gods know that. But I can tell you how. *How* it happens."

The man waits a moment, then nods. "Yes? How?"

The others seem to draw closer, the room to get a little smaller.

"You know when the sun goes dark, how you quake and tremble with fear." I don't know if this is how they react, but I'm guessing ancient tribespeople, like the man who asked, would be terrified at these inexplicable cosmic events. "What if the sun decides never to return, you wail and despair? You turn to the healer—" as I do now, a call-out to my tribal mentor. "But it's not like that. There's nothing to fear, nothing at all."

The men hold their breaths. Even the dust motes swirling through the room and the flies circling the torch flames seem to freeze, waiting for yet another revelation.

"No, it's nothing but the moon, crossing the sun and covering it. They are precisely the same size, from our earthly perspective. The sun is 400 times wider than the moon but the moon is 400 times closer to the earth, so they appear exactly the same size." I make rings of my thumb and forefinger in each hand and move them one over the other to demonstrate: same size, same fit. See?

I let that sink in, a glimmer of modern science that I can share with the ancients.

Someone shouts, "The sun would eat the moon; we'd be left without a moon!" and the men start in again shouting, yelling, even a few laughing.

After a few moments the Chief raises his hands again to command their silence. When the men go quiet he turns to me and asks, "Who is your ruler? What is he like?"

Should I describe Apex Leader? I'm not sure how. "We don't know. He or she or it or they rule from a secret place. We see Apex Leader only as a vague image and hear only the commands and assurances that all is well. *Apex Leader means maximum order,*" I murmur, mindlessly regurgitating the Destopian saying as I was brought up to do, good den that I am.

“This does not sound like a good foo-tcher,” the Chief says, looking at me, before turning slowly back to the others. “The Chief should rule in front of his people. He should earn their trust and confidence, leading them day to day...not through some distant signal to a hole in the head.”

“Mmmm,” the crowd murmurs. Someone laughs and repeats, “Hole in his head” and a few others repeat the taunt.

Again the Chief raises his hands for silence, then points to a man in the back. Everyone turns to observe him. He is tall and thin, almost gaunt, with a long scar that runs from nostril to ear across one empty eye socket. His face reveals the terrible map of a long and harsh life. With some effort he pulls himself up to his full height, leaning on his spear for support, and raises a querulous voice.

“What of the foo-tcher of fighting?” the old warrior says, shaking the weapon with a tremulous hand. To compensate for the loss of one eye the other beams like a drone laser at me so that I’m afraid my skull might burst into flames. “Will you have eliminated war as you seem to have done death?”

So here it is. The dilemma I have been dreading is finally at hand. Should I tell them the dismal facts of Destopia and our perilous future? So far I’ve lied mostly by omission. Is that even a lie, or a mere convenience? But now the choice is stark: follow my father’s advice and tell them the truth, or lie and ensure my triumph at this tribunal? I’m not so naïve as to think the truth is always best. But once again Dad’s dictum rings out with sharp clarity: *Son, don’t be uncouth, just tell the truth!*

And the truth, carried along like a kite in a storm by my windy rhetoric, seems to have worked well enough so far.

Plus I’m a terrible liar. Runa could lie with the facility of an eight-year-old; I can no more dissemble than a dumb man can preach.

Fine. If it is the truth they want, it is the truth they shall have.

I turn to address the tall man with the awful scar and piercing gaze. “As with everything else in the far-off future, there have been enormous advances in crime and war, powers of destruction far beyond what you and your tribesmen can imagine.” The others seem riveted by this new revelation about their foo-tcher land, and now that I have committed to the toxic truth, the poison starts streaming out of me like projectile vomit.

“Imagine our tribe helpless amid great bombs that fall from the skies and destroy great cities. Imagine deranged fanatics pouring their poisons into the water and air so that every sip and sigh bring death.” I close my eyes and raise my arms to conduct them through this awful foo-tcher. “Imagine evil leaders killing millions in their hunger for power and glory.”

I peek out to see what they're imagining. Their eyes and mouths are rounded like perfect ovals, in silent thrall to my fierce testimony that only the rain riveting the roof like gunshots disturbs.

Maybe I should lighten up a little? "That was the rumor, anyway. What we had heard. Maybe it was just an excuse."

This I realize needs an explanation. The long-forgotten National Anthem springs to mind. "Old Glory had a song," I instruct them, "sung by crowds at every festive event. And it consisted, the part that everyone sang, of just two questions: can you see the flag that was the symbol of our nation—and can you keep it? And the answer, after three centuries, was no. It all came tumbling down. And the only way to prop it up again was to set up a new class of rulers, our own tribal chiefs, to control every realm of society, all activity and opinion, all work and rest. Only then did the bloodshed and chaos finally subside."

The men are slack jawed, stunned into awed stupefaction by this vision. But this time their awe is less reverent and more...what? I can't read their faces.

"After that, everything was fine," I conclude disingenuously.

"Bombs?" someone asks. "What are they?"

The word means nothing to them. But they should know. The past should know what the future holds. It's my one line of magic, the only trick I have. I take up the spear again and sketch above the cityscape in the dirt some elliptical spheres falling from the sky.

"They are weapons like your spears, only far bigger and more powerful, killing not one person but thousands...millions in a moment—" The cavemen tiptoe in to get a better view of their fateful foo-tcher, "—raining death from the sky—"

A crash of thunder rocks the hut, nature or God or Prospero's little joke, and ignites something like a tremor, electric charges and ion molecules that vibrate and suffuse the air, like fever heat, electric fields that converge in my head. I can feel the little atoms scrambling for a purchase.

Another crack of thunder, directly overhead—is that a fireball spiraling along the back of the hut?—rattling and shattering my inflamed psyche, as if the lightning had bolted into my head, neurons twisting and bursting, corrupting my thinking, the pings from Runa's Cranial Console causing shudders of dislocation and despair.

"—and explode—"

"Explode?" someone screams above the noise.

"Yes, like that thunder—" I realize they can't see it, hear it, imagine it, their foo-tcher and mine, and the countless violent deaths to come, the twentieth and twenty-first centuries with their famine and war, repression

and genocide, holocausts and cleansings, hatreds and lies, bombs and barbarism. Should I warn them? Why not? Maybe they'll want to choose a different path. Or maybe I shouldn't, I realize, that would be risky, dangerous, insane. But I have no choice, my actions seem directed by some outer force, I am driven to spell out their dark foo-tcher like one of the children's cave puppets at the hand of some unseen puppeteer.

My long and exhausting and difficult journey through time has finally come down to this, detonating something like a Big Bang in my head, and despite my certainty this will not go well I find myself yelling, bellowing shouts to outshout the thunder, bombs bursting in air, havoc and despair, leaping and kicking and flinging my arms and rolling my head as if in a seizure (that must be it! a simple explanation: it's another seizure!), convulsing and stamping out every last line of dirt, hacking a hole in the ground where the homes and buildings and cathedrals and all civilization had been, and scream: "—bringing death, terror, destruction! Death! Terror! Destruction! Chaos and anarchy! Awful insanity! And whose fault was it? Yours and mine and ours. We gave them the tool to rule!"

I must be mad. I *am* mad. In some narrowing, still-rational part of my brain I realize this rant is dangerous, deadly even—like being injected with a toxin. But I can't stop. I'm like a pebble in a landslide, flying down at the speed of gravity, falling, falling, caterwauling.

A line of a poem pricks my memory: "We are all falling, this hand is falling too. All have the falling sickness, none withstands..."

They certainly think so, the men. They shrink back as if I'm contagious, which I must be, infected with some dark psychic plague.

I stab the spear into the ground and push myself up into the smoky air, trying to vault above the horrifying scene and propel myself back home. But I can't—gravity and Prospero are too strong. I am stuck here in the Stone Age past and stuck there in the Destopian Age future, unable to escape either nightmare.

Tears burn my cheeks. My lips quiver and I squeeze my eyes shut to hide the pain and family disgrace: pariah among the people, accursed son of the Ingleside clan, destroyer of the denizenry.

The men are silent, mute with the shock of seeing the man from foo-tcher land unravel, until I whimper or maybe just think, I can no longer tell the difference, "That was the worst bomb of all."

There is a noise...a snigger? Yes, a solitary taunting hoot. Others take it up and soon it balloons into billowing, boisterous laughter. What was funny? They don't understand: that was no comedy. It was a soliloquy of horror, a Grand Guignol of drama. There is no humor in a foo-tcher like that, only tragedy. But they can't see it; all they can see is this crazed stranger, shackled to the truth, sweat pouring off his face,

palsied and broken and out of control. Maybe they *do* understand: it is pathetic and obscene, their foo-tcher. Is history indelible, I wonder. Maybe in a parallel universe things go better for our tribe. And for me.

Someone up front shrieks, “Look at his fingers!” What? The same ten as everyone else’s.

“He has no signs!” the man shouts. He grabs my forefinger and before I can object, holds it aloft for general inspection. “No signs!” he yells. There is a collective intake of breath.

I snatch my hand back: no fingerprints, thanks to another freak fest, my BODI phase.

“Give him the test!” someone yells and others take up the cry. “The test!” “Yes, let him take the test!” “Take him away!” “To the testing place!” “See if he can pass the test!”

The men are on their feet, chanting and waving and laughing—it seems like a game with them, something horrid and festive at the same time, like a lottery to pick the sacrificial victim—before I have a chance to respond, to shout my innocence and goodwill, thinking, *What have I done wrong? I saved you from starvation!* Someone grabs me from behind and others yank at my vest and shove me through the animal skin curtain.

Outside rain lashes us from every direction and lightning pulses the landscape and wind whips up the leaves and limbs of nearby trees and from below the horses in their makeshift corral whinny at the stirring weather and the ruckus we are making.

Maybe the wind and rain will subdue the men. But no, they take their cue from the storm, which seems only to have electrified their passions.

“Take him up for the test,” they scream. What about the Chief and the Healer? Where are they? Have they lost control of the mob? I’m poked and prodded with anonymous hands and fists and spear points toward the main cave and then around it. From behind I’m shoved up the embankment overhead, some thirty or forty meters, to the top, and frog marched to the edge.

In all the travels since I had set off for my childhood home some time ago that seems like days, even weeks, I have experienced a kaleidoscope of emotions—elation, wonder, curiosity, ecstasy—and yes, trepidation. But not desperate, unreasoning fear, not like this. I shake with fright and the knowledge that Prospero has failed, the mechanism has run aground. Ancient cavemen, oblivious of The Dream Machine and the marvels of foo-tcher land, have taken rough hold of my destiny. I feel in my vest for the G-shaped talisman Goshem gave me and bring it up to my lips and whisper: “Bring me luck, jeweled pendant, restore me to my slumbering body behind the Command Post.” Does it have that power?

The Chief shoves his way to my side, answering my prayer. He will take command of the men, he will save me—Cave Bear Man who brought the bear to the tribe and saved them. He flashes his insidious smile and raises his hands for silence as the storm rages on and coats his face with water.

“Our tribe and our times may be SIMPLE AND CRUDE compared to your foo-tcher,” he shouts above the driving wind, “but we live in HARMONY AND PEACE with our surroundings and honor the traditions of our fathers and their fathers, those before, going back to the time before time,” he says, “the times depicted in the Dark Cave we permitted you to see. From the beginning we have hunted, traveled, and lived the same way with the same customs and outlook.” He pauses to look around. “Now you tell us that will all change—that we must change. But change to what? ANIMALS— NOT MEN! NO, THAT IS NOT OUR WAY!”

The men roar in affirmation.

“When an enemy is captured or a tribesman does wrong, when a sorcerer in our midst is exposed, WE PUT THEM TO THE TEST.”

“The test!” the men scream back. “GIVE HIM THE TEST!”

The Chief waits for them to quiet. Then he peers down from the cliff’s edge and says quietly, almost to himself, “We push him out there,” he points past the dark cliff, “to see if he can fly like a bird. Can you fly, Cave Bear Man, visitor from foo-tcher land?”

“N-n-no,” I say, the words breaking up like pebbles in my mouth.

“Ah, but you claim such magic powers, dropping into caves, destroying cities, soaring above clouds. You *Sapiens*,” he says with a sneer, not bothering to hide his contempt, “surely you can FLY AWAY just as you have flown here.”

I glance over the edge to the fatal emptiness below. “No no, not so,” I answer, teeth chattering from cold and fear. “I only claimed to come from the f-f-foo-tcher. I can’t d-defend it. But isn’t d-describing it good enough?”

“NEVER,” shouts the Chief, barking an insane laugh, his voice rising above the storm. “Our foo-tcher doesn’t exist as some ALIEN TOMORROW. Our yesterdays and tomorrows will be forever the same, never forward, never back, always now. Your people are SLAVES TO TIME, TO WAR AND MISERY AND DEATH. We want NONE OF YOUR SLAVERY.”

“You m-m-misunderstand. I was t-t-trying to escape t-t-time’s slavery, to transcend it. That’s why I’m here.”

“Your only magic is to tell us these falsehoods. SUCH LIES! How can these things you speak of—BOMBS FROM AN EMPTY SKY AND RULERS FROM INVISIBLE THRONES WHO SLAY MILLIONS—be

possible if our tribe prevails? Would we—” he pauses to puff up his chest and shout out for all to hear—all the tribe, the corralled horses, the animals on the plains, and the people near and far, today and tomorrow and forever, “—*WOULD WE EVER ALLOW SUCH EVIL?*”

The people yell back: “Never! NEVER. We would *NEVER ALLOW IT!*”

The Healer plunges through the crowd and takes my arm. At last, my protector! *He* will rescue me, will point out that I have done no wrong, except perhaps overplayed my hand, and saved them from starvation.

“The visitor brought us the bear, it is true,” the Healer calls out to the crowd. Then he turns to me. “I wanted to help you, but that is beyond my power now. I helped restore you to health. I argued to let you visit Dark Cave, as you requested, to witness *our* magic, the paintings left to us as a gift by our ancestors. What you have told us in the tribunal sullies and defames the magic we permitted you to see.”

“But, but...what about the sacred mission I’m on, the vision quest, the spiritual journey?”

“You profaned your mission. You said it yourself: your tribe is destined for a foo-tcher of destruction and tyranny. Better to forsake it. To do that we must forsake you, who has brought it to us.” And having pronounced my death sentence, he lets go of my arm and fades back into the crowd.

“But wait,” I wail. “That was all a guess. We don’t know if it was all that bad!”

“So now—” the Chief announces, ignoring me, ignoring a drum roll of thunder, his face sharply illumined by the lightning, dripping wet from the pounding rain, eyes gleaming in the reflected torchlight, mouth settling into a fierce scowl of command and derision. He takes a spear someone has handed him, prods me with it and says, almost quietly, just between us rival gods, “Show us your magic, Cave Bear Man. Fly away, fly back to your foo-tcher. If you can.”

“No, no, wait. The foo-tcher is fine—”

The Chief jabs the spear into my back, forcing me to the side of the cliff. My sandals dangle over the edge, toes pointing to an unknown foo-tcher. Some of the other men push up beside me, grab me by the shoulders, and heave me headlong into the void.

“Let Foo-tcher Land bear you up,” I hear the Chief shout into the storm.

Falling again, screaming again—a long attenuated cry that echoes along the rocky cliff and sails into the darkness—tensing up, bracing for the shock of shattering earth. I feel the wind rise up to meet me, but not the fatal crash. Just falling, endless falling...

Then I made a fourth blunder. More than my allotted three, I know, but then my life has been allotted more opportunities to err—far more—than most people.

I had returned to Granner Hall to finish up some work in my office when I heard a soft knock at the door. Peering in from the wall security monitor was a young woman.

“Yes?”

“May I see you, Dr. Grove?” she said. “Please? It’s urgent.”

I was not expecting anyone.

“Who is this?”

There was a pause and then she said in a voice so soft I almost could not make it out, “Elizabeth of Woodlawn. Liz. George’s fiancé. Former. Ex. Was. No more.”

That was concerning. I had recently told George that his Orkestrate doctoral thesis and program had been rejected for violating the “Prohibition of the Four C’s”: too creative, too concerning, too clever, too communal. Was that why she was here? If so, I did not want to discuss it.

But something about her plaintive look, her large brown eyes and trembling lips peering in from the monitor, tugged at me. Again the fatal ambivalence. I hesitated a moment, then buzzed her in.

She was tiny, not much over a meter-and-a-half tall, weighing maybe forty-five kilograms. A strong wind could have knocked her over. Her hair blonde as wheat hung in clumps over her face and she looked wrung out, like a wraith, like she had not eaten in days and was starving and exhausted. I was reminded of my 100-day nightmare trip across the Old Land years ago. She paused just inside the door to glance at the message boards with the scrolling awards and commendations.

“Please, come in. Sit down. Can I get you some coffee or maybe a drink?” She looked like she needed a drink. I pointed to the cabinet bar in the corner. “Or a Neuramind? I have some here, five milligrams, ten milligrams, whatever—”

“No thank you,” she said politely, and pulled out the chair across from my desk and slowly descended into it. She folded her hands in her lap and peered at them, as if they were performing some fascinating trick.

“What can I do for you?” I asked. Evidently she needed prompting.

She looked up but did not say anything. Her eyes were a deep brown, deeper, they shaded into some russet darkness, penetrating and pulling one irresistibly inside, like a black hole. I had to look away.

“Did George ever tell you how we met?” she asked, finally.

“Met? You and George? No.”

She looked down at her hands again. "At a college dance, of all things. He just walked over to me and took my hand. They were playing some kind of waltz, but he steered me straight into a tango. We were doing these crazy things all over the dance floor, cheek to cheek, arms out straight, like you'd see in some silent movie. It was so sweet. I guess I fell in love with him on the spot."

I wasn't sure how I was supposed to respond. I arranged a smile and said, "That's very sweet. But why are you telling me this?"

She looked back up. Her eyes were liquid with tears.

"I'm sure this is...off-limits, AOL," she said with some effort. "But George told me about Orkestrate, what happened. He was...well...devastated."

I waited a few moments to reply.

"Yes, I am sure he was. I know he worked on it a very long time. He believed in it. I am so sorry. I felt terrible to be the one to have to tell him. But I cannot go into details. Authority decisions are private and privileged. I'm sure you understand."

Tears started advancing down each of her cheeks with alarming speed; several had diverted to the tip of her nose. She brushed them aside with her sleeve.

"I'm sorry," she said, the words distorted by her crying. "So silly. If George knew I was here..." She looked down again at her hands. Maybe she had scribbled a note on them—encouragement or an outline. "Be firm!" It might have suggested. If so she was failing.

"Yes," I said, feeling the need to soothe her. She seemed so helpless and vulnerable. If I could help her get it all out—her angst, her concern, her plea—she could leave knowing she had done everything she could. Yes, that would be best.

"It's brave of you to come."

She shrugged. "Desperate. I'm sure it's uncomfortable for you too. The two of you, you and George, were...more than mentor and mentee? Friends?"

I shuddered to think about it, our last scene together at my apartment.

"And I know his father was a mentor and colleague of yours," she said in that still-tremulous voice. "I've read some of the papers you published together on the non-compatibility of nano-particle referents. Your joint work is displayed in a place of honor in the library where I work. Brilliant."

I nodded.

"George is too proud to come here himself," she continued, now seemingly more in command, "but I'm not. I'd do anything." She sat up more firmly in her chair and held my gaze for the first time. "He'd been working on Orkestrate for years. He was fanatically devoted to it. Without it he'll...well I'm afraid to think what it will do to him."

So charming, her devotion, her determination to help. I sighed.

“What do you want me to do?” I replied, starting to add that there was nothing I could do, but she cut me off.

“You could get the Authority to reconsider. You’re a Den Nineteen,” she said with more conviction. “You have that Authority.”

I considered my reply. George was the scion of a famous and formidable Destopian family; the Authority’s deliberations had been lengthy and contentious and the ruling controversial. I myself had argued in his favor. After all, what harm could come from an obscure music program? I was overruled: the Four C’s. But this was not for her ears, not for public discussion. Leadership decisions are private, final and irrevocable. So best just to hasten her departure, help her find closure and understanding to reconcile herself to George’s fate. Only I am not good at these sensitive things; I’m better at blunt action, like cutting a man’s throat. It would be easy to simply eject her. But why create a scene? Plus she deserved some honesty, as Samuel always advised: “Don’t be uncouth, just tell the truth.”

“Appealing is out of the question,” I said sternly, then smiled. “But George is very clever, like his father and clin, a brilliant family. He will find something better to focus on. I am not worried and you should not be worried either. Whatever he turns to will just need to conform to the strictures, that is all. That was the problem with Orkestrate.”

I thought that was a sensitive and understanding reply, but evidently not. Her cheeks bloomed scarlet, the color rising to her forehead. Maybe she was getting sick. I was afraid she might throw up on my desk.

Instead she stood up. I blinked in surprise.

“That’s not what the problem was, not really. Was it, Dr. Grove?”

“Orkestrate? Of course it was. I just told you: the program was creative and communal.” This was getting out of control and needed to end.

“He told me what you did to him, that night in your luxury apartment. Talk about violating strictures and social norms.”

I stood up too; I had no choice. I was at least a head taller than she and thirty or forty kilograms heavier, but I was afraid she might leap across the desk and try to throttle me, her look was suddenly so fierce.

“Oh?” I said as calmly as I could. “What? What did he tell you?”

“That you assaulted him. Drugged him and attacked him. He told me when he got back to his hab.”

I had to stifle a laugh. “Sweetie, that is not how it works.”

“First you ruined his career and now you’ve ruined his life,” she shouted. “It’s pitiful and you’re pitiful and terrible, a monster. Go ahead, quiesce me, I don’t care, that’s what you people are good at.”

As if that outburst took every bit of energy and fortitude she was capable of, she crumpled back into her chair and cradled her face in her arms and started to sob.

Finally she looked up, her eyes pink and puffy and her nose wet with snot. "And now I can't see him anymore. I would forgive him but he won't believe it and refuses to forgive himself. So now we're finished, thanks to you."

I blinked in astonishment. This was not how any of this was supposed to have worked out. I should not have let her in, should never have talked with her. I should have excused myself with work or just ignored her timid knocks.

I went around the desk and crouched over to where she sat, small as a bird, and put my arm around her neck, such a lovely, tender, fragile neck, and said: "You need to go."

Afterward I thought: first Samuel, then George, now Liz.

X. Dead Reckoning

17:20, 7/Martial

Then it stopped.

No crash landing, no body splayed open, no crushed bones and brain matter drizzling the last vestige of life on Stone Age rocks.

Just me. In my hab. On the floor.

I lay there a long time, curled up, too dazed to think, too stunned to move, void of anything but a dull emptiness at the center of insensibility.

Gradually, vague images, surreal and fantastic, took shape and flitted across my mind: the bear, the cave, the Healer, the Chief, the paintings, the tribe, the trial, the test.

I staggered to my feet and checked the Q-tab for clues. The trip counter read 122:02: two hours, two minutes and two seconds—the total time elapsed while on the program. I tapped a few more keys. The first trip, to our childhood home on South Blackstone, was exactly sixty minutes, as programmed. Same with the second trip to the Schwarzschanerhaus in 19th century Vienna. That left the last segment, the unplanned and terrifying solo descent thousands of years back to the caves and those long days and nights with the tribe. Just two minutes and two seconds?

I became aware of a sharp pain at the back of my neck. I ran my finger across the spot. Blood.

Something was very wrong.

Tired as I was, I began poring over the Run Report and the error log.

I must have fallen asleep at the table. How much later was it—time, once the exquisite scaffolding of my dreams, had slipped the sprockets of my consciousness—when I heard the hiss and click of the door?

Runa stared at me from the entrance. “You look like hell,” she pronounced.

“How did you get in?” I started to say, but it came out garbled, incapable as I was of speech from exhaustion and shock. Then I remembered: palm lock, same as this morning, just a few hours that seemed like days ago. Like a mirror, a palindrome, this crude account, this dark puzzle, this programmatic nightmare that was ending as it started when she barged in on me just hours before and changed everything.

I rose and walked to the sink and splashed cold water on my face. “You wouldn’t believe...what I’ve been through,” I rasped. With an effort I quickly sketched out the rogue trip.

Runa nodded and clucked sympathetically and took my hand and guided me to the couch.

“How could this happen?” she said, plunking down next to me and wrapping an arm around my shoulder. “Surely you didn’t program a trip back that far in time—to murderous cave bears and Stone Age warriors?”

“No, of course not. You were there, with me, when we set out for Vienna.” I cradled my head in my hands and let out a soft moan.

Runa rubbed my cheek *clinsweetly* and lifted my face to hers, the face that was like a mirror. “Relax, we’ll figure it out, you and me, B&C.” Ever helpful, ever the problem-solver. I tried to smile, but the pain in my neck made me wince.

“OK, think back,” she said. “Do you remember the last time we were together?”

Of course. We had left Beethoven’s apartment after the terrible scene with Karl and walked across the Schwarzspanierstrasse to a café down the street. The trip would time out soon—surely the hour was almost up—when I suddenly remembered the manuscript of the Tenth Symphony, the holy grail of holy grails. I had just moments to retrieve the score. I figured there must be some way to use its “new gravitational force” to take down the Authority, the way Beethoven’s Third Symphony finished off the prim Classical world, like a rock through a window, the fresh air blowing in a new epoch of liberty and humanity, and the Ninth with its groundbreaking ideas and radical energy cracked open the Romantic era to reveal a new and brighter future. I was certain Beethoven could do it yet again, freeing the future, as Runa said Dad had proclaimed at our thirteenth birthday party.

“That’s when you got run down,” Runa said, rubbing my hand.

I nodded and shuddered at the memory. “The last thing I heard was you screaming my name.”

“I thought you were dead. You were lying there in a bloody mess.” She clapped her hands and jumped up. “That’s it! That’s what happened. It explains everything.”

I looked up at her, incredulous. “What?”

“Bettendorf and Kolinsky’s work, and Chen Bao in Shanghai and Goldie Meyer here at UCM,” she said, ticking off the names with her index fingers. “I’ve read their journal articles and studied the case reports about traumas like yours, people with terrible accidents, cranial injuries that cause hysteria and delusions.”

I looked doubtful.

“No, I’m sure,” she trilled. “The jolt of the virtual accident, it was like a cerebral implosion. The shock hurtled you out of Vienna and triggered the falling dream into the bear cave and all the rest. And it would explain why you freaked out at the tribunal.”

Maybe. But a few things didn’t add up.

“Yeah, but why weren’t you here in my hab when I returned from the cave trip, which it turns out lasted only a couple of minutes?”

She paused momentarily, then said, "I left."

"Left? Why?"

"Well, I was done."

She saw Photon Synthesis snoozing on the floor and scooped him up and started stroking him vigorously. "The trip timed out for me at the roadside across from Beethoven's apartment."

"And you weren't concerned about *me*, lying in a pulp under some carriage?"

"Well, yeah. I mean a little. But it wasn't really you, was it? It was the virtual you, your avatar, your dream alter ego. The *real* you, the one sitting over there," she pointed to the Command Post closet, "looked fine. Your eyes were closed, your arms were folded, and you seemed perfectly calm, smiling even, nodding, like you were having a good time. I figured whatever was going on, it must be good. And the lights on the Q-tab were blinking green, which I knew meant you were still tripping. So I tip-toed out and went home."

A sudden downdraft of sleet hit the building and reflected into the hab a twinkling glow from the sodium vapor lights above the street. We heard the sound of klaxons below and turned to see what it was.

"Soldiers," Runa said. "Running down some protesters."

"What kind of soldiers? Physical or virtual?"

"Some of each, I think. Hard to tell."

She turned back, lips pursed, her face solemn and determined. "That's what happened, George." She took my hands and wringed them fiercely as if to impart the painful truth. "The tremendous excitement of imagining you had recovered the Tenth Symphony plus the virtual accident overwhelmed your brain and caused a Bettendorf Trauma, it's called, a full-on psychoactive seizure. Of course there was no literal accident, no storm, no horses, but you imagined it and your brain processed it that way. Mind jurisdiction. That explains the falling dream—and the gash on your neck. You must have staggered from the Command Post there and collapsed and hit your head against something hard, probably there." She pointed to the edge of the table. "And that's why the cave trip seemed so long and terrible but lasted only a few seconds. It's a classic grand mal seizure. It distorts your sense of time, your sense of everything. I've treated epileptics who've had seizure disorders like that. The seizures can bring on hallucinations and strange fantasies like the ones you described. Which must be what had happened."

She smiled and crossed her arms in classic *clin-conclusion*.

I looked at her in astonishment. "Seizure disorder?"

"Absolutely. It's something we should've considered from the start, given your falling dreams, the danger from REM psychosis and neurological disturbances. There's only one way to prevent it." She rubbed my arm, a warm

clin gesture like she would do sometimes to make up after one of our childhood scrapes, and looked at me with deep concern.

“What way is that?” I said and giggled. I couldn’t help it. Was she going to prescribe more Neuramind? Yoga? Maybe some exercise, calisthenics, jumping jacks or pyramid pushups?

“It’s not funny, George. You’ve got to *stop tripping*. Now! No more trips.”

“What?” I grimaced.

“Absolutely. You might not survive another attack. And I refuse to sacrifice my one and only clin.” She reached over and kissed my cheek and I thought I saw tears welling up under her eyes. Or was I still hallucinating, as she had diagnosed?

“But I’m not finished with my work,” I protested. “I’m not—”

She put a finger to my lips. “Sssh, it’s OK, you don’t need to finish, you’ve already established your proof of concept. The program works. Just not for everybody. It’s too dangerous—at least for you, until we can figure out how to make it neurologically safe.”

I removed her finger and gazed at it, the wrinkles and nails and even the half-moons identical, like everything else. Almost.

“Well, I’m not sure. I have another trip in mind. An important trip.”

She leaned closer and rubbed my hands more firmly. “Georgie, *please*. *Do not try*, do not even *think* about it. You could stroke out or have a fatal heart attack.”

She cradled my face in her hands and stared plaintively at me.

I pulled away—I was never partial to her maternal gestures—and rubbed my eyes. I was so tired.

“I know what this means to you,” she consoled. “The end of your hopes and dreams. Only it’s not.”

I looked up. “Oh? How’s that?”

“I’ll do it. I can take over, be your co-pilot, your ABH. I know how to run the program, we’ve tripped together. I can keep the project going. I’ve never had falling dreams, so I wouldn’t be subject to the same neurological risks. And the most important thing,” she took my hand again. “I know how critical it is for you—for everyone, for posterity—to keep at it, testing it, running it, perfecting it. All I need is the fourth key. And this time—”

She went nattering on but I stopped listening. No reason to continue. No point. Enough.

“I don’t think so, Runa,” I interrupted her needless chatter.

She smiled thinly. “What?”

“Because that’s not the problem, Runa.”

She leaned back and stared at me, her smile modulating to something more...*uncertain*.

“What do you mean? Your seizure disorder? Of course it is. I know these things. I’m the expert, remember?”

“No.” I smiled back at her. “You may be the expert but I’m not the problem.”

“What *is* the problem then?”

“Not what. Who.”

“Who?”

“Right. And *who* would be *you*.” I had to smile, a nice couplet rhyme for our couplet-crazed time. “*You’re* the problem.”

Her reaction reminded me of a game we played as kids, “Look fast,” I think we called it. We’d run our hands up and down in front of our faces as we changed expressions: now sad, now happy, now angry, now wacky. Just like that Runa’s face went from tentative to startled to agitated before resolving to a strained, slightly anxious smile, a mask of mild if not altogether unruffled concern.

“What are you saying, George?”

I leaned in until we were inches apart, practically eyeball to eyeball: same eyes, same face, same everything, alike in every sense except sex organs and whatever organs one’s conscience derives from.

“I reviewed the Run Report. Someone tried to hack into the program just a few hours ago—”

I paused, waiting for a reaction, some palpable gesture—a tic, a blush, a cry—but now her mask was screwed on tight.

“—tried to view and copy the source code—”

No reaction.

“—and alter the program—”

Nothing.

“—someone with the same retina image and fingerprints—”

Blank.

“—and DNA—”

Motionless.

“—someone like, in fact, a clin.”

“That’s a lie!” she shouted and started to protest, but I clapped a hand over her mouth and shoved her back against the couch: time to finish some unfinished business. She winced and tried to wrench my hand free, but I pushed harder.

“Let...me...*finish*, just this once, let me tell you *what I found out*,” I hissed, then regained my composure. Steady now, no time to go ballistic, at least not yet. “The hacker discovered the first three security keys were biogenetic, and—what incredible luck!—a clin would have those very same keys—same fingerprint patterns, same retina field, same DNA code,” said, speaking slowly, carefully spelling out the treacherous truth. “But there was another layer of

security, a fourth key that *wasn't* biogenetic, which the hacker didn't expect. Darn that four-key encryption! So the hacker tried a few of the obvious things—birthdays, addresses, pet names, hey, even MacGuffin made an appearance—but none of those things worked. Failing to get inside the program, the hacker then made a momentous decision. Do you know what it was, Runa? Can you guess?”

She jerked her head from side to side, her large oval eyes blinking furiously, her hands trembling on mine over her mouth. “Whaf?” she managed to say in a muffled tone.

“*Sabotage!* Such an ugly word. But that's what it was. Let's sabotage the program source code! A few dozen stray taps on the Q-tab was all it would take, right? Just let those fingers click randomly here and there, like monkeys at a keyboard. Then the trips would start fouling up.”

She jerked my hand aside, digging her nail in hard. I didn't mind the pain: I enjoyed it, the pain, it felt good, refreshing.

“*And just why would I do that?*” she hissed back.

“Because then I'd have to turn to my ABH for help, for support, like I always did.”

“Nonsense, George, it makes no more sense than some cheesy horror vid.”

“Ah, but I have proof, dearest ABH.”

That stopped her. After a moment, she said, “What? What proof?”

“The hacker left tracks.”

She blinked several times and started to form a word, retracted it, tried another. The best she could come up with, finally, was, “Oh?”

“Yup,” I said, fighting the impulse to put my hands around her neck and wreak havoc. That would be so *clin-calamitous*.

“Nonsense, George. It just...” she searched for the right response, “*makes no sense,*” she finally said.

“Oh, but it does,” I replied in the lightest of voices, as if we were discussing the worse-than-usual weather or the latest conjecture about Apex Leader, “Because the hacker—but at this point, let's dispense with the phony third person, ‘Pretense makes no sense,’ as Dad used to say—*you*, my darling clin, figured I was on to something, something useful for the Authority in which you harbor such lofty ambitions. Isn't that right, my beloved Partner in Crime?”

“*Not true, George,*” Runa said fiercely and shoved her face almost nose-to-nose against mine. “And even if I'd wanted to...*sabotage your program,*” she said, spitting the consonants, “when would I have had the chance? I haven't been here since Vienna, like I told you. You can rewind your decoy tape and see for yourself.”

Such disingenuousness. I grabbed her shoulders. Couldn't help it. Physical contact seemed necessary, connective tissue for my barely constrained feelings.

"I'm afraid it *is* true, and we both know it," I said, still forcing myself to remain steady. The urge to throttle her was so strong. "You were here this morning, just hours ago, at the very outset, hacking into my brain to download the *neural enhancements*, you called them. *That's* when the problems began. When we didn't synchronize on the first trip home. And Schindler accused us of being spies on the second trip. And those strange verses in Beethoven's books and his nervous breakdown and the carriage accident. The falling dreams and unprogrammed trip back to prehistoric times and the cave bear attack and my pathetic display at the tribunal—why would I have willingly shared such dangerous and incriminating information about their future—for which I was sentenced to virtual death. Why would I have done that, why would I admit to bombs and genocide and then break down as if it was all my fault? I could see it wasn't playing well, wouldn't end well. But I couldn't stop myself. So why did I do it? Why, Runa?"

She shrugged.

"I'll tell you why. Because someone made me. *You did*. You didn't *need* to be *with* me; your little *act of sabotage* was with me—" I said, shaking her in time to the words, "—making things *worse* with every *trip*. Don't bother denying it—it's all there in the record, the mangled code you left behind."

She tried to pull away but I gripped her tighter. She winced and cried out, a high-pitched whine that brought me—I hated to admit it—a thrill of pleasure.

"George. Please, this isn't like you, this rough stuff, and these...ridiculous accusations. This is all about Dad, isn't it?"

"What? What are you talking about?"

"How you always thought Dad preferred *me*, which is why you harbor this irrational rage against me."

"That's crazy!"

"Well guess what? You're wrong. Turns out he always preferred *you*."

I knew this was nothing but a clever diversion, Runa's desperate bid to throw me off track. But I felt suddenly unmoored, as if I had stepped into another of my falling dreams.

"How do you know that?" I asked, sure she was making it up.

"Take your hands off me and I'll tell you."

Reluctantly I loosened up.

"I heard him say to Mom, once, when he was dying and we were taking care of him. He said he always had the greatest hope for you, the greatest expectations, you and he were so alike, 'twins a generation apart, closest to my heart,' he said."

"What? That's just more nonsense, why wouldn't he have told me?"

“You weren’t there, at the end, you told Mom you couldn’t bear to watch. He told us on his deathbed.”

I shook my head to shake off Runa’s tactical feint. “You’re just trying to distract me from the truth, the truth of what happened here today.”

“I’ll give you the truth if you’ll let me. It’s simple enough,” she took my hands with hers. Evidently she needed physical contact too.

“The truth is you had another falling dream, like I said. That accounts for the short trip to the caves, the time compression from convulsive disorders. And you probably hurt yourself when you fell on the floor and gashed your neck, maybe you got a concussion. Here, let me see.” She reached around to look but I pushed her hand aside.

“That’s not it, Runa. Give it up.”

“I won’t, Georgie. You’re not well, look in the mirror if you don’t believe me and see for yourself, you look crazed. Here’s what you should do,” she said helpfully. “Lie down, take a couple of Neuramins, and let’s rethink this.”

She made to pull the bottle from her pocket but I tightened my grip on her arm.

“Never mind that! Never mind the phony dad story and protestations of fake innocence.”

She was right about one thing, though: I *wasn’t* well. It was strange and unnerving to want to hurt her, my own clin, my replica in every way right down to electrons and neutrons, all spinning and churning in synch, spooky action alright. I shivered at how it felt, this emotional extremis, like a breeze of clarity had swept in, clearing out the smog. Like someone *waking* from a dream.

“But for all your brilliance and careful maneuvering,” I continued, back on track, letting my voice grow more strident, almost shouting (*but careful now: stay calm, don’t lose control*), “you made a few critical mistakes. Like just now. How could you know?”

“Know...*what*?”

“Know the cave trip was so short? I never mentioned that. Or hurting my head. Or the fourth key. I never mentioned those things. The only way you’d know there was a fourth key was to get inside the program.”

She started to object. “I...I just...assumed—”

“Assumed *nothing*, Runa, you *knew*. You hacked in with a surveillance program when you operated on me. I deleted it just before you arrived.”

Her expression was a vacancy, an inability to respond. It was nice to see for once: her defenses vanishing, her lies crumbling. But she was persistent, I’ll give her that.

“That’s not true, George, not true,” she said in a desperate, wavering voice. “I can explain everything.”

“Too late. It’s all there in the code history. Except for one thing, something I still can’t figure out, the one overriding question that the Run Report can’t explain. Maybe you can.”

I paused and took a breath. Emotion was welling up, I wasn’t sure I could even say it, the little speech I had prepared. I swallowed hard and forced myself to ask her: “Why would *you*, you of *all* people, my beloved clin, together all the way—” and, giving way finally, even choking up, I let myself lose control, just a little, and oh so lightly shoved her head back against the couch, just a touch, three times, one to crown each word, “—*turn...on...me?*”

“Ow, George! Stop! You’re acting...this is so...*crazy*.”

“Tell me! Why did you?” I demanded, righteous anger starting to build to the boiling point, leaning into her, finally shouting. “I NEED TO KNOW!”

She looked at me dazed, deciding, I guessed, whether to deny, fight back, or capitulate. I waited. Time seemed to have slowed down, to have stopped. What need of it was there now?

Finally she said, in almost a whisper, “Georgie, please, I *had* to.”

“Had to...*what?*”

She hesitated. I shook her harder.

“*WHAT?*”

“I had to *tell*.” The admission seemed to liberate her tongue, unleashing a rush of words, a projectile string of excuses. “It was too important...We needed to alert the Authority and secure the program...Because I realized this isn’t really about time travel...It’s about—I’m sorry George—mind jurisdiction.”

She went on, but I couldn’t process it. *We? Secure the program? Alert the Authority? Mind jurisdiction?* I started to laugh, talk about crazy, she couldn’t be serious.

“No, George, listen,” she said, fixing me with her laser glare. “You’ve got to believe me. You could never have gotten away with this. *Never*.” Her words poured out faster now, from urgency or maybe panic. “And they would have done away with you once they found out...I know how they operate, the Authority...I saw it with Dad...I have way more experience with them than you do...I told you that from the beginning...You’ve got to trust me...I’m right about this.”

It was stunning, all of it: the treason, the treachery—the traitor!

She slid out of my grasp and rose to her feet and looked down at me.

“That’s why I told Vänka.”

“You *what?* You told *Vänka?*” I thought I might black out.

Magically, as if merely saying her name triggered some signal, the hab monitors began to flash and alarm bells to clang. A Special Announcement?

“Yes, George,” came the familiar voice, deep and slightly inflected, echoing around the room, and her massive and frightening image flashed from one wall panel to another, all of them the hated Vänka.

“Everything is for the best, best for all concerned. The weather is fair and the *foo-tcher* is fine,” she droned on the screens, which pulsed like a phantasmagoric light show, like some hideous acid trip.

I was stunned by the hallucinogenic image of Vänka swirling and spinning across the ceiling and along the walls where Apex Leader usually appeared, revealing a curious resemblance, the round head, the bulbous, larger-than-life features. Like a Special Announcement, the sight of her was doubtless meant to inspire dread and disorientation. Which it did. Then the screens went dark and silence filled the air like the aftermath of a bomb. Runa and I looked at each other, only now our expressions were reversed: hers went from alarm to triumph, mine from rage to shock.

“It’s out of your hands now, George,” Runa said. “Vänka will be here any moment.”

I closed my eyes and sank into the couch. Runa and Vänka, my worst fear. I could see the future...my life’s work...draining away like storm water down a sewage drain.

Strange thoughts careened through my head, like Vänka’s image through the hab. One was of the hideous and humiliating scene at her apartment years ago, which I had done my best to erase. Another was to flee. Escape! Grab the Q-tab and make a run for it, somewhere, hide out. But that was ridiculous, there *were* no hiding places in Destopia. The entire city-state—every alley and corner, every hab and house, every building and boulevard, from Central City to the great border walls insulating us from supposed chaos—was monitored by Authority surveillance cameras and security drones and patrolled by Authority troops. Without the coveted yellow-and-black spiraling wrist pass, freedom of mobility was impossible, like they said: *Outside passes elude the great masses*. Still, a handful of intrepid souls had made it to the open Midlands and presumed freedom. Maybe if I—

The familiar hiss and click of the lock registered across the room and the door swung open. Too late: There she was.

There is a civic cancer spreading. It always starts as a tiny infection, a single toxic cell. Left untreated the poison expands rapidly through the body politic. But not here. The Authority is determined to cut it out, just as we did 22 years ago, at GC/Zero. Eternal vigilance is the price of precious security.

That's why Destopia was created: to form "a paradise for all deserving denizens," a new form of society where every person willing to follow the strictures has ample opportunity to find personal satisfaction and fulfillment within the protective nest of security and stability. Our civil society operates under a strict regimen of stratification, spelled out in the Caste and Sumptuary Strictures. The higher dens administer government and occupy the Thought Squads that shape our future; mid dens run the factories and staff the stores, shops, and businesses. Dens Two and Three make up the warrior caste, the physicals who along with their virtual counterparts provide safety and security. And Den Ones, the Dead Ones, the deplorables and mostly unemployables, are sated by the Big Six, kept out of the way in their ghetto habs—assuming they stay out of trouble and off the streets.

A place for everyone and everyone in their place.

Highly stratified and restrictive, some dens complain, and it may be true, but far better than the alternative. Because there can be only one thing or the other: restrictions and regimentation or chaos and anarchy. In Destopia there is no in between, no slippery slope to slide down into awful insanity. We have seen where that led in the last days of Old Glory.

*Our Destopia affords the best of all possible worlds: the glory of a utopia and the safety of a paradise, the word from the old Persian, *pari-deza*, "enclosed park," a place of security and comfort. That's what Destopia provides: a walled city-state to keep Destopians in and intruders out.*

I know these things. I saw and suffered and survived. I fled the Old Land for Old Glory where in both places, as everywhere in all times, it was the same: given a choice, people prefer security to liberty, order to democracy. They will beg for it.

Aleksander tried to assault me. I killed him and the other thugs who attacked me. That is when I realized my special gift. The shy, soft-spoken girl of 15, making my terrible way alone across a chaotic continent, found her necessary and special skills of fortitude, resilience, craftiness—and the willingness and ability to kill with calm efficiency.

And these strengths transformed me, gave me the confidence to gain power and manipulate people when the time came to serve Destopia—and myself.

I cannot claim victory over the cancer.

*Not yet.
But it must be.*

XI. Vänka

18:04, 7/Martial

It took me a few seconds to register the full shock of her: the vast bulk atop those pipestem legs, the perfectly round face with the beautifully sinister features, the auburn hair piled high, the taut pink bow at her neck holding up the ridiculous cape that swept to the floor—and another few seconds to register the bodyguards, two giant, beefy soldiers decked out in the full display of Authority power, black helmets with dark visors angled low over their eyes wearing thick black metallic vests and shiny black boots, straight dark hair cascading past their shoulders, laser carbines at their sides, who followed her in and settled themselves just inside the door.

There was a long moment of shocked silence. Then without turning around or taking her eyes off me Vänka said, in a low, barely audible voice, “Shut the door.”

The soldier behind her nudged the door with his foot, letting it ease back a meter or two, not quite clicking shut. He resumed his impassive, resolute stance, laser carbine slung low at his side and at the ready.

Vänka turned to me and smiled. “So, again we meet.”

I vaguely nodded, too stunned to speak.

Reflexively I turned to my ABH. She was striding up to Vänka to administer of all things a noisy kiss on both cheeks.

“Thank God you’ve arrived,” she said. “George was trying to kill me.”

“Was he?” Vänka said, with a hollow smile. “Hmm,” she frowned, looking around the hab as if inhaling spoiled milk or dog shit. Probably the cat litter.

“Quite a place this is, George.”

I tried to stand up, to take command of the dismal situation. But I couldn’t move. Shock and fear had disabled my limbs.

The best I could do was say, with an attempt at a snarl, “What do you want?”

“Now, now, rudeness is not called for,” she said with a pleasant smile.

“We have *business* to do. Important *business*.” She split the word into its parts, the syllables crisp, her light accent rendering it *bez-e-ness*. “You might as well be cordial.” *Cor-di-al*.

“What kind of business?” Of course I knew what kind, Runa had just confessed the deadly business. My whole enterprise—my dreams, my work, even my life—was at risk. Outnumbered four to one including two huge soldiers guarding the door, and holding the fourth key they wanted and I meant to deny them, required some finesse I wasn’t sure I could summon: my mind was as numb as my body.

“Authority business,” Vänka said. “Dream Machine business.” She eyed the bookshelf with another frown. “This is *quite* the collection you have here,” she said, pointing to the disk labeled *Annals of the Secret History of the Authority–Apex Classification*. “Possession of the Annals is a class twelve violation of the strictures. I guess you know that.”

“Mostly redacted, what’s left makes no sense.”

“Still a capital offense, punishable by drone quiescence,” she said complacently, the vague smile still in place, continuing to cast an eye over the rest of my illegal collection. “I could call in the drones with a snap of my fingers.”

“Have at it,” I said, furious at the dire turn of events. Fortunately, Vänka didn’t hear the comment, or if she did, chose to ignore it.

Runa had gone off to make coffee and now returned with three mugs—labeled See No Evil, Hear No Evil and Feel No Evil, the last showing a crude image of Apex Leader with his/hers/its/their bulbous lips leering and murky figure leaning down in a rude gesture of self-gratification. I grabbed it before Vänka noticed; surely another capital crime.

“Cheers,” Runa said, and made to clink mugs as if we were toasting some thrilling news, maybe the recent success of the Martyr football team or a rare break in the bad weather. I stared at her, still struggling with the polarity switch in our fortunes. She shrugged and plopped onto the couch across from me and took a sip of coffee and gave out a long sigh.

“Wish you’d come earlier,” she said to Vänka. “Could’ve saved me from a near-thrashing from my murderous clin here.”

Runa’s casual lie jolted me to life. “You’re catching me at a bad time,” I said to Vänka. “I’ve been up for—” how long was it? It seemed like days, weeks even, “—a very long time. I’m brain dead.” I squinted and rubbed my eyes in a show of exhaustion, which was in fact no show: tension, terror, and fatigue were wrestling for supremacy in my brain. “Can we do this—whatever this business is you want to do, some other time? Next week? Tomorrow? I’ll be able to think a lot more clearly then.” Long shot, but even twenty-four hours would buy me some time to rest and recover and maybe concoct some viable exit strategy. Or run.

“Sorry, George. Has to be today. Now. You do not need to think for what it is we are going to propose.”

She said this without malice, offhand, glancing around wide-eyed as if she had never been in a hab before, certainly not one as chaotic and stricture-busting as this one. Her glance fell on the old Underwood typewriter on the table, which she studied with interest, as if peering at some extinct reptile in a museum. She leaned over and pressed down on a few keys, her eyebrows hiking in surprise with the unexpected *snap* they made when she let go. She gazed down on the stacks of paper on the floor and up at the books and other media items on the shelves, which she stepped up to examine more closely

before picking out a volume and flipping through the pages. “First edition 1984,” she said, sounding impressed. “Worth some money on the black market.”

I jumped up and plucked the book from her and stuck it back in its place on the shelf, to her astonishment. Go ahead, quiesce me. I had gone to a lot of trouble to procure these items.

“Another capital crime. And all this illegal paper,” she said, shaking her head. Then she turned to the closet. “And is that your little flight deck over there?” Without waiting she limped over more illegal piles and glanced at the Command Post, paying particular attention to the gearbox on the floor and the Q-tab atop the table, whose function signals were blinking wildly. “Another illegal device, that Cranial Console. And these colored lights on your Q-tab? Is the machine still running?”

“No,” I said, “that’s from the damage your wonderful colleague here did.”

“Did *not*,” Runa said laughing, as if we were kids. This was a game to her—my work, my dreams, my future.

“Damn it, Runa, you did. We’ve been all through this.”

Vänka looked at me severely, like a parent annoyed by her children’s incessant fighting, then sat down on a chair across from the couch and patted one of the cushions. “Here, join us, why not?”

“No thanks, I’d rather stand.”

“Oh, come now, George, be nice, let us show we can play together like big boys and girls, shall we? It will make things so much easier.”

Big boys and girls? That was precisely the opposite of what I had in mind; obduracy and pique seemed the better play. Stand tall, be tough! Only I was barely able to stand. My knees were shaking so violently I had to stick my hands in my pockets to steady them, and I thought I might collapse from fright and humiliation. That certainly wouldn’t look good. Maybe I should see what they had in mind. Mine was too befogged to make a good decision. In any case, I thought, glancing at the unwavering soldiers, what choice did I have?

I sat down on the couch, at the other end from Runa. Vänka sat across from us, a triangle of sorts, the Bermuda Triangle, I thought, ludicrously, where ships plunged to their doom. Odd, the wanderings of an unruly mind, especially when it’s racked with stress. Pay attention! But I couldn’t, my mind as if kidnapped reverted to the last scene at Vänka’s apartment those many years ago, which I had tried so assiduously to put out of mind, and thought I had. Evidently not.

“Good, good,” Vänka said. “Much better,” and she leaned over and patted my knee. That got my attention, the casual intimacy so creepy and fraught. “So,” she said with grave import. “I see you have been busy on your Dream Machine, tripping here and there. Is that not right?”

“Why ask if you know?”

“Well, of course. That is our business, to know. Yes, Runa?”

Runa leaned over and waggled my shoe for emphasis. “That’s what I was trying to tell him before he started smashing my head against the couch.”

“I didn’t *smash* it, Runa. I was very careful. Believe me I could’ve done a lot worse. Probably should have.”

Runa snorted. “Any more careful and I’d have been out flat,” she laughed, waving her arms wide to signal a KO.

“I had a lot to be angry about.”

“Your anger was *mis-placed*,” Runa said, splitting the word in two, thrusting her head forward accusingly. “I was trying to *help* you, like I’ve always done, P in C, *together all the way*. But you didn’t give me a chance, you were so *fixed* on your *silly theory* about sabotage. But the fact is, I know things you don’t, things that would put a whole different spin on what’s going on, what’s at stake here. If you’d only have given me a chance to explain.”

“That is exactly right,” said Vänka, who had been watching our byplay with some interest. I remembered Runa saying once that as a biogeneticist Vänka had been fascinated by our rare clinicity.

“Runa is highly placed in the Authority, a Den Twelve,” Vänka continued. “So we know a lot about your Dream Machine. She has tripped, simply invaluable experience,” she laughed, flashing those fearsome teeth. “We understand exactly how it operates, where and with whom it has been, and even how it could be improved, *if—*” she paused, leaning close, her voice dropping, “—*if you cooperate.*”

“But you don’t have a choice,” Runa put in. “Free will is not an option here.”

“True,” agreed Vänka. “What need is there for choices? *The Authority makes the choice, Dens can only rejoice*, goes the saying. But I am not as brutally candid as your famous clin,” and she smiled her appreciation at Runa’s candor.

I took a deep breath.

“What do you have in mind?” I said casually, my face the mirror of cool detachment, my eyes flitting back and forth between them.

“Good, good, I knew you could be reasonable,” Vänka said, looking pleased but then turning serious with a getting-down-to-business concentration. “So, what is it we know? Well, we know this. For all your brilliant work, your thousands of hours putting pencil to paper, all illegal—” she waved at the piles on the floor, “—you imagined the wrong *par-a-digm*,” which she pronounced in three parts, the last syllable “dim” as in grim. “You want to provide dreams and thrills, like some teenagers on a joy ride. But your program has sooo much more potential.” She warbled the hated word.

“Oh? What’s that? What potential?” I said, trying to sound reasonable, trying to keep my free-range fear and bubbling anger under control. Better to

seem curious and cooperative than to rise up in justifiable rage—for now. That might come in handy later.

“Come now, of *course* you know! It is why you have been trying so hard to elude us.” She chuckled and leaned over and gave my knee another playful pat, actually more like a squeeze.

“Know *what*, Vänka? Enlighten me,” I said with feigned composure. They knew about the decoy tape?

Vänka paused to take a sip from her mug—the one inscribed See No Evil—and closed her eyes. “We know your machine, *however illegal*, will be hugely popular with Den Ones and your DREB friends, the ones with whom you’ve been collecting royalties to maintain your little lifestyle here.”

She knew about that too? What didn’t they know? Had Runa told her everything, or had the Authority been keeping tabs on me all these years—as Runa had suggested when she had first announced she was “in.”

I must have looked shocked, because Vänka said, “Yes, yes, we know. Just as we know it would be irresistible for the dens to flee their grim habitations—” her eyes skimmed the room “—and visit their deceased loved ones and drop in on famous episodes in history. Maybe the Great Convergence itself. Who would not? I myself would love to see my parents and sisters again. They all perished after the Russo invasion,” she said and sat back in her chair and sighed dramatically.

I couldn’t suppress a look of surprise. I had always assumed Vänka’s family had made it to Old Glory sometime after she did, that she had managed to bring them over before the Second Holocaust.

“Yes. So unfortunate,” she said without emotion. “And at the same time, it would give us so much information about them.”

“*Them?*”

“Destopians, who else?” She paused, then added, “Which would be of critical importance to us, through your device. As Runa would I am sure be happy to tell you.”

I turned as if on command to my clin. She was actually bouncing on the couch with excitement, hardly able to contain herself.

“You won’t believe it, George,” she said, almost levitating like the 40/80s. “It’s so thrilling. It was what I was trying to tell you when—”

“I almost killed you. Yeah, I know.”

“And one reason it’s exciting is because *you’re* the key. You! My very own beloved clin!”

They both looked at me as if I was some prize specimen in a zoo or a rare butterfly pinned up in some collection of exotic insects.

This was worrisome. I remembered one of Dad’s warnings not too long before he died. *Don’t let them trap you, that’s how they zap you.* At the time I

had shrugged it off, another of his crazy couplets. Now I wish I had asked him what he meant.

“How’s that?” I said tentatively.

Runa glanced at Vänka, who nodded for her to continue.

“We plan to announce soon—*get this!*—an historic deal with the Sino/Russo Force,” Runa trilled. “You’ll never guess what for.”

“World domination?” I suggested.

“A peace agreement!”

I must have looked surprised.

“Yes, hard to believe,” Vänka said. “For many years Destopia has been in the cross-hairs of the Sino/Russo criminal empire. But our defenses are too strong for them. They have come to respect our resilience and military readiness. So now they want to negotiate.”

“It will mean the end of Emergency Powers,” Runa interjected, leaning over and shaking my leg with emotion. “Soldiers on the streets—gone. No need for all that security. And they’ve promised to lift the weather siege. By Septimo we should be seeing the sun again.”

Runa settled back on the couch with a dreamy look as if trying to imagine the pleasant warmth of a sunny day.

“Really?” was all I could muster.

They waited for something more appropriate, maybe war whoops or cartwheels.

“But, uhm, what do I have to do with it?” Here was the part where I got zapped.

“It’s the *best part*,” Runa cooed.

“Your Dream Machine is essential to the deal,” Vänka piped in, thrusting out her hands as if to gather me in. “They want a guarantee we have complete and secure control of the denizenry. That is where you come in, your cooperation with the Dream Machine. You need only to sign the agreement I have here, it spells out the conditions and requirements. It will be the highlight of your career, full Den honors, elevation from Den One to Den Ten or, who knows, maybe even higher, like your clin, with all its special privileges”—she smiled widely—“which is an unheard-of promotion, access to exclusive entertainment, unrestricted outside transit pass. No more black swirls spiraling your Dead One status. It will be the full distinction like Runa and your brilliant father.”

I closed my eyes. I could feel a headache pounding just above my right eye, as if a blood vessel had burst.

“Sign what agreement?”

Vänka reached into her pocket and pulled out her handheld and gave it to me to read.

I, Denizen One George 5625S.42B.of Ingleside), hereby voluntarily and of my own volition and accord, free from any coercion, intimidation or control, renounce all rights and privileges deriving from and pertaining to the program known as “The Dream Machine” (hereinafter “TDM”). Since all creative endeavors fall under the exclusive purview and domain of the Authority, TDM automatically and by rights defaults to Authority jurisdiction.

I also agree to help the Authority establish, adapt, copy, scale up, and implement the program for whatever purposes they deem necessary and advisable, assisting in whatever manner they require to execute the program as needed.

In exchange for said cooperation...

There were some juicy emoluments that followed and below that some legal mumbo jumbo, which I scanned. I folded my arms and looked at Vänka.

“Just swipe with your finger,” Vänka said.

Runa smiled broadly and rubbed my shoulder in encouragement. “One swipe and you’ll be a super star,” she said. “Imagine how great that will be.”

I sighed. Some star. Some agreement.

“Sorry. No deal.”

Vänka’s head snapped back in surprise. “Explain,” she commanded, like she had commanded the soldiers.

I could invent some stupid excuse (“The Dream Machine can’t be altered without destroying it” or “It would take years to reprogram it”) or just come straight out with the truth—and wait for the quiescence. The first was foolhardy. Lying never worked for me, and Vänka wouldn’t fall for it anyway. The truth was—I wasn’t sure why I said no. Like AI, so many of my actions were inexplicable. But I knew it was suicidal to resist, and certainly fruitless; they could force my acquiescence. Oh well, too late now.

“Because that’s not the real reason, is it? You want to use it for mind control—”

“Now, now, such a crude term, George. We call it *Mind Jurisdiction*, that is the proper term, right Runa?” Vänka said.

“—mind control to crowd into their brains,” I continued, “just like our father was forced to give you holokinesis, your famous *tool to rule*, and Runa the traitor here—” I kicked my foot against hers, at which she bridled and sat up straight, “—is helping you get more access with her Cranial Ports, yet another tool to rule. What a family, a triple threat of treachery!”

Runa grabbed my ankle and twisted it painfully and I—whether accidentally or on purpose would be hard to say—hurled my coffee at her. She screamed and lunged for me and we twisted onto the floor in front of an astonished Vänka and started rolling around, grappling each other with headlocks and applying strangle holds, shrieking just like we did as kids.

“Okay, ENOUGH,” Vänka yelled, and grabbed our wrists and pulled us apart and flung us back on the couch. “Really, the two of you.”

But the thought of Runa’s treachery got the better of me again, as it had before Vänka arrived with her little security detail. I leaned over and grabbed her arm. “You’re a treasonous little snake, you know that Runa.”

I was certain that would rouse her—we know these things about our clins—and sure enough she popped me in the mouth. Blood spattered onto my shirt and I thought I felt a tooth come loose under my tongue. I tried throwing a punch at her, but she caught my wrist and twisted me onto the floor again. It was almost fun, I even thought I saw Runa smile and wink, a nice bit of *clin-synchronicity*, reverting to our childhood spats at a time like this—it broke the tension and maybe provided a diversion from which I could wrangle out of this death trap.

I felt myself wrenched up by my shirt collar like a sack of laundry and tossed back onto the couch.

“Will you two BEHAVE?” Vänka shouted. “This is ridiculous, worse than kindergarten! No wonder they banned clins.”

“She’s a traitor,” I said, wiping the blood from my nose and probing the inside of my mouth with a finger and picking out the molar Runa had chipped, which I flicked at her.

“He’s a socio,” Runa responded, feeling her scalp for missing hanks of hair.

“Maybe we should move to the table,” Vänka said angrily. “More decorous. Plus, you have to swipe the document.”

“Tables in this place?” Runa interjected. “You’re assuming this is a regular hab, not some *hovel*.”

I lunged for her again but Vänka stepped between us. “Please, do I have to call in my soldiers?” I had forgotten the giants standing at the door. Curious: despite the ruckus they had hardly moved. Guess they didn’t care what carnage Runa and I inflicted on each other as long as we left Vänka alone.

There was only one table, in the corner under Einstein and Bohr, easy to miss, covered by an assortment of papers and journals and mounds of dirty plates piled up with moldy leftovers on top of a threadbare gray tablecloth. Exhaustion, anger, fear, and a reckless disregard for consequences welled up inside me. I rose and strode to the table and with a flourish wrenched off the tablecloth so the detritus went flying across the room and at their feet, where it made a terrific clatter.

Vänka and Runa looked down at the mess and then up, at each other.

“Well, that certainly is one way to do it,” Vänka said with an astonished laugh.

“See, what’d I tell you?” Runa circled a finger near her ear. “Unhinged.”

“Thanks Runa,” I said, gritting my teeth. “If it helps get done...whatever...you’ve...come to do, let’s just *do it*.” I dragged over several chairs from the corner and sat down without waiting for them.

I knew I was at their mercy. I knew what they could do to me. I knew my choices were vanishingly small. That just made the decision easier. Let them see how violent and irrational I could be. Not someone you could easily dicker with or threaten. Stable was out; socio was in.

Runa and Vänka took seats on either side of me. They still looked a little abashed. Good.

“Do your friends over there want something?” I said, pointing to the hulking figures at the door. “Water? Schnaps? Wine? Neuramind?” The soldiers rustled slightly.

“Here is the crux of the matter, George,” Vänka said, pulling herself up in her chair and eyeing me with renewed intensity. “Your Dream Machine as currently designed has no place in Destopian society.”

“Oh, why is that?” I said with as much sarcasm as I could level at her. It wasn’t much, my invective versus their might and quiescence, but it was all I had.

“Too dangerous, risky and addictive, leading to nightmares, not dreams.”

“I’m sorry you feel—”

“That leaves you with just two choices,” she said, throwing up two fingers and waving them in my face. “One, you can sign on and join in with full den honors, as we described. Or two, we can apply enough quiescence to squeeze it out of you, the fourth key, and then—” the ample lips turned up just slightly, a horrifying smile, “—force your cooperation to scale it up. Just like we did your father. He chose wisely, and I strongly suggest you do too.”

I turned to Runa. “You approve of these threats...and this...this *thought control*?” I banged my fist on the table. “This naked appropriation of my work? So you and your Sino/Russo friends can sneak into people’s brains like, like—” I strained for a metaphor until I noticed Photon Synthesis looking down at us disapprovingly from the shelf by Beethoven, “—like cat burglars?”

“It’s not what you or I approve of,” Runa said, shaking her head in a gesture that said: Obviously you don’t get it. “It’s what the Authority needs.”

“Exactly,” Vänka said. “I could coat it with honey or make something up but that would insult your intelligence and waste our time. So I will just put it to you in the simplest of terms: We need to use your program for the benefit of the S/R Alliance who demand our control and the good of the Authority and the deserving dens of Destopia.”

Her expression had hardened, her tone had turned frosty and officious. This is what she and Runa had come here to tell me. It was all out on the table now. Better to know where things stood. I could do that too. To hell with guile.

“Right,” I said. “But you have a problem, don’t you? You can’t use it, The Dream Machine, not without me. You don’t have the fourth key. Sure, Runa and I share the same DNA, the same retina image, the same fingerprints.” I reflexively turned over my thumb and glanced at the smudge that was all that was left of mine. “That’s three. But you don’t have the fourth key. I made it up, it’s not bioencrypted. And you’ll never guess it, not even with all your Quantum supercomputers working for years in parallel clusters.” This was wishful thinking—they could figure it out pretty easily. I was surprised Runa hadn’t cracked the fourth code this morning when she was messing with the program.

I leaned back and pretended to smile at her, but it couldn’t have looked very convincing: even my face wasn’t taking orders. I would very much have liked to have stood up, to tower over them, to exert righteous dominion in my own hab, my six-hundred-square-foot fortress. But I thought there was a good chance my painfully stretched nerves would give out and I’d collapse. I was surprised I could even speak with conviction.

“And it’s not just the fourth code,” I added with what authority I could. “You’ll need my help scaling the thing up.”

“Yes and no, George,” Vänka said evenly. “You might survive quiescent torture—or you might not. We can afford to play that game. We have all the soldiers and drones and Quantum computers on our side. You have...*what?*” She looked around with a smug smile. “Not much. Just this place and a few hundred of your DREB pals and your little program. This is *exactly* what I told your dear father: agree to help with your holocausts or lose out. He finally understood. You should too. So, do you want to take the chance?”

“George,” Runa chimed in. “You seem to have forgotten. This isn’t a request. See the soldiers at the door? The drones outside?”

Drones too? I craned around to look out the window. Through the usual stormy scrim I could make out a score of them hovering just outside, invisible except for the blood-red lights beaming in with fearsome resolve. Not surprising, really. But I noticed something else, something curious: a sodium vapor light twinkling through the sleet, like the North Star on a stormy night, as if a bulb was flickering out in random patterns. Only they weren’t random.

“See something interesting?” Vänka asked pointedly.

I turned back to her. “Drones don’t bother me. And neither do those thugs at the door.”

This seemed to have roused the soldiers from their torpor. They raised their laser weapons and took a step into the room.

Vänka shot a hand in the air. “No!” And then more quietly: “Not yet.”

They stopped and, looking sheepish, retreated to the door.

“George, you know very well we can make you *acquiesce*,” Vänka said. “Send in the drones and quiesce the code out of you. Torture is messy and ugly,

but—” she let the ugly words play out. “Your father did not want to cooperate either.”

What was the pattern of the dancing light? I had had only a short look, just a second or two. It seemed to be a simple five-letter alphanumeric signal, a Manichean cipher, if I wasn’t mistaken: on-on-off, on-off-on, off-on-on, on-off-off, off-on-off.

“Are you listening, George,” Vänka said, leaning across the table, thrusting her round face in front of mine. “Just swipe your permission and the code and we’ll be done, the future will be fine for all concerned.”

The blinking light outside spelled out, I was fairly sure (could this be right?) the five-letter words “swipe” or “fight.” A message—to me? How could that be, the code winking and twinkling, an irresistible invitation? Crazy! And yet, the numbers and meaning were obvious. The first signified swiping my fingerprint—to accede, surrender, give in. The second signified resistance and struggle. Only problem: neither was tenable.

“George...? Remember your father’s decision.”

There it was, the answer! A simple algorithm, a series of if-then statements, the trap which when sprung would decide the outcome of this lethal cat-and-mouse game. Specifically, Vänka’s next mention of His Dadness: <<If positive = swipe>>; <<if negative = fight>>; <<if neutral = wait>>.

Really, what difference would it make? We’re all headed for mortality’s meat grinder anyway. This way it was out of my hands. Let fate decide! That was the magical approach, as Vänka herself had urged at our first meeting. She’d probably approve. But what if his name didn’t come up?

“George, are you all right?” Vänka asked. “We have serious business here and your mind seems to be floating off somewhere else.”

“On the outskirts of reality, as always,” Runa put in.

“Not at all, my clinny clin clin,” I said. “I’m right here with both of you, just trying to decide, weighing my options.”

“You have no options,” Runa said curtly. “We keep telling you.”

“That’s what I was saying, about your father,” Vänka added.

I bristled, waiting.

“He didn’t want to cooperate either. But in the end, he knew it was the right thing to do, the *only* thing to do. You saw the letter with his devout thanks.”

<<Neutral mention = wait>>

Runa twisted in her seat. “What letter?”

“That document was a phony,” I said.

“I watched him write it,” Vänka replied stiffly. “I showed it to you.”

“He was coerced, it was forced. I can prove it.”

She gave me a long, sideways look, doubtful, then said slowly, her voice dropping ominously at the end of each sentence, “All right. Go ahead. Prove it.”

I turned to my clin. “A letter Dad wrote to Vänka thanking her for her intervention with the Authority, with whom he was refusing to cooperate. Vänka showed it to me. It confirms the rumors about the curse, about how he agreed to turn over his holokinesis to the Authority, the tool to rule, and to help them set it up.” I turned back to Vänka. “Did I get it right?”

She nodded and waved her hand. “More or less.”

“He didn’t mean a word of it.” I smiled, waiting for their response.

“And *how* do you know that?” Vänka said, tapping the table.

“It was coded. There were what cryptographers call fingerposts, secret signs directed to a skilled decoder. Like the mention of Fermi. He meant it for me, figuring you might show it to me.”

“Fermi? What do *you* have to do with Fermi?” Vänka asked with a sneer.

“Well, aside from Dad being the Fermi Professor, you can see it right down there, the memorial.” I pointed out the window past the still-hovering drones and the twinkling coded light and the thickening snow to the carbon arc lamps a block away that illuminated the hideous sculpture.

“That’s ridiculous George,” Vänka scowled. “Just what is this silly code you think you’ve discovered?”

“Of course you wouldn’t have spotted it. You’re not a cryptographer. But I saw it right away. The letter you showed me was so awkwardly phrased. So after leaving your apartment that night—” I paused to blink away the memory of the humiliating visit, “—I tried to decode it. Sure enough, when I took the last letter of each sentence, a simple Caesar’s Cipher, it spelled out a message.”

“What message?”

“Take the first sentence: *I feel compelled to sit down and write you, my angel*—that was the first fingerpost: he would never, ever, write something so egregiously sappy and manifestly untrue—unless he was drugged or under duress. Isn’t that right, Runa?” She looked uncertain. I continued, “—*to convey my deepest feelings of gratitude and trust*. The last word is *trust*. The last letter is T.”

“Yes? So?” Vänka said. That word again. This time I didn’t mind. She looked defensive and uncertain, a welcome sign as signs go.

“Next sentence: *I don’t need to say how, without your intervention, life for me and my family would have become intolerable, so I cannot thank you enough*. Last word, *enough*. Last letter, H. Third sentence: *You ask me to list my transgressions, but forgive me, darling*—that was another obvious clue, you certainly weren’t his darling, he was uxoriously devoted to our mother—*I really can’t, they are as numerous as the infinite numbers of pi*. Last word, *pi*, ends with I. And so on.”

She looked darkly at me, her lips curled in distaste. “Keep going,” she finally said.

“S from sins, I from alibi, S from Destopians, B from proverb, U from you, L from hateful, L from helpful, S from Destopians, H from brutish...that was another clue: the original quote from Hobbes was inverted in order. I looked it up.”

Vänka blinked in confusion.

“I from Fermi, T from thought,” I continued. This was almost fun, this little disquisition, if only my safety and possibly my life weren’t hanging on the outcome. But it was critical to appear confident, even cocky. “That was the final clue: Fermi was misquoted. I looked that up too. What he actually said was: *Ignorance is never better than knowledge*. But Dad needed a T, so he changed it to *thought*. *Ignorance is never better than thought*. Which doesn’t make sense, unless you were writing a coded message. So now you can spell it yourself, Vänka. You know how to spell, right?” I said with casual insolence.

She hooded her eyes and tilted her head, furious but unsure. “You tell *me*. You are the cryptologist.”

I spelled it out slowly, letter by letter. “T – H – I – S I – S B – U – L – L – S – H – I – T.” I had to laugh: His Badness at his best. “That’s what it spells. *This is bullshit*. Which it was. Is.” At this last word I flip my hand in an insouciant gesture I hope will inflame Vänka to some act of intemperance, but she ignores the gesture.

“Nonsense, George, some ridiculous coincidence you must have dreamed up. We don’t have time to argue about these things anymore.” She snarled at me and fingered the handheld. “You should know me better. I have killed men for less. So decide, now or never.”

She stood up and towered over me and pointed out the window. “The drones are out there waiting. You know what they did to your father. We made sure you saw.”

<<Negative mention = resist>>

I jumped up and bowled into her and we tumbled to the floor with a crash. She growled, “You don’t want to do this,” but I did. I scrambled on top and grabbed her neck and tried to choke her but she made a terrible roar and raised herself to her feet, pulling me up like a puppet.

Runa screamed, “Vänka, no—”

The soldiers sprang to life and stepped in to aim their laser carbines. I cringed, steeling myself. Better to die upright than bow down. But...nothing! As I suspected: virtuals. I even thought I felt their virtual drizzle. The drones outside trained their red lights at my head. I could feel the hot cross-beam on my forehead and braced for the explosion. Again...nothing!

Vänka shook off my grip and clamped two thunderous hands on my arms to try to pin them to my side. I wriggled free and gripped her elbows. Runa wedged herself in, trying to pry us apart. “Are you with me, Runa?” I gasped, but she didn’t answer.

We were locked together, the three of us, like wrestlers in a cage or tarantulas in a jar, grasping each other with venomous fury. The walls closed in, our tight little scrum enveloping us in a claustrophobic rage. Nothing else mattered, no past or future, no here or there, no place but this hab, no time but this present, this violent Tchernikovian Now.

Then Vänka broke my hold and grabbed my throat and jammed her thumbs into my Adam's apple. I tried to wrench free but she was too strong. She roared like the cave bear and moved in for the kill, her face pressed against mine and her pointed teeth glistening and her breath hot and musky and her fury pulsing down her thick arms into my neck with galvanic force.

I stepped back to trip her and we lurched from side to side and corner to corner like crazed dancers until we neared the table where she grabbed a coffee mug and with a sharp crack smashed it against the side, shards of glass bursting everywhere and shoved the jagged edge against my throat.

"Enough, give up," she growled.

"Never!" I gasped.

Runa clapped a hand to her arm but Vänka hip-checked her away and turned to finish me off.

Everything—the fear, exhaustion, futility, the thumbs bearing down on my throat, the lack of oxygen and the sharp sting from the broken mug breaking flesh—made me feel faint, like in a falling dream.

I gagged for air. My lungs burned and the light began to fade. What strength I had drained out of me and darkness closed in. I felt my knees buckle and the room spin and the floor sway open and I started to drop through.

There was a *thud* and a ferocious yowl. Vänka shrieked and released her death grip from my neck. She was making choking noises and grasping at her throat with both hands. Her eyes were wide as eggs. She was trying to speak but emitted only squeaky rasping noises.

I couldn't believe it: on top of Vänka sprawled Photon Synthesis, tugging at the back of her cape. He had jumped from the shelf and landed on the strap round her throat, tightening it like a noose around her windpipe. Vänka desperately flailed at the cat and managed to dislodge him, but he neatly sidestepped her grasp and hopped up onto her thick mop of hair and began gouging long strips of flesh like raw bacon from her scalp, which he anointed with a light drizzle of pee. Vänka screamed and the valorous cat yowled back, their cacophony filling the room and drowning out Runa's cries.

With the fierce energy of sudden freedom I grabbed Vänka by the throat and with my other hand collared Runa and tipped the door open with my foot and gave one final, mighty heave and shoved them both across the threshold into the hallway. I slammed the door shut and with a few quick strokes disabled the lock and shot the electronic bolt to quad-lock the door. The booming

click-click-click-click noise it made was the most reassuring sound I had heard in weeks.

There was a pause, then a tremendous bang followed by a second and a third; Vänka was trying to break in with the full force of her huge bulk, but the sturdy old mahogany door held firm.

“The drones are coming back, George,” she screamed from the hallway. “Real killer drones. And we will return too, with a phalanx of security police. Authority security, physicals, rough and real, not virtuals this time.”

“I’m sure you’re right, Vänka,” I said to myself almost cheerily. It didn’t make any difference who or what returned—I planned to be far away when they did, as far away as it was possible to be.

“George, please!” Runa pleaded, pounding on the door. “I’m still with you, ABH, P in C, no one flies solo. We can get through this together. I can save you. But you’ve got to cooperate with Vänka and the Authority, before it’s too late. It’s not a game anymore.”

I felt preternaturally calm. Maybe she was right. Maybe I’d be better off putting in with them, giving them the fourth key, relinquishing the dream, accepting Authority control. Let them execute whatever den mind games they would. Was any other scenario possible? Could Destopia get any worse than it was already? Play along! Get a pardon, jump to Den Ten or Twelve or whatever Vänka had promised, enjoy the fruits of their game. That was what any reasonable den would do.

But I could hear my father’s voice in my head: “When have you ever been reasonable, Georgie?” he would complain. “Succumbing to the Authority is ridiculous, impossible.” I conjured our imaginary conversation, as if he were just over my shoulder helping me think this through. “Don’t do it, don’t let them use your life’s work to trip into people’s minds and probe their deepest secrets and darkest despair. Because you know they will. Don’t make the mistake I made! *Be a den of action and not inaction.*”

So true, Dad. Conniving with the Sino/Russo Force, the bear and the dragon, if that part was even true, was out. Going rogue was in. It was still *my* program, driven by *my* ideals and dreams. Dad was right and Runa was wrong: it was too late.

“But you’re right about one thing, Runa,” I said to myself. “The game *is* over.” I had one more trip, and after that, I didn’t care what the Authority did.

Striding back to the Command Post, I spotted my feline hero back up on the shelf by Beethoven, already curled up and snoozing contentedly, dreaming perhaps of his spectacular intervention. Who’s a good boy? I clasped my hands and made a little bow in his direction. Well done and thank you, Photon Synthesis!

Incredibly, we had prevailed—the valourous cat and I—had won, had bested Vänka and Runa! They were gone and I was still alive. I knew from the

redacted-but-reconstructed sections of the Annals what we DREBs had always suspected: that the Authority always planned somehow to implement mind control. Mine was the program Vänka and her Hummers had settled on. But I hadn't given it to them, had kept them at bay. The Dream Machine was intact and ready to go. I hadn't been forced to disclose the fourth key.

There was one other surprise. Smiling, I reflected that I had tricked Runa into an admission of guilt, which wasn't entirely accurate. Working my way through the Run Report earlier, I had confirmed that her blundering interference with the software was *not*, in fact, what had propelled me reeling from Beethoven's Vienna apartment to Stone Age caves, from the 19th century back some two hundred centuries. No, it was, amazingly, Prospero who had sent me hurtling through the centuries—from Beethoven to the Chief. It was all part of the program's "plan" that I needed to follow. Why else would I have been directed to:

*Trip back in time
To steal the fire
And ignite the crime
On Destopia's pyre!*

The blinking lights on my Q-tab that Vänka had seen were not an alarm but an invitation, a coded command performance for this final trip, this outrageous finale, to the very first fire of all time. That was where I was headed.

I heard more screaming, banging, kicking, but I was already at the Command Post, setting up, preparing for what I knew would be The Dream Machine's last and greatest adventure.

xi.

We will never concede. Never.

He may be brilliant, he is certainly crazed, but he is just a single one—a paltry Den One—against our overwhelming strength and singularity of purpose. He and his DREB friends have no chance.

But it is sad to witness. I liked him. Loved him, in a way. He will regret it. So like his father.

XII. The Ultimate Trip

19:18, 7/*Martial*

They say just before you die, your whole life flashes before your eyes. How ridiculous, I had always thought. Unless you were a midge with the wingspan of an eyelash and the lifespan of an hour, there would be no time to process the countless experiences that make up a normal human lifetime.

And yet something like that happened as I plugged in. I knew I had only moments; Runa and Vänka and a phalanx of soldiers—physicals, not virtuals, thickly muscled and well-armed, and their killer drones—would return soon. I'd be Authorized, my work confiscated, conscripted by Authority Security. They'd figure out the fourth key quickly—it wasn't that hard, Runa would tumble to it fast enough—and use it for their insidious mind games. It would be the end of everything. I would become the third in the string of family traitors who had helped prop up our *fauxtopia*, along with Dad and his holocausts and Runa and her Cranial Ports.

And yet, even as I set up, the whirl and wash of my emotions began to give way to a strange sense of serenity, like the final calm they say the prey feels in the claws of its mortal predator. What difference did it make? My fate was already decided. The trauma and desperation of my situation and the prospect of my imminent demise seemed somehow not to magnify my dread but to minimize it, to slow it down, to slow *time* down, so I could consider the two deepest questions, not exactly a life's last retrospective but a consideration of life's deepest mysteries.

The first of which was: what does it mean to live? That was simple enough, I thought (as I keyed new parameters into the Q-tab and coded a few new algorithms and finished cleaning up Runa's crude attempts to find the fourth key and wreck the program): life is the flame that flares up to light up our tiny piece of the infinite darkness, then flickers out.

What then does it mean to die? That was simple too: death is the point beyond which our lives and our remains and then ultimately our memories crumble and fade to nothing, as if the dead had never lived. Like the ancient stars, now gone, which once had shined so brightly.

They had *all* shined: Sammy and my father and our ancestors back in time and Beethoven and the Healer and the Chief and Goshem and the countless ancient tribesmen who were nothing now but the dust that fills our lungs and the atoms that line our bodies and buildings. But their words and actions and lives and memories *had* meant something, and even after they died and their beings had been reduced to a few ounces of dust and dirt, the meaning of those lives continued to play out, like ripples of neurocurrent in a

brain or gravity waves in the universe. That was what my program had been intended to capture and sanctify: every life, precious and memorable!

Yes, it's true that eventually we're all dust floating among the stars. But we can't see out that far in space or time. We don't know what will happen or what it will mean—life's significance. So let's turn around, throw back the switch and reverse the arrow of time, return to the beginning, "eternal harmony conversing with itself," Goethe had said, to see the magnificent chaos of the universe at the moment of its inception, and start the process over. See where it takes us. To a better future, perhaps.

That, I guessed, had been the ultimate point of The Dream Machine and the goal of Prospero's forceful machinations, though I hadn't at first seen it—to help me grab the key of life at its beginning and try a new doorway, and through that door to free the living and revive the dead, be with them again, as I had been with my parents and Sammy and even Beethoven—not to manipulate the miserable lives of the dens of Destopia.

Thus I planned to return to the beginning of space and time, to venture back to the moment of cosmogenesis, the Big Bang—*before* the Big Bang. I want to look out over the edge of the universe to see what's on the other side. I want to be the first to learn: was it some cosmic accident of the incorporeal null state or the casual hand of a whimsical God that set the vast unfathomable machine whirring? Was there a clue from the expansion site, Hawking's virtual particles, perhaps, or Wasikowski's ghost floaters in the ether? Whatever it was, I want to experience the "fireworks of unimaginable beauty," as Lemaître called the opening act of the great cosmic drama.

There was still another reason to go back: the inscription on the fertility figure I had discovered in the Dark Cave. I had decoded it only an hour ago. It was a sign, a directional signal, a poetic fingerpost, which read:

*Return to the time
Before time began.
There to find
A better plan.*

On the back it read:

To know one thing, you must know its opposite.

Endings and beginnings, life and death: the eternal circle. These thoughts flitted through my mind as the end approached. Soon I would be a memory, then a mere vacancy, around which had once stirred these dreams of glory.

Inexplicably I flashed on a dream from years back. In the dream I was back in college, in some medieval lit class, and we were assigned to write a

simple couplet in the style of the 16th century metaphysical poets, something suffused with grace and hope. That was easy for me—I had just met Liz and we were poised on the cusp of a deliriously happy relationship. I scribbled down the first thing that came to mind, but try as I might, in the dream, I couldn't quite make it out, it was written in my ever-hurried scrawl, blurry and indecipherable, until by a supreme force of will I dreamt it into focus. It read:

*Dreamers set the world aglow,
To think it is to make it so.*

The poem stayed with me long after the fog of sleep had lifted. Why had it come back to me now? It was certainly no end-of-life survey or summing up. Just a dream, a dream of a poem. And yet so ambiguous and unsettling: was it a valedictory statement or the inscription on a tombstone?

Because I had dared to dream, to make my Dream Machine a reality. And now it has come down to this, this...*nightmare*.

As I finished punching in the required parameters on my Q-tab, I remembered that Runa and I had once speculated on the question of ultimate beginnings. This was years before I had started down the path to The Dream Machine. We were schmoozing, late one night during a college break, when I posed the absurd question: what happened at the beginning of time? Wouldn't it be amazing to go back and see?

"How could you, Georgie? There'd be nothing to go back to before the Big Bang."

"Hmm, maybe there was something before the Big Bang," I speculated, rubbing the wispy beard I had recently grown.

"Right, that would be God," Runa laughed. That was when she was going through her theistic phase. I was going through a cosmogenic phase myself.

"No, I was thinking of something else, like a mirror beginning, so there wasn't one Big Bang but two, starting at the same infinitesimal spot and blasting off in different directions, expanding exponentially, one forward, the other in reverse. Or perhaps multiple Big Bangs, with all those parallel universes. Wouldn't that be something to witness, right at the point where they take off?"

"Sounds dangerous," Runa objected. "And besides, you wouldn't know when it was."

Actually, I corrected her, I would. The latest research was quite precise about when it happened: thirteen billion, seven hundred and twenty-six million, 227 thousand, six hundred and fifty-four years ago, at ten seconds after 7:59 in the morning Greenwich Mean Time. Give or take a few moments.

"Yeah," she snorted, playfully ruffling my long hair, "and what if you miss by, say, ten million years? That's a long time to wait!"

I thought about that. “No,” I said, brightening, “there’d be no waiting because there was no time before the Big Bang. That’s when time began!”

“Sounds crazy to me,” she said, “creation *ex nihilo*, out of nothing. You can’t go from inert clay to living cells without help. I’m for intelligent design myself, God as first cause.”

“Yes,” I agreed, “something from nothing seems impossible. But clay *isn’t* inert, it’s filled with silica and other vital elements. The so-called void at the beginning couldn’t have been a void at all, since it gave birth to the entire universe. The void was some kind of vital *po-tent-i-al-ity*,” I said, syllabifying the word for emphasis, and added in my most *clin-pedantic* manner, “*Thirty spokes shore the wheel’s core. It is the center hole that makes it more.*” That’s where I want to go: the center.

Runa rolled her eyes.

“And aside from ancient wisdom,” I rolled on insufferably, “our use of language itself, hard wired into our consciousness, reflects our evolutionary journey. We say, ‘He did *nothing*’ and understand it to be an action—the act of inaction. Even the definition of nothing is a clue: (*Noun*), *a thing that does not exist*. But note, first it is a *thing*.”

Warming to the argument, I went on, “*Nothing* turns up *something* in all manner of idiomatic expressions. *Nothing could be further from the truth. Nothing ventured, nothing gained. Nothing to it. Nothing is sacred. Nothing doing.* Our language,” I added, “certainly treats nothing as something. It is the (non)thing about which there is much ado! Philology reflects ontology,” I concluded with a jaunty laugh.

“That’s just so much sophistry,” Runa jeered, and threw a sock at me.

“Nothing more, nothing less!” I replied, and threw it back. “But OK, you’re a student of science. Let’s employ math, the basis for all physical law. Nothing *can* be something,” I told her, “in the sense that zero is a real number, the sum of other real numbers, like plus 1 and minus 1.”

Looking at existence this way, I continued, the eternal riddle changes from: how did we come about from nothing, to: how did the *one* state, void, develop into *another*, substance? Much the same riddle had been solved regarding the origins of life from non-life here on Earth, based on biomarkers in animal and human DNA, nucleic acids and organic molecules. Thus viewed, the answer might be as simple as a switch in time polarity, as the Shanghai physicists proposed, or antimatter meeting matter. Or the quantum explanation: random energy fluctuations in the void, an abyss laden with potential.

Whatever it is, I had told Runa, the quest to find it would be the holy grail of philosophy and physics, the *sine qua non* of scientific endeavors. And religion too. “I want to know God’s thoughts, all the rest are details,” Einstein said.

Exactly.

All this flashes in my mind—not a lifetime of memories but a memory of a lifetime, starting with my highly imperfect existence and going back, lifetime upon lifetime, generation upon generation, on the quest for answers—in the moments it takes to set the timer back thirteen point seventy-two billion plus twelve digits of years. I tap a few keys on the Q-tab to release the sixty-minute trip limit. No time constraints in the depths of infinity! No time limits at the start of time!

Just inside the closet door above my command post are several quotes scrolling on a digital monitor:

“I am going to seek a vast perhaps.”
—Rabelais

“Why is it that we and the universe exist? If we find the answer to that, it would be the triumph of human reason—for then we should know the mind of God.”
— Hawking

Help me, all you who are dreamers too. Help me make our world anew.
— Langston Hughes

All the universe starts and ends at a microscopic point of infinite density, deriving from and returning to nothing. And the point where the circle meets is the gateway to ultimate understanding.
— Seitung

*In wakefulness we look,
In dreams we see.*
— George-of-Ingleside

Outside, I hear klaxons, the sound of Authority Security closing in, and the beehive roar of their drones. They are in the building, the soldiers, I can feel the heavy thud of their steel-toed boots vibrating in the hallway. Nothing virtual about that sound. Only seconds left.

It’s all over—for me and my dream. And yet I feel elated, past care and apprehension. I am embarking on the greatest journey of all: death and eternity—timelessness!

I grasp the tab and stare into the camera lens to release the retina key. I lick my thumb (careful to find a spot where the whorls hadn’t been obliterated) and swipe the upper right corner of the screen, releasing the fingerprint and DNA keys. Then I type in the fourth security key, the code Runa couldn’t figure

out. It was “LvBopus109” —the piano sonata that so fired my imagination years ago.

The subfunction lights blink an encouraging green, a friendly wink in time, urging me on. I press the bright red GO button and hear the usual whirring, the colossal engine of time travel coming to life, the soft whoosh and tumble of circuits and neurons.

Then...nothing.

I sit. I wait.

Still nothing.

Not much time left, in this crucible of time.

Still and yet still: nothing.

Has Runa corrupted the program beyond repair? Or have I miscalculated the time? Too far back? Nothing for Prospero to latch on or return to? No knowledge in the dataverse that can replicate the time before time began? Of course. What was I thinking?

They are at the front door, I can hear them banging on it, breaking in. I hear Vänka yelling, “He’s in there!” I hear Runa yelling “No, wait!”

Suddenly I feel Photon Synthesis at my leg, prowling around the laundry chute. No! Stay here! Reflexively I reach for him. The chair tips over. Someone rips open the closet door. There is a blinding light. Then all goes black: a vortex of swirling, spinning darkness, circling round faster and faster, racing along in a fever dream, dropping down into a dizzying no-edge-no-grip-no-sound-no-sight-no object-no-form-no shape-no-substance nothingness.

Worse than a falling dream: a nightscape in a prison of sleep, a cathedral of doom, tormented by failure at every step and stage. There was the failure to secure a safe Dream Machine, to discover the root of my father’s antagonism, to vindicate myself, to copy the epoch-shattering Tenth Symphony with which to shatter our epoch, to survive the cave ancestors whom I should have bested. Even this narrative has failed, more opera buffa than ed vid, as if one could wrestle eternity onto the page.

Spiraling down faster and faster.

Descending.

Dissolving.

Dying.

Prospero, make it stop!

Please stop, Prospero!

STOP!

But it doesn’t stop. My commands, in this dark space, have no purchase, no power.

Instead, it slows. I feel like someone dropping gently into a dark pool from a great height. I see nothing and float freely, the feeling of the fetus in utero.

Gravity no longer exists. Or rather, has yet to exist. This must be the time before time, when all is black, all is void.

Except for one tiny thing. I can just make out little specks and sparkles of light, seemingly random in duration and direction, flashing across the spectrum field. They are like tiny shooting stars, or the floaters in one's eyes. Maybe they *are* floaters, in my eyes—or in the eyes of God. But I *am* God. I created Prospero, and Prospero, Godlike, has (re)created the universe.

A universe that is shapeless, without substance and texture, totally dark except for the erratic floaters, pinholes of flickering light. They provide no sense of perspective. I reach out to touch them, but there is no *me* to reach, no *them* to feel, only emptiness. They might be close at hand or a million miles away.

And no temporal perspective. These thoughts may be taking seconds or some immeasurable duration, an eternity, in the vacuity of timelessness.

There is no sense of time passing, no time at all. There is no life, no consciousness, outside of mine. No connections, no ties.

And where is God, the master of all, creator of the universe, puppeteer of life and worlds? Is the supreme being in evidence?

Nowhere.

I am utterly alone.

Utterly.

Alone.

Darkness.

Death.

Dead.

The apprehension of death flits across my consciousness like one of the floaters. Quiesced and annihilated by Authority soldiers in my hab. Now stranded here, in this dark, in death's purgatory.

Is this hell, the space inside of which one is left only with one's brooding failures? Or eternity? "One short sleep past, we wake eternally, and death shall be no more," wrote Donne.

But if this is death, what about the sparklers? And my thoughts? While I can't feel or see myself, can't feel or see any *thing*, I still have a mind, a mind that reflects, that registers fear and confusion. These may be unpleasant thoughts, terrifying even, but they are not nothing. Nothing equals nothing, my father had taunted, but he was wrong.

If I can think, said Descartes, then I *am*.

I am thinking that death's sting after all amounts to nothing. Life's motive force, the flow of energy, of which we're entirely unaware but that propels us through our earthly existence, merely ceases, or takes on another shape, our atoms and spirit moving off to repopulate other forms and features, like the planet's ever-changing water that empties forever from its lakes and rivers into

the earth's vast seas, then swirls skyward in clouds to dispense rain throughout the lands, the cycle of nature and life.

Eternity, death, heaven, hell—no matter. Not worth the lifelong agony and trepidation that haunts our days. Too bad I had to die to come to this revelation; I could have shared it with the Dead Ones, with all Destopians, with all *sapiens*.

I contemplate these ideas for a time, maybe minutes, maybe eons. Time has lost all meaning. There is no time. There is no meaning.

This...*existence*...if you can call it that, is devoid of everything, life and love and laughter, everything that makes living worthwhile and good. I ask myself: what is the greatest gift? And I imagine two people tickling an infant under her chin. The infant laughs! There it is, the greatest moment in all of time, in every minute and generation: the first laughter, more important by far than the first wheel or controlled fire or even invention of language. Because laughter was and is and will always be the first connection of happiness and wellbeing, without which none of those other firsts would matter.

All gone. Reduced to...*nothingness*, emptiness, void. Like the void at the beginning of the Bible. Before man, when it was just God. Maybe this time he will decide to let it go. Given another chance, he'll take a pass. Who would blame him?

But wait.

Wait.

Up ahead, in the far distance, is that—a shape? Getting larger? Growing familiar? Is it...?

My father!

“Dad!” I scream. He looks up. He sees me. He smiles. He starts to say something. But there is no sound. I try to read his lips. It must be important—some advice, some wisdom, some secret code!—but all I make out is gibberish, a string of nonsense words, before he starts to fade and disappear in a puff of smoke.

“Don't go!”

I must be hallucinating, like Flash-in-the-Brain-Pan.

But now it happens again, someone else, growing closer.

Can it be?

Yes! Runa! Is she real or another figment, another dream?

I shout “Runa” but of course no sound issues forth into the vacuum of eternity.

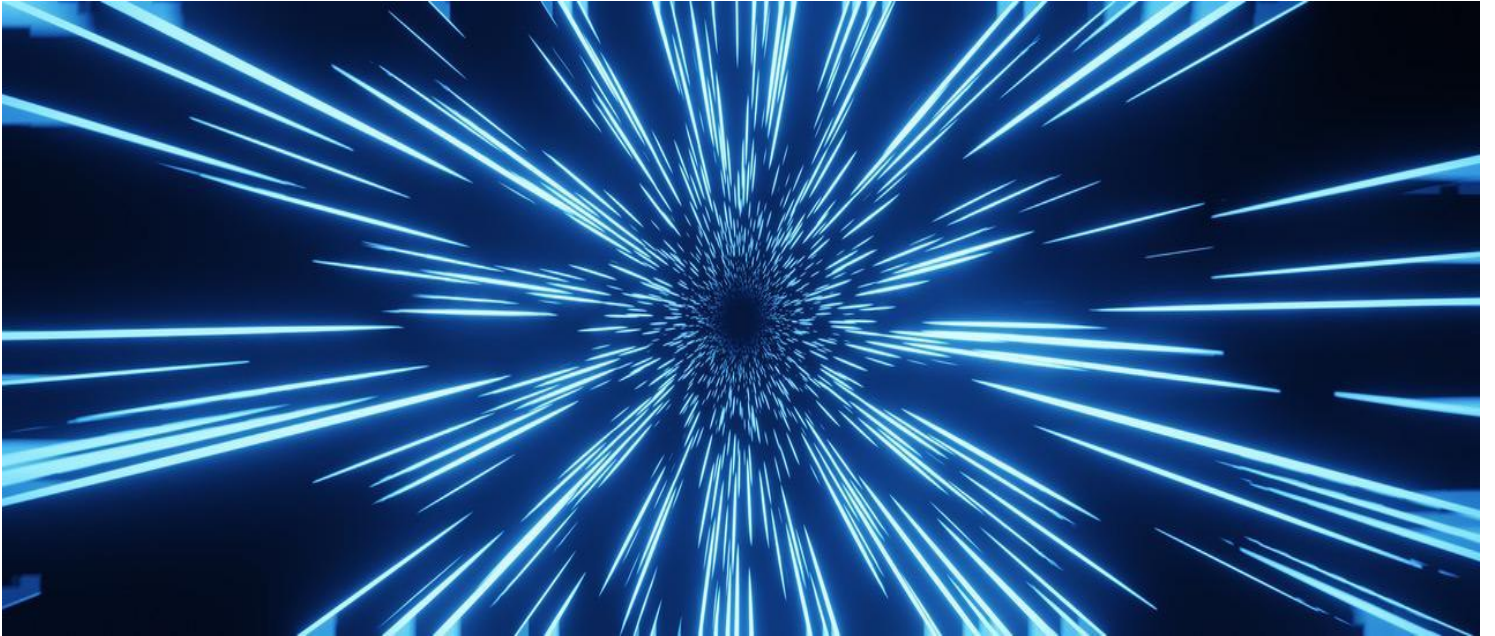
Maybe louder.

“RUNA!”

She looks up! She sees me! She is floating towards me! The distance, whatever it is, diminishes; time, whenever it is, contracts; meaning, however it is, expands. She is closing in. She reaches out. I reach out.

We touch.

phhhhhhhhhTT



Run Report:

[Null contact]

[Trigger timer]

- 10

- 9

- 8

- 7

- 6

- 5

- 4

- 3

- 2

- 1

0

[Null terminate]

[End Machine program]



Evidence Report x-042+8

*Drafted by Vänka 4930S/CottageGrove
Denizen Nineteen and Senior Authority Figure
Destopia, Central Midlands
01:49, 8/Martial, GC/22*

The above document was recovered from the Q-tablet of Denizen One George-5625S.42B-of-Ingleside, game developer and failed doctoral candidate, University of Central Midlands, at 19:42, 7/Martial, GC/22. The software program therein described, labeled “The Dream Machine,” outlines a feasible approach to virtual time travel and the first results from its embryonic employment. The Authority is developing plans to modify the coding and leverage the program for the purpose of examining and (if need be) modifying the denizenry’s dreams and thoughts, known as Mind Jurisdiction—their minds, our jurisdiction.

Denizen One George of Ingleside’s assistance is needed to manage and operationalize the reconfigured program. However, no trace of D1/G has been found.

(I had yanked open his closet door myself, leading the phalanx and directing the recovery operation in order to avoid the worst. But there was no George! The Command Post was empty and still, except for the seat behind the desk which swiveled slightly as if someone had just stood up and hopped off. We tore down the closet looking for escape routes, combed through the hab, scanned the forty-second and adjacent floors, fanned out around the building and the neighboring streets, even ran a drone search all the way to the outer quadrant walls and a few miles beyond, into the Midlands wilderness, out among the wild animals and rogue squatters. Nothing. He was somehow—mysteriously, magically—gone.)

Preliminary analysis of his decoy camera tape offered little in the way of clues: the camera was damaged in the break-in and what footage has been salvaged appears to show D1/G disappear as if dematerializing at the moment of attack.

A full search is underway. It is imperative that his whereabouts be ascertained. His clin Denizen Sixteen Runa-of-5466S.Ellis anxiously awaits his recovery.

Despite the disappearance, we found several other items of possible relevance in his hab along with the Q-tab: reams of paper in scribbled longhand and jumbled typewriter ink, presumably the source code, scattered and out of order and beyond reconstructing. Also found were two antiqued, tarnished, half-burnt pieces of jewelry in the shape of a fanciful “G”; and a half-torn and

mud-caked title page of a purported Tenth Symphony by Beethoven. They have been seized as evidence and sent to Authority labs for examination. The latter is certainly spurious.

Also in evidence is a small and bejeweled fertility doll brandishing a knife or spear in one hand and a torch in the other. The fertility figure is especially troubling, representing life, death, birth and revolt. It is being employed as a symbol of rebellion in conjunction with recent violent attacks on Authority soldiers and buildings. The source and leaders of these attacks are being sought for interrogation and quiescence.

I see them now, from my office window, Dead Ones sparking to life, torching buildings and incinerating drones and massing against and dispersing the soldiers with their crude spears and harpoons. Some wear outlandish jerseys displaying large birds, and fertility figures painted on shirts and sweaters and shields and splashed on the streets and walls emblazoned with ridiculous slogans like "Falcons Attack Hummingbirds!" and "Art Destroys Silence" and "Birth of a New Freedom!" and "Life Over Death."

Signed "DREBs as in Rebs, Widespread Ahead!"

And the fife-and-drum corps who follow the rebels, children as young as seven or eight, wearing their silly piped hats and striped Falcons jerseys, tootling their little flutes and banging their little drums, beating a rhythm of defiance, singing and shouting: "We Can't, No! / Be Stopped, No!" as well as empty slogans like "Dens and DREBS to the barricade, unsheathe your weapons unafraid."

Behind them are other rebels swaying their arms and dancing in circles and moaning low and unintelligible sounds in some dark and distant melody, frightening and mysterious.

Other messages have begun to appear on walls and streets, striking in their simplicity and obscurity:

*Two figures touched,
In deepest night,
And touching,
Sparked the world alight.*

and...

*The Dreamer, foe of strife,
Brings Dead Ones back to Life.*

And another...

Chaos, violence and anarchy

*Led us close to insanity,
Until, disentangling from authority
We found a better mode of alchemy.*

And still further...

*The Goshem Queen
Was the missing key
To change the world
And liberate me!*

And this personal attack...

*But as the dead are ever alive,
In spirit and dreamy memory,
So will I, ever watchful, ever strive
To skew and undo Vänka's legacy.*

And these even more obscure messages...

*Yet still I dream
Of space and time,
Astride the stream
Of spacious mind.*

They have no meaning and no point. They are just crude and senseless rhymes and vandalous and vainglorious slogans and images. We have our own message for them, more real and stark. It is the Authority warning:

*Dreamers set the world aglow,
Beware the dream to make it so!*

Unchecked these dreamers represent a fearsome danger, tearing at the weave of Authority that we've so carefully woven to shield them from the chaos and anarchy outside our walls, on which they stage their noisy forays and splash their senseless graffiti heralding some new society. Who knows what beast they claim is waiting to be born, but it is certain to be worse than this one.

That is why, with all the considerable might at our command, we shall crush them.

Still, they come.

Acknowledgements

The genesis of this book was a 2013 exhibit at the Field Museum in Chicago called “Scenes from the Stone Age: The Cave Paintings of Lascaux.” The title was misleading, however: it was not just about the paintings, it was about the incredible discovery, the techniques, the preservation and the profound meaning of Lascaux: that creativity began 30,000 years ago. The exhibit was stunning. But the best part, for me, was a side gallery where one of the Lascaux corridors was reconstructed. Greeting you as you entered were two Neolithic people, a woman and a man, done up, presumably, in wax reconstruction. Their dress and demeanor, the vestments and adornments, were so incredibly lifelike that it was startling. They stared right at you with a riveting gaze, as if to say: we left you this wonderful world, what have you done with it?

What I did was imagine going back to see them. What would they be like? How would they react to visitors from the future? What could I bring from the 21st century that would be useful or welcome? These themes are reflected in “The Dream Machine.” From there, the other elements of the book—going back to one’s childhood home, visiting Beethoven as he finished his Tenth Symphony, falling in (literally) with a Stone Age tribe, viewing and contributing to their cave art, returning to the time before time began—gradually filled themselves in.

Along the way I read numerous books and articles that influenced my thinking and helped me to write “The Dream Machine.” Unfortunately, and very negligently, I did not keep track of all of them, so I will be unable to acknowledge all of them. I do remember enjoying the Jean Auel “Earth’s Children” series. I loved “Sapiens: A Brief History of Humankind” by Yuval Noah Harari. Anything by James Gleick, whom I had the pleasure of hearing at the Chicago Humanities Festival in 2016 at Northwestern University. Great historians like Doris Kearns Goodwin and David McCullough, both of whom I met. The Scientific American special edition dated Autumn 2016 titled “The Story of Us” was helpful, as was Jim Holt’s book, “Why Does the World Exist” and Timothy Ferris’s highly readable “The Whole Shebang.”

My father, an incredible autodidact, was certainly an influence too. He was always studying history, and said of “The Decline and Fall of the Roman Empire” that it was worth reading if only to compare to the decline and fall of the American empire.

There were the sci-fi authors and books, some mentioned in “The Dream Machine,” and the great movies like “2001,” “Ben-Hur,” “Judgment at

Nuremberg” and even “It’s a Wonderful Life” for the thrilling way they took us forward and backward in time.

Several friends and acquaintances contributed mightily as well. Abigail Person, co-director of the neuroscience program at the University of Colorado School of Medicine, helped me sort out brain chemistry and neurology for the so-called “techniques” of brain biohacking. Any inaccuracies or misrepresentations in that regard are entirely my doing. I consulted with data engineer Zack Berman and systems consultant Dennis Applebaum about coding. I appreciated their time and efforts to educate me. Again, any errors or misrepresentations in those departments are entirely mine.

The wonderful coach and writing instructor Fred Shafer helped me think through the structure and details of the story and spent hours going over them with me. His ideas and encouragement were invaluable. Mark Drozd, a friend and fellow book clubber, weighed in with some heartfelt comments and considerations. The Off Campus Writers Workshop, one of the oldest in the nation, provided weekly author presentations that were extremely useful.

National Book Award winner and MacArthur Fellow Charles Johnson, whom I gratefully count as a friend, took time out from his busy schedule to read and discuss “The Dream Machine,” even allowing me to quote him as saying it was “brilliant.” Coming from a MacArthur Genius, that’s saying a lot!

My family deserves limitless thanks for their continued support, patience, encouragement and loving-kindness.

And of course this book would not have been finished, or possibly even started, without the emotional comfort and security provided by my wife, Ronna, who has always been and will always be my anchor and guide. She is beautiful in so many ways, skin deep and all the way down, as the dedication states.

And my beloved grandson Ben, then 12, who patiently listened to me read the book to him, and on finishing pronounced it “terrific.”

One afternoon in my youth I remember visiting a friend whose mom served us some homemade treats. Being a Jewish mother she expected us to try them all, but one concoction looked so awful I pushed it to a corner of my plate, where I hoped it would dematerialize. Of course this did not go unnoticed. “Aren’t you going to try that one,” she asked, pointing to the offending item. Always a quick-thinking liar (unlike George), I replied without thinking, “Oh sure, I always save the best for last.”

In this case it's true. This book was written while I was a member of the Wesley Writers Workshop in Evanston, Illinois. The leaders, Sharon and Steve Fiffer, and our merry band of participants, helped shape and drive the narrative forward with their exceptionally good-humored and incredibly helpful insights and advice. Without their encouragement and, just as important, their deadlines, this book would never have been finished.

To Sharon and Steve, I owe a debt of infinite—and timeless—gratitude.