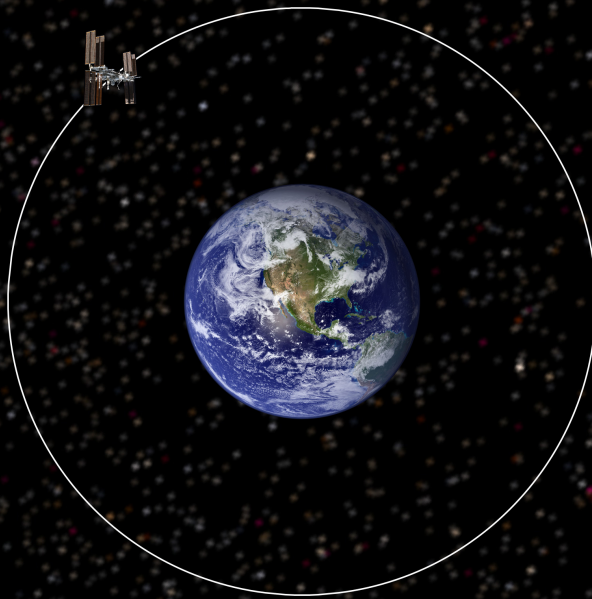


Mother of Hydrogen

The Future We Deserve



A Novel

Vinay Gupta

Hexayurt Press

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To Annie, who loves ya,
and Psyche and Bhavani Ma,
who were unbroken links in the chain.

The future is, in all things, our friend...
The future is both hope and fruition...
The future is the Bible of the free.

—Herman Melville, *White-Jacket*

Preface

This novel is both a companion to and a synthesis of the ideas in *The Future We Deserve*, a collection of a hundred short essays, all from different authors, that I edited with Cat Lupton and Noah Raford, which came out in November 2012.

I wrote the bulk of *Mother of Hydrogen*, 60,000 words, in six days towards the end of that month, November 22 through 27: NaNoWriMo became NaNoWriWk by accident. I do not know how I did it. I used Emacs. Its emergence as a finished book I owe to Reuben Thomas: he took up the challenge in late 2017, and in a few short months turned my raw brain-dump into readable prose and made it into a book, adding the ending I had just written, and badgering me to fill various lacunae and elucidate several obscure passages. Of course, any remaining faults remain mine!

I'd also like to thank, in no particular order, James Hester, Nathan Koren and Jay Springett for their help, friendship and assistance; Ásta Helgadóttir, who said something inspiring; Dougald Hine for wise council over many years, whether he knew it or not; and Bembo Davies for setting my feet on a Path With A Heart. My father, who appears as Dr. Goppti, had another name for the goddess Nuit: he called her Shakti.

The Hexayurt Project is real! See <http://hexayurt.com>

I've been a lifelong mystic, and I'm tired of hiding. I tell you true: please stop hurting each other, it's breaking my heart.

Vinay Gupta @leashless London, April 2018

One

Harry sat on the dock, feet dangling just above the green water. His sandals sat by his left hand, damp and sandy. The mountains reflected in the water were always covered in snow at the top, but the slopes were gray or green or white depending on the time of year. In the summer, the trails were deliciously shadowed and leafy.

Overhead, the lake monitor flitted about, making sure nobody was drowning. A fist-sized lump of plastic and rainbow-iridescent solar panels, covered in tiny eyes, it had been designed to be vaguely reminiscent of a giant dragonfly, without being a simple copy. Just enough like nature not to be a dull machine, but not a crude imitation. This was fairly typical of machines, nothing exceptional, but Harry had a vague ambition to be a robot designer one day, and had looked up the specifications for the lake monitor and quizzed the maintenance guy about the device in some detail one summer two years ago when it had gone down with a mechanical fault. Harry didn't really understand how the monitor helped people—it was too small to stop anybody drowning—but the device was simple enough. Ever-watchful, if somebody was in trouble, it simply called appointed people in the schloss to come and help. Harry did not think much about the similarity between the lake monitor and similar, less naturally-styled devices at school, rolling down the corridors picking up trash, encouraging children to classes, occasionally making malfeasance known to teachers. It wasn't hard to mess around with the school robots, any

seven year old could estimate line-of-sight for the cat-sized devices, trick their simple brains into blaming the wrong kid for somebody being pushed over, confuse them in a stampede of legs and tip them over, and similar games. Robots were dull, everyday objects to Harry. But the imitation of life, of the living dragonflies, was a little touch of magic. Harry watched the monitor hovering over some children splashing about on the shore with buckets, their mother lost in her book a few yards distant.

Harry was trying to meditate. Fitfully, he aligned breath with the slow swing of his feet, trying to will the water to come alive in his sight, as it had the first time that Uncle Peter had shown him how to coordinate breath-and-hands. Peter called it chi gung, said that it predated kung fu, but was actually much more important. There wasn't much to do in the summer, when Harry's father worked from here in the mountains over the school holidays, and mother and Harry's two sisters went to the music school most days. It wasn't boring, but it lacked the intensity of summer in the city, with sports and parties and the constant rush of visitors, arrivals and departures, and the gentle chaos of the city's streets. Colorado was not New York, but this was how the summer usually was.

Peter said that if you did the breathing just right, you lived forever. Harry quizzed him at the time "forever like it seems forever? you don't mean forever!" and Peter laughed, enigmatic, and said "well, perhaps it just seems like forever" and messed up Harry's hair in feigned annoyance. Harry slipped gently into trance for a few moments, watching his foot swing back and forth over the water, exhaling it forwards, inhaling it backwards, and the water was perfect crystal, completely static, and the air was simply its pressure against Harry's nostrils, nothing more. Hearing sharpened and, for a moment, Harry was aware of the sound of everything all around him as a single, static thing, frozen in time, all heard as a single note. He shivered, breaking the spell. He didn't really know what Peter was getting at, but as Father said, "Peter spent a long time figuring out the hidden angles of the obvious, and you should look over his shoulder at least a couple

of times.” He’d watched Peter in the mornings, slowly dancing with sticks, fluid rotation, body and the weapons moving in the same or opposite directions, tucked turns and surprising snap kicks, all in semi-slow motion. It seemed like an odd preoccupation for a fifty-year-old, but trying to imitate Peter with a stick soon revealed how much the older man knew about sticks and steps and bodies.

Father said that Peter was the mystic of the family, “a wizard, but there aren’t really wizards like in the stories—he’s as close as people really get, though.” Harry dimly understood that Peter was a several years older than Father, and that Grandfather had died when they were both in their teens, and Papa (Grandfather’s father) not that long after that, and that Father still looked up to Peter, even though Peter was by most standards quite poor, a green camper van packed with strange odds-and-ends of electronics and camping gear and clay and a wheel and a mandolin and, some years, a dog or two riding saddles or...”look over his shoulder, but for God’s sake don’t go off on the whole trip with him, son!”

Two

Peter eased through the form. Deeply familiar, he was not quite in tune with his actions, not quite fully focused. In the edges of his vision, the after-image of the sticks carried the slight sheen in the air of energy, but he was aware of going through the motions, too aware of his own awareness to really sink into the practice. A little coffee in the morning helped shake off the evening's torpor, but left the slightly-too-heightened awareness until noon, rounding off the edges of the practice in just the wrong way. Peter didn't care, right now it was as much for muscles as for soul, and he's spent enough years living on rice and vegetables and orzo to consider a disgraceful old age of caffeine and red wine as pay-back. Slowly, always slowly, trying to unlearn the martial instincts from his thirties, the desire to snap the sticks like whips, drive through the forms on angular momentum and imagined opponents' broken bones. To just let the stick be a stick, the elbow prescribing the arc, the knee supporting. Peter wonders what he'll be working on in ten years, if he keeps up the practice, or if one day he'll return to the sword form, finally ready to put in the time to move from wood to steel, from the curved saber to the perfection of the straight sword. Perhaps in time.

Three

Gregory closes the door and pulls the blinds. Countersurveillance nodes report, in the small green indicator under the clock, that there are no detectable surveillance devices in the area, no tight-pulsed laser beams on the glass, no complex antennas catching a thread of occasional white noise bursts across many frequencies. Gregory loads up half a dozen windows with live feeds from African operations, bits of drone imagery highlighting where the map is not the territory, where things are behind schedule, where there's been a shooting or a few cases of cholera. The coffee grows cold as he starts to integrate the general picture. It's not a bad day, by any means. The State Department's humanitarian operations have been fairly well organized this year, unlike the debacles of summer two years ago when a series of personnel changes left them short-handed at the start of a civil war and balls were dropped which made the media.

The gear in the field is getting old. They stuck with an older, cheaper platform rather than upgrading to the semi-sentient area-of-interest platforms because of the difficulty of verifying the objectivity of the algorithms. Unlike a news organization, State wants to know what's really happening, including all the boring stuff, the places where nothing ever seems to happen because everything is fine, the trucks arrive and depart on schedule, the grain sacks are full and correct in number. Systems evolved for realtime news pay attention to vocal stress, to rapid movement, to any sign of conflict or strong emotion. They tend to bias the feed towards

drama, and that turns out to make it surprisingly difficult to understand how humanitarian operations are really going.

So Gregory has to piece together substantial parts of “everything is fine” by reviewing summarized logs, rather than having an auto-editor piece it together for him. Once in a few weeks he’ll catch something really important—missed hospital reports of infectious disease that somebody round-filed thinking it was taken care of when actually there were similar cases popping up in the field, or a little statistical anomaly which means somebody’s embezzling on the supply chain. But mostly the job is very simple in intent: make sure that there isn’t a clusterfuck ongoing. Ground teams periodically go completely off the rails due to clashes of personality or sexual tension or religious conversion or some other human factor, and HQ can’t take the chance of having the press get hold of it before accountability has been ensured.

It’s a lot of waiting around for people to be idiots, frankly, thinks Gregory. But it keeps the family in blue jeans and tacos, and once in a while, Gregory actually saves some lives.

It’s a contrast from the old days, when the machinery on the other end of the link weighed metric tons and charged around on rockets kicking doors. Gregory’s shoulders tense like iron as old memories surface, kids running away from the machines as they go from patrol to engagement, bullets spraying. Unconsciously he massages the edge of his left hand, which used occasionally to chafe against a crack in the glove housing after a long day flying a front line engagement unit. When he felt that it always meant shift was over.

Gregory gets up, stretches, and walks out on to the porch to find Peter and have lunch. They’re going to have to talk about the boy soon, and about whether or not he’s going to carry on Peter’s work or not. Gregory doesn’t doubt the kid is up to scratch, and he’s curious in all the wrong ways, but the family business is not simple, and Peter’s emotional attachment to his nephew may make it a poor fit.

But Gregory doesn’t want the kid to grow up not knowing what’s out there, locked in the rat race like every other victim, unaware of the shifts and tides of the world. He doesn’t want

to lose his son to the illusions of the world, or to his brother's mysticism.

Given the choice, though, Peter's way is better than what Gregory feels he can offer. Better to live the dream, than to be disillusioned. Gregory doesn't doubt that Peter would do fine with somebody else's kid, but they're family. Can he stay clear enough to do the job right, or will avuncular affection breed bad habits?

Peter's sitting on a stump, checking messages.

"Lunch?"

"Yeah, let me remote the kid. Is Helen joining us?"

Gregory thinks about how to broach the subject.

"No, she's having lunch with the girls."

There's a long pause. They both know. They always know, sometimes one a little before the other; it's implicit, intuitive. Perhaps more than normal between brothers.

"Peter, why don't you take Harry for a couple of months next summer. I think he'd like to know more about your life, about the stuff you've done, and I want his eyes opened before school, before national service. I want him to have options."

Peter pauses. He knows there's only a few minutes before the kid is back, and it'll all be sandwiches and lemonade and some riveting tale of fishes.

"Greg, I'd love to, but you know that if he follows me, he's going to have a hell of a life. You know how it's always been with me—right place, wrong time, no excuses—years of hell in India, years of trying to put the pieces together. Do you really think he wants that? He might stay on the straight path yet."

It's formulaic, Peter thinks. They both know the outcome.

"Yes, he might, but I've seen him out of the corner of my eye, watching animals. Fades right into the trees. He's born to it, we carry the blood, and I know you'd keep him out of trouble Peter."

Harry arrives, sandals in hand, socks stuffed in his shirt pocket. To both men he looks young, they see him as he was at seven or eight, a time of pure childlike innocence. He's older than that now, but right now, they only see the child. If he knows the weight of what's being discussed, he doesn't

show it. He saunters into the kitchen, opens the fridge and examines options. Peter nods.

“You know what they do to kids in the army these days, Greg. I guess we give him a fighting chance of being his own man.”

It’s settled. Hopefully they’ll never get caught. They go inside, and eat sandwiches, and ponder the war watching the kid grow up in front of their eyes.

Four

At fifteen, all of the boys and an increasingly large percentage of girls (for them it's voluntary) take a year's cadet training. They stay in high school, but over the course of the year adopt uniform, drills, salutes, discipline, a chain of command, rank-and-insignia (randomly rotated) and, towards the end of the year, combat drills. The combat drills use very similar technology to common games systems—goggles, direct electronic stimulation of the vestibular system to produce balance and orientation cues, and complex spatial audio. Civilian systems seldom bother with gloves, and the cadet systems have only very basic tactile interfaces—pressure, grip, vibration—no force feedback. It saves on maintenance: force feedback systems require a ton of calibration, and a software error can mangle a finger or even an entire hand on a real military rig.

They simulate both kinds of combat—in-your-skin and in a robot body. Although the prediction has been for years that eventually jockeys like Gregory will comprise 100% of the US Armed Forces, there are too many jobs which simply require somebody to stand there with a node checking that items are physically present (military gear can't use locator nodes) or talking to people about what's happening—field synthesis of information with full context forces the brain to work faster and make better decisions than remote sensor feedback. You just can't fool the limbic system into understanding the gut feel of the situation without smell and body language. The locals, rightly enough, refuse to treat even fairly humanoid

combat robots as if they were people. You can't really win hearts and minds from within a half-ton steel carcass, even if it's got a very expressive human face and a melodious voice. It's still a tank in the minds of ordinary people, something the brass—never being allowed near the non-combatant populations for fear that even a few of them might be switchers—never seem to understand. You just can't command loyalty or change belief systems with a robot.

So main combat is still 40% robots, hovering seas of drones and lesser nodes, little insects covered in sensors and passive energy capture systems, and occasionally orbital sensor and gun platforms. But the weak link has always been the men, has always been our side versus theirs. The enemy, whoever it happens to be, never plays nice and line up in big, fat formations right in front of our armor. The increasingly blurry line between civilians and combatants, the Geneva-excluded "switcher" populations who will hit targets of opportunity while bowing and scraping towards State for funds to rebuild their shattered lives, leave only one option: an army that's all tooth, and no tail.

America knows, without a doubt, that this may be a fight to the finish, a war without end, and America is armed, girded and warded, to do what has to be done.

Five

The kid is fifteen. He's young for his cohort, so he won't actually start cadet year until he's almost sixteen. It's summertime again. They've fallen into the routine now—first few weeks of the summer the family spends alone, Helen and the girls fussing over the boy until it's time for Peter to arrive. Peter spends a few days hiking with the whole family in the mountains near the summer house, then the men take off on their own for a week or so, then Peter and Harry leave for the next six weeks.

Peter is training Harry in the hope that his personality will be strong and refined enough to survive the shock of the conditioning processes of the cadet year. If anybody understood the family's intention—to produce a child capable of dissent, of doing something against the National Interest as defined by the chain of command, even in uniform—to produce a man capable of disobeying direct orders, in fact—they'd all be prosecuted.

Gregory understands all too well what the stakes are. His generation's experience of war was heavily shaped by soft propaganda, a lifetime of exposure to a culture which was meant to make it very clear what right and wrong are, and where real power, goodness and wholesome values resided: with the National Interest. But what they do to the kids these days goes far beyond that. They make sure, without a doubt, that their minds totally internalize the chain of command, the concept of the higher authority embodied in the America and its values, and above all the need to be part of

a smoothly-functioning war machine, something capable of maintaining all that's wholesome and sacred in integrity and power.

Six

Peter and Gregory sit by a smoky, damp camp fire. A little drizzle in the afternoon dampened the deadwood they gathered from the forest, and the fire in the early dusk is anemic. Harry's fussing with it, grown taller and stronger than either man can really see. Wanting a little space, they send him down to the stream to get water.

"Last chance, Peter."

Gregory is concerned. They've taken a decision, to break the kid out of the system before he even knows what it is. To train him to think for himself, so that a generation of draft-oriented psychologists won't make him believe the National Lies. Everybody goes through it, and it's producing a society of slaves.

"Greg, it's not a fast or certain process. In the old days, you know, they were raised this way from eight or nine, usually with their grandfather holding the keys. It's not as if we really know how to do this faster, or in this world. He's got the summer, six weeks, and he's kept up the work at home, right?"

Gregory has to admit that the kid has worked his ass off. He doesn't, can't understand what the old men are plotting, but he's been raised with the stories of Peter and Gregory's grandfather, a Native American medicine man who fell in love with a white woman, settled in Kansas and drove a pickup truck. Papa had been every inch an ordinary American, he'd given up whatever Native identity he had when he

married into white culture, suppressed it almost willfully with a six-pack a weekend and a love of baseball. All American.

But to his sons, and a little less to his daughters, he taught the secret history: imperialism, genocide, COINTELPRO, the rape of nature, and the death of the world. He'd lived through the nuclear age, and watched world peace slip out of our fingers over and over again.

He passed this down to his son Frank, and then in turn to Peter and Gregory, and now they were passing it on again to Harry. The seed understanding that "this is very wrong" raises the question, "but what is right?"

And to seek the answer to that question, to make up one's own mind, is a crime.

"He's not ready yet, Greg, but he's going to be in good shape by the end of the summer, I think."

The air hangs heavy.

Peter says the unthinkable. "I think he's going to go all the way, you know. I think he's going to have to. His generation are under so much pressure, and they need somebody to break through. We all know that change is possible, but they've done a very, very good job of making sure that there's nobody to lead it. I think he has that spirit."

This is what Gregory had been afraid of, but it's also the price of the training. You want your son to be free, to understand the world by his own lights, and soon enough he's enrolled in the Army of Freedom, not a cadet, but tied up in an even older mess, an Army that may well date back to the paleolithic, passed hand-to-hand, mouth-to-ear for as long as there have been stories.

Peter continues.

"We don't know his destiny, we don't even know our own lives, Greg. But we can't deny people freedom because we're not willing to make sacrifices. If he takes the spear, he might make history. God knows somebody has to."

Harry's timing is always uncanny. It's one of his gifts.

"Spear?"

Seven

I am fifteen.

My uncle and father are, if not medicine men, descended from one. We've forgotten all that Papa knew, other than the history and some of the politics, but Peter's spent his life recreating it, not working from the Native sources—Papa closed the book on that!—but India, China, Jerusalem, Africa, trying to find the sacred thread that ties us all together, which could be respun to weave the future.

They don't think I'm the Messiah, but they've failed themselves—eked out little lives; Father still working for State, monitoring in Africa, herding bots and people, trying to lessen the impact of our wars. Peter's a nomad, which is a polite way of saying a bum, making a living peddling small-time amounts of dope and occasionally mystic knowledge, stopping by communes and ranches, working a little, waiting.

My sisters are eight and nine, and bright and precocious. But I would think that—I'm their brother, and they're blond, blue-eyed icons of privilege. At least I have dark hair, something of the blood.

Snap to focus. Peter's drawing a circle on the ground, about five meters across. Dad's sitting in meditation. He's never really mastered what Uncle Peter knows, but they trained together under Papa for a few years, and Dad never let it go entirely. Peter-the-magician.

"Magic is the story of the world!" proclaims Peter, to nobody in particular, as dad walks around the circle, with a

stick of sage and a tea kettle filled with stream water, muttering.

I feel the cynicism recede. Hokey as it all as, I've seen what Peter can do. Last summer Peter and I spent three weeks in San Francisco, much of it stalking police men. Peter simply followed cops on foot, in their battle dress, rifles slung low, and walked two or three meters behind them on darkened streets, listening to their conversations as I wondered why they couldn't see him. They'd stop on a corner and he'd come right up behind them and ask for directions or a light for a joint, and they'd visibly startle. He played it with a straight face, which in its own way was even more impressive.

The rush is here. I feel the air go still, and time stops. Everything contracts into the familiar eternal present as he makes the invocation.

"Do what thou wilt shall be the whole of the law!"

"I stand here, secure in my personhood, the living spirit of the undying god manifest through time and space into eternity, every level of my being serene and united, beyond-stories, beyond-time, immanent, present and manifest, and I am secure in my freedom."

The words, even in this place and time, never sound hollow. I note dad's backpack has a bunch of technical junk on top of it—broad spectrum jammers in case some forestry drone wanders by and squawks. Secure, indeed.

Peter and Gregory look like gods now. They're old to my eye, but I see the force and wisdom, and even their bodies seem eternal, renewed with force and vigor. Peter carries a fair bit of it with him all the time, scooting across traffic like a teenager on a skateboard, or hauling up a tree. Dad's only like this in a circle, during ritual. It's only the second or third time I've seen him do it, and I don't know if he can do it alone, without Peter leading.

Peter asks me, as Dad finishes the quarters, whether I know what The Spear is?

"No, we've never talked about it. Dad's never mentioned it. Something native? Hitler's spear of destiny?"

"Thelma, Peter, the Way of Freedom, has within it a concept of a spear or lance, something fundamental. European archetypes, the Lance, Arthur, Camelot, the Grail myth, the whole bit."

The slight cynical flash again. The tea kettle of water is a chalice tonight. Boy campers in the woods playing shaman.

"We're all the world has left, standing between the rest of our species and the end of all life, Harry. We don't know how many others there are, but as they digitize life, as they take up nature and make it into a pet, and wipe out what they cannot control, we become increasingly responsible for outcomes."

I want to say "and what have you ever done about it?" and I know what he'll say if I open my mouth. "I trained you."

I've seen where this is going for a few years, Uncle Peter's sense of failure turning into a desire to pass the torch. And he's right—I'm smarter than he is, at least in book-smart terms, and I'm physically gifted. I don't really connect in sim-space, I lag too much when driving a simulator to really compete with my friends, but I'm fast in the real. I could do great things.

If this was a century for that.

"Uncle, what are you suggesting? What is the spear?"

As I ask the question, it rises up from the base of my spine and hits me right in the heart, right in the chest. I see every tree propelled upwards by the Spear, I see it in my own cock, I see it in snakes and eels in oceans. My mouth opens and I hear myself say:

"Conscious life."

Peter goes limp, and father sits down heavily.

Peter pauses for a moment, then rummages around in his pocket and brings out a remote. He shows my my own face.

I look like a god, there's a radiance, a glow in my eyes, and a fire. I look charismatic, gifted, heaven-sent.

We don't say anything. I feel it click into place in my personality, my energy, almost in my bones.

"I am the spear."

I'm not dumb. I know this kind of stuff passes, but it leaves traces; "handles for history" my uncle calls them. And I know

that you roll with it, at least until you feel yourself going over the cliff into stupidity, cupidity or madness.

He makes a fist, making sure I see him cock, and hurls it full force towards my face. I step back and turn, intercept at wrist and elbow, and brace.

We freeze. The motion was completely reflexive, thoughtless, and perfect. I'm empty.

Dad comes up behind Peter with the tea kettle of stream water, and I look into it before I drink. The water is frozen time, static intention, a reserve of nourishment, I see it as every animal or plant from the time before language saw water, and also as a scientist, hydrogen bonds and viscosity and micro-structure. When I drink, it is cosmic. I'm all life, and without this, I will die. I imagine, perhaps, that I can taste the microtoxins, a trace of pesticides and heavy metals, and also traces of the tongues of the wildlife upstream—wolf spit and deer feet and otters and squirrels, and above all plants.

Sacred.

Dad's teared up, and Peter hangs his head and breathes.

"Peter, thank you" I say, and I realize that he's been through this too, and he got as far as he got, and it's my turn now.

"How old were you?"

"I got it at twenty-two, Harry. But your generation do everything much faster than we did, and your dad gave you a better start than mine did."

Grandparents. It's supposed to be grandparents, but Frank never got it. I think about mom and the girls.

"Can women do this too?" "Yes, but it's different for them—the Lance is secondary. Men kill as a primal activity, and women create. Both genders, both roles. The lance for a female helicopter pilot would make sense, but your mom plays the fiddle for a living."

Dad snicker. It's a family joke, she's actually a concertmaster, but I see it all from so many perspectives right now.

"Will you teach the girls, Peter?"

"I don't think I know how, Harry, but I'll try and find them someone closer to their frequency and mindset, if there's an interest. I'll take the first step."

I'm feeling the energy collapse, normality beginning to break in. I'm relieved. This has all been a bit much.

I sit, abruptly. An expression of concern flickers over Dad's face. Peter starts to close the circle, a rod picked out of the fire, still smoldering a little, traces the pentagrams as he goes.

"May the mother and father of all that lives support us in this work!"

The three of us recite, from the heart.

"Love is the law, love under will."

I wonder what it means.

The next morning we hike back to the road and catch a ride home. It's done, we don't need any more time in the woods this trip. Peter suggests we borrow a cabin from some folks who live about an hour and a half from the music school and spend a few weeks up there, see mom and the girls on the weekends, and spend some time in town too. Somehow that sounds better than hitting the road in the little green van and seeing more of the world. I want to see home, familiar things with these new eyes. Perhaps from there I can make more sense of it.

Everything and nothing changed. I'm exactly who I was before, but now I recognize myself in the mirror.

All life, on two legs, and not a pair of braincells to rub together. I am fifteen.

Eight

The cadet process is mostly social. At first it's a game, a role-play. We're still riding to school on our bikes or dropped off by our parents. We arrive in street clothes and change in the gym. Two hours of physical training before lunch, with a leisurely discussion with the two senior cadets and the sergeant about whatever's on our mind. Values, danger, risk, bravery, the war, but also dumb stuff—where are they from, what's their favorite part about being in the service, all of that. The afternoons are regular school work, but from a different syllabus. Economics, geography, history, bits of Spanish and Portuguese, what I'd later recognize as a Colonial education like they gave the British officer class. You have to know the people you're going to be fighting. We're chatting casually with the Senior Cadets and the Sergeant before lunch.

I ask "What's the meaning of the cadet training to you, Sergeant? What did you get out of it?"

He's about twenty-two, although he's got a surprising amount of assurance for such a young man. He's a lot more solid than our teachers are. Buzz cut, blue eyes, a square jaw. He's muscular, but more a climber than a weight lifter. Even the Senior Cadets, only a year or a year and a half older than us on paper, move with a purpose and discipline that leaves me cold. They're probably the best of their classes—teaching is, after all, recruitment. But I also know that we don't grow up naturally that fast in a year. That's conditioning and drugs, shaping them into little soldiers. That's what Peter and Dad were armoring me against by pushing me so

far so fast so early. When they condition me, it won't take. I won't let it.

I will not become a cookie-cutter killer. That's not my destiny. I know that now.

"To me, Cadet, it's about service, and about values. Like you, I had to do Cadet service, it's part of how we all live. It's a core part our education for life. But I'm from a family of sailors, my forefathers fought in World War Two, and we've often been in the service since. We all enjoy the benefits of this society, but if we can't fight to preserve it because we've gone soft, pretty soon it'll be machetes and machine guns all over the world. We're really important, to the way this country works, and to the world."

Hands raised, indicating questions. Julie, one of the two girls in the group. He nods, and she speaks. "I think it's important to remember that we're showing people our values too. We're not making war for its own sake, we're trying to keep the peace, fighting for the world's future, to make it a better place. It's not just about defending our country. It's about improving theirs. Saving the world." Predictably enough, she looks smug and self-satisfied. I see her for a moment in the far future, in a blue suit, a future politician. Mentally rehearsing her lines, the image. Future ambition written on her face. She's an idiot.

I shake my head for a moment to clear the vision, and focus. I'm looking for cracks, for flaws, for weaknesses.

"I don't see what's brave or dignified about driving robot tanks through slums shooting poor people. My father was Armor, and he says that the war was a mismanaged, stupid mess in his day."

Of course, we're only kids. We have radical ideas, radical opinions. We're trouble. Sarge deftly remixes the criticism: "Well, in your father's time it was a huge mess in Africa, wasn't it? We were only in the early stages of our mission to Africa, we hadn't really learned how to deploy remote-drive forces effectively in a less-than-total war scenario, and mistakes were made. Did your father stay with the Service to make things better?"

Seamless. A councilor, an empath with a crew cut. There's nothing to push on, nothing to move against.

"He's with State now, monitoring aid projects. He drives from home most of the year." I say, defeated.

"So he did stick around to improve things, still serving our Nation. That's very good. I'm sure you'll make him proud." I have a momentary sensation of powerlessness, confronting The Machine in the man in front of me. He's not as smart as me, he's probably not as good at a lot of things as I am, and I'm going to surpass him on every front by the time I'm his age. But, right now, he's got the upper hand because they sat him down and drilled him for months in nonviolent communication, in manipulative psychology, in making people feel like he's a gentle, kind force of good as he shapes them into cogs. I bet I'd get the same polished response from every other Sarge in every other high school in Colorado. He's just too good to be himself.

This happens a lot. Training with the cadets, with Sarge, it's clear they're better than they have any natural right to be. It's not the man, it's the training. Over and over again I see this from him, from the Senior Cadets. They're polished bolts. We're rough nuts.

A couple of the guys, from longtime local families, lived in the area for generations, start asking about traveling the world with the service, about battle. They sound like gung-ho idiots, eager to spill blood.

But the stuff that Peter said keeps going around in my head: not the men, the machine. Not the men, the training. They want to shape you into a component of the machine that kills the world. I think the rhetoric is old, out of date—as far as I can tell, and I'm no expert, we've stabilized the climate with—surprise—more machines. But I'm wondering, more and more, how you turn a seventeen-year-old, just two years older than me, into a Senior Cadet.

It's an education for national service. But I'm getting stronger, and I'm starting to put more and more of what dad and Uncle Peter said into context. The people in the service are like cells in an organism.

Nine

On the first day of cadet combat training, I break Jim's nose.

It's not a glorious start to the day but Peter's trained me plenty to fight, but not to spar in pads. The Senior Cadets want to get a sense of where we're starting from, as quite a few of us have martial arts experience, some of us are boxers and brawlers, maybe a bit of wrestling or store-front dōjō karate, so there are a series of friendly bouts to see where everybody's at. It's pretty rough and ready, not very serious. Real training starts next week.

I square off with my friend Jim. He's lean, about six inches taller than me, and with a good deal more reach. We go running sometimes, and he can outpace me at the mile. We've never had a real fight, but we've poked at each other in corridor brawls and he's fast and fairly well coordinated. I like him. We're wearing lightweight boxing gloves and faceguards. We're asked to keep it friendly.

We're in the gym, on open mats—no ring. Jim closes a few times, and I jab, circle and retreat, keeping distance, getting a sense of his pace. I sense I might be taking this more seriously than him. He's smiling and laughing, I'm focused. He comes in hard and direct, regular jabs like a boxer, tries for an uppercut, and that one glances off the front of my headguard. It would have hurt if it had landed. I reply with with stabbing close kick, which he twists out of the way of, and he chances a backfist to the head, thinking I'm over-extended, which I am. In a compromised position, my instincts take over: I block the backfist with my right hand and trap, hooking my hand over

his glove, and as he pulls back to free his arm, I reply with an unpadded elbow, expertly slid straight along his arm directly into his face, where it slips neatly through the T-shaped gap in the faceguard in exactly the way a gloved fist would not, to bloody effect.

Jim steps back with a yell, "Aahhhhh!" and pulls off the faceguard. It doesn't look that bad, but he's bleeding, shaken and red. The Sergeant, however, is delighted at the unexpected action, and I realize I've made a mistake in distinguishing myself. He and a Senior Cadet clean up Jim.

I've known Jim since kindergarten. As we walk down the corridor to the nursing station, he kicks me in the ass hard enough to leave a bruise. He's being good natured about it. Later, in the nursing station, he says "I thought you were wasting your time with Peter's kung fu!"

I don't say anything. There's nothing I can say. I leave Jim with the nurse, and take my time walking back to the gym. It's not a major reveal, nothing's really been shown. Of course, not everybody has an uncle who practices martial arts. But it's not an odd thing, nobody cares. If they knew what else Peter was teaching me...But they don't. Peter says my job is just to get through this crazy society and try and keep my perspective, keep my center. I can figure out what to do later. Senior Cadets are not the enemy. The sergeant is not the enemy. The chain of command is not the enemy. Humans are not the enemy.

Bad judgment and bad timing, perhaps, are the enemy. And I haven't made a very good showing today.

We return, and the class is taking turns boxing with the Senior Cadets who've completed basic military training away from home. The Senior Cadets are whip-like fighting machines compared to the cadets. The Senior Cadets' movements are almost identical, adjusted a little for build and height, clearly trained in machines. They look almost like robots. Peter told me about this—drugs and proprioception-modifying brain stimulation, load the basic physical training in as if you'd been practicing from the age

of five. But it's very static, rote and drills. "Mall karate on steroids."

I don't spar with them. Not today. But I watch, very closely, the moves, the pacing, the stance and the reach and see a few holes. I could take them.

Or is that me being fifteen?

Towards the end, the girls hit the mat. We've only got two in the class of '24, which is a bit lower than expected. The seniors send them sprawling, just the same as the boys. It's understood: the enemy, whoever they will be, kill girls.

Showering, I notice their bodies in new ways, reacting not just with the ready impulses of puberty, but with something older, more primal. All life, on two legs. I'm not sure what the hell Peter was thinking loading this on to a fifteen year old, but I know the situation as well as they do maybe. I wonder what Papa knew that he never got the chance to teach Peter.

Next year, I will be a Senior Cadet, unless I'm found unfit, and that's not likely. Faking is severely punished. And then I'll be in the war, on one side or the other.

But the next stop is very definitely going to be girls. I want to see what all the fuss is about.

Ten

Helen sets the table. They're eating later than usual; Greg's been finishing up work, and she's testy because she'd hoped for a nice family evening. But there's some minor crisis, and her husband's mind is in Africa.

Sally and Petra sit quietly at one end, drawing. The two little girls are both working on the same screen, hands dancing around each other, sometimes reaching over the top of each other's arms as they drag images around on the screen in a loose collage, then join the pieces with procedurally generated filler. The scenes lack perspective (they're young) but are increasingly well-composed. Snippets of tunes attach themselves automatically to birds, some of the trees are "live" and swish in an imaginary breeze. They're bored and listless. Mom's tense and crabby, and dad's been at work since before breakfast. They know he's in the office, goggles on, ploughing through feed after feed cataloging anomalies. Something about missing food, Mom says. Outside it's a gray day, not even rain. Upstate New York in October has beautiful days, but this isn't one.

Gregory comes down stairs at last. He takes a look at the girl's drawings, gives them a quick squeeze, then prepares to face his wife. Helen's cooking pasta, but only for four. Harry's on his first overnight with the cadets, and Helen knows that this is the start of a hard year of real changes. Increasingly he'll be a ghost in his own house, then for the Senior Cadet year, he'll be in barracks. The high school is girls and a

few disabled or otherwise unfit boys from here on. The two streams don't rejoin until college. Soldiers and civilians.

Gregory puts his arms around his wife's waist from behind, as she hovers over the pot. She radiates tension.

"He'll be OK, it's just a camping trip." "With guns, and flashlights, and teenage boys standing as sentries. It's a military drill." She's a little defeated, not venomous. "All perfectly safe." Gregory wishes he was entirely sure of that. There are other factors to consider.

"It's not his body I'm worried about." A simple finality. She understands.

Helen begins to serve the meal.

The girls put their things away, and say a simple grace. It's something they've picked up from their religious friends, families which cleave to older ways of sharing food. Their grace is simple, a requesting the blessing of a blissfully vague deity of plants and animals. "Dear whoever made everything we're eating, thank you for keeping us all so well."

Gregory's pleased at their simplistic scientific doubt. They've not been raised atheist, but it's natural to children whose questions are answered truthfully. They don't disbelieve anything, they're filled with a bit of natural wonder and curiosity and a soft-headed gentleness and...Gregory wonders for a moment about his own beliefs, how he maintains an honest atheism while, at the same time, knows full-well that Peter's powers—mild as they may seem—violate reasonable causality. Not God but nature, but Nature...

As Helen serves the girls, under his breath, Gregory whispers a fragment of what's become a creed. "Mother of Hydrogen, You are the void. Holy are Your ways, Unseen, unknown, unimagined..."

Gregory's mind shifts gears for a moment, and he sees the scene as he knows Peter would, ancient, cosmic powers formed into his wife and children and himself, play-acting a world without end on an ever-changing stage.

He sighs deeply.

Helen thinks he's thinking about the boy, and in a sense he is, but his mind is locked into the present. Rising, he picks

up Petra from her chair in an enveloping hug, and carries her to the refrigerator. They gossip affectionately and theatrically select drinks for each member of the family, then each carry two glasses back to the table, sparkling water and lemonade. Gregory's filled with gratefulness for the simplicity of the scene, as his son prepares for what may become a very trying weekend indeed.

"Stay hidden." He wills the thought on Harry.

Helen's mood improves over dinner. She's thinking about the girls. They are not twins, but they've got a very good rapport and genuinely like and enjoy each other's company. The gap in ages doesn't seem to matter, they take turns to lead. They've managed to be sweet and innocent without being cloying or foolish, a sort of benign realism. Helen realizes, thinking about it, that they're level-headed largely because of Gregory's insistence that Helen is open with them. She's a field biologist by training, who neglected field work in favor of music and wound up in orchestras and then education. She'd never thought she'd wind up as a professional musician, but a certain diligence and social grace which added greatly to the cohesion of the often complex emotional dynamics among musicians had made her an asset in ways that went beyond mere competence or raw talent. But the girls had grown up on the doubt and biology of Helen's basically scientific underlying frame of reference, and a certain open-minded curiosity had grown out of it. Gregory in some ways treated them like little adults but, on balance, tough as it had been in earlier years, it was good. They'd handled their religious friends very gracefully, and taken what suited them from the interaction.

Helen realizes that she is proud of them. She's proud of her family. It's a very ordinary moment, but for a moment, everything is just right. She smiles at Gregory, and it's all fine. Things are just as they are. She loves them.

World without end. The moment passes. Petra excuses herself, gets the slate and together they start on a new picture, this time more musical, birds arranged on comms wires, like a score. Helen starts to clear the table, and mentally starts to plan tomorrow.

Gregory does the dishes, and wonders what the odd cosmic flash presages. Probably his son is active, doing something subtle to reality. A moment of force? He'll call Peter later, they should probably check in. He opens a bottle of wine, pours two glasses, and thinks, We can talk tomorrow.

Eleven

I'm in in New Jersey, the Pine Barrens. Our school's cadets are camping out in the October chill with cadets from a couple of dozen other schools, over a thousand all told. It's a fairly festive weekend event. I haven't been at it very long, six weeks, and it's all still a bit strange and theatrical, but there are a few dozen Senior Cadets and they manage to add a certain gravitas to the whole thing. I'm still fascinated by their solidity and maturity, after just a year.

A real army Colonel addresses row upon row of boys and fewer girls in near-identical parkas. An array of small flying nodes amplifies the message convincingly. It's like he's ten feet away from you, speaking straight to you, for a thousand people at once.

Harry listens with interest.

"We have learned the lessons of history, and we know that it is incredibly important that a free society is defended by a representative army, one which comes from all walks and stations of life, one which comprises citizens of every belief system, ethnic background and geographical loyalty. To defend freedom, and your country, is a right, not a privilege."

It's not difficult to pick holes in the argument, but I have other things on my mind. Specifically, there are a lot of girls here, and while the surface environment is all very regimented and disciplined, we all know that a certain amount of mucking about is a reward for keeping it together in the official events. Dad says that it's important to build a big network fast in a new organization, and I've taken the advice—

liaison role between our school's cadets and those in the district. There's a collab and conference calls a couple of times a week and an online workspace which is, thus far, architectural renderings of each school on a US basemap. In my "personal effects" pouch I've got a fifth of whiskey (legally purchased, I'm sixteen now) and two joints (also legal, but I can't buy them; thanks, Pete!).

The Colonel continues, heartfelt and sincere, logical, rational and for all of it, wrong. Dad's been out there, he knows what we do, and it's not true that we're sorting out the mess we made in the last century and atoning for our crimes by shedding our own blood to protect the helpless or whatever the party line is. We still interfere, we still kill, and it's not...

Whatever.

Twenty minutes later, it's mess time. Each school cooks: a group of four or five prepare food, and the other cadets are individually assigned another school's tent, decked as a mess hall, to visit. Hospitality and broad contact. The selection may or may not be random. As people fuss backwards and forwards, running around searching for a replacement ladle or a misplaced backpack, I walk to the assigned meal with the other district liaisons.

The tent's set back against the tree line, perhaps seven by twelve meters, a gray-green plastic canvas with a thick liner of technical insulation behind it. I see lights through the windows, steam rising through a vent on one side from the stove. The tent flap opens and a tall, gangling man comes out, parka hood down, to drag in a heavy bag sitting outside the tent. I walk the last ten meters to the tent, and look through the slightly steamed-up plastic membrane windows at all the people, taking a moment. It's a bustle of activity, people sitting in a loose group beside a pile of backpacks staying out of the way of the cooks, while others set table and pour water into glasses. There's a busyness, a slightly giggly camaraderie on their faces. I want to like these people. The military gray of the clothing, the simple black of the bags and boots and the insignia seem insignificant against a first meeting with kids from all over.

I know names and faces, but as dad says, "Face to face first." Here they are for the first time. Two breaths, and I enter. I go the long way round, ask if they need any help at the kitchen. A guy about my height smells soup in a ladle and gives a broad smile "we're about to start serving, could you let people know?"

I sling my bag into the pile, and walk round the back of the tent to the group. About ten of them sit, knees up off the floor for the cold, on sleeping bags or jackets, six boys and four girls, talking while the others cook or set up.

"They're about to start serving dinner." One of the cadets acting as server says "two minutes!" over my shoulder, so I sit. The cadet to my right introduces himself, Martin Shaker. He's black, good natured, longer hair than I'd expect in a cadet. We shake hands, and he points his way around the circle giving names: Julian, Nyen, Daz, Emma, and...I'm gone.

Emma Bowen is the one I'm looking for. Blond, five foot six, from a school about two hundred miles away, beautiful, smart, and very nearly two years older than me. I think her family is a bit like mine, something in the blood. We've been messaging a lot, eager to meet after nights shared testing values and framing questions, things we want to learn about life. Her brother is a marine, two years older again, stationed on some base in Texas doing nothing very interesting, but it's a real eye-opener to see what filters back into her family unit. She's got a contagious enthusiasm for life, seems kind of unburdened by things. I'm acutely aware I've been made a little heavy for my years by what's happened. It's like maintaining a secret identity. She seems...straightforwards.

She's looking right at me from further away than I can make conversation. Nothing else to do, I smile and stare, and she looks back, smiles and waves. We rise as the circle breaks towards the tables, and shake hands. The electricity is palpable. We sit at opposite sides of one of the low mess tables, on the cold steel benches padded with sleeping bags, and eat soup. I begin to understand how seductive this all is—young people on all sides, from all places, meeting, exchanging ideas, broadening horizons, all in uniforms from

their district, their region, their school and their heritage. A thin layer of conformity over “Hey, how are you! Where are you from?”

They really know how to do people.

But, right now, I don’t care. The cadets chatter and gossip. The more diligent try to talk about the next year and the work the liaisons will do together. The less diligent talk politics, or fragments of military news or lore passed around as wisdom, or try and have split-off side conversations about music or travel or holiday plans. As with all the other tents, there’s no senior cadet or other authority figure present—they’ll be along presently—but this time we have to ourselves.

I could eat her with a spoon. My mind is on anything other than my plans—our plans?—for later in the evening. We’ve talked about it, we said we’d see how it was in person, and my calf is against hers under the table, touching above the boots, pressed tight. We pretend to ignore each other and make conversation with our neighbors. I experience an odd split consciousness, one part of me hovers above it all, knowing that I’m in this camp ground being indoctrinated, made into a tool of the State, but on the other level I’m just a teenaged boy seeking out life, experience, happiness. The old men’s game of transmission and revolution and showing the world what’s possible seems...as interfering as the clergymen who want their sons to wear a black suit and go do a theology degree. I’m sure I would have liked Papa, but...

This is my life.

Right now, what I want is this girl right in front of me, with the slightly aloof manner and the fond eyes. The paradox frames itself very clearly: they’ve taken away a bit of my freedom to protect the rest. The two levels of my awareness don’t match, don’t fit. I don’t care. I push it away. I file it in my brain for later, and return to trying to not make a fool of myself in front of Emma.

She’s beautiful. I knew that from vid calls, but in person, she’s beautiful. Beautiful. Beautiful.

Twelve

Things are a little different among the senior cadets.

“Colonel Gibbons,” one says to me, “I would be proud to serve my country at home or abroad next year, but my parents have asked me to go to a college close to home so I can help them with my grandparents.”

I am talking to them at dinner, asking how many plan to stay in the service and complete their tour with honors by spending a year in the regular military in a non-combat role.

I reply curtly, “Your duty to your family is important, son, we all understand that. Perhaps you’ll consider other ways to serve your country after college. We can’t all always put our family first, but this sounds important to you.”

The atmosphere is open and frank. That’s what works best. I’m good at maintaining this atmosphere. Tonight something prickles my scalp, a subtle sense of something being wrong, not the chilly evening or the swarm of fuzzy parkas and fuzzy thinking lapping up chili in the other tents, but a deeper sense of...unease. Every year I come here, and have the same conversations with the same kids, five or ten basic faces over and over again, perhaps two dozen stories. There are charts and graphs and documents, instructions on how to play the role so that as many as possible volunteer, and those that don’t are left with a clear sense of deference to those that do. It’s how we build and maintain society. It’s how we win the peace and prosperity that has, despite all odds, chosen to linger on America.

No, it's something else. It's the sense of being watched, but there's nobody there. I remember it from active service. It's the subtle pressure on my mind that comes from the enemy. And there isn't one here. I'm getting old.

Thirteen

After the senior cadets have given us a short address and outlined the plan for tomorrow, we are encouraged to socialize. There are many large fires around the site, some with themes for conversation and activities, other unstructured. At each is a couple of senior cadets or a senior cadet and a regular military officer.

It's not hard for Emma and I to slip away into the woods. She makes a pretext and leaves for her school's tent, I leave a few minutes later, then double back to pick up my bag, shaking the conversation I've been part of. We meet as arranged, a hundred meters up a path into the woods.

If I play my cards right, I'm going to remember this night for the rest of my life. It is freezing cold, but we've got two and a half hours before curfew. Down at the camp site it's all boy scouts, and up here...she's holding my hand, stuffed into a parka pocket, and she's talking in a sing-song voice about the night and the moon and the trees and how she's been dying to meet me. I wonder how much of it is actually curiosity about me, or given that she's almost two years older than I am, how much of it is the power trip of...well, I'm a virgin. But there's no denying that the plan is on, the furtive discussions we've had until now, "talking to a cadet from another district about the first camp" are now prelude.

I've got a couple of insulated sleeping mats and bags swiped from my school's tent with me. She's got a small inflatable survival shelter with her, and a heating block, taken from her father's garage. We scurry a good few hundred

meters into the woods, then turn off the trail and head for as much cover as we can find. It's dreadfully conspiratorial. A mission.

Electric. I keep having glimpses of slow time and shoving them back down. The mysteries can wait for another day.

We're here. This is as private as it's going to get. I have a dumb, last minute thought "I hope she's not loud" and then laugh at myself. I don't expect to give a star's performance; this is, after all, not a sim. She's fumbling, unfamiliar with the starter on the tent, then it starts to hum and inflate, and she tosses it on the ground. We haven't even kissed yet, but she's confident and direct. I'm not exactly nervous, but... there's a sense of something leaving. A pang...

And then she's in front of me, looking me in the eyes.

"Harry, I didn't think I'd like you this much in person, but I'm honored and excited to be here with you right now." Something's off, like she's reading a speech. Then I realize she's terrified too.

"How...?"

"One boyfriend, we're still friends, but he's not really my type," she says, for some reason. That's not what I was asking. I smile, watching the tent inflate behind her, the moonlight in the trees etching itself into my mind. I feel too aware of myself, try to shut it down to one channel. Just here. Just me.

"How do you know what your type is if you've had a sample size of one?" I say awkwardly trying to break the ice. Not good.

I'm suddenly aware of the difference in our ages. She was old for her class, a cohort below her age; joined the cadets late, and is very nearly eighteen. I turned sixteen less than a month ago. I don't feel like a child, but this is all very new.

We're talking about sex.

And then she says something that makes it alright, that makes it make sense.

"I want you to remember me and here as your first time. I wanted the chance to give that to somebody, and I really like you. You're different from most of the guys my age, even guys older than me. I feel like you're older."

And something changes. I don't feel like I'm sixteen. I feel...real. Something Father said passes through the back of my mind: "Helen of Troy was fifteen," and, yes, OK. I'm not a child. I can do this. It's fine.

I step forwards, our bodies pressed together gently through our parkas. I place one hand on the back of her head, the other on her waist, and I kiss her. And it's not fumbling around with a friend's sister at a party, it's not a sim, it's not somebody else's story, it's me, and it's her, and she holds my lower lip between her lips for a long second, then opens her mouth into mine. Her hand's on the back of my head, and the parka hoods meet, making a sudden, ridiculous darkness. We laugh, disengage, "try that again!" and I throw the stuff into the now-inflated tent. The last thing I clearly remember in the ordinary flow of time is looking at the time: 8:34 p.m.

Fourteen

The Colonel is tired. Alone, the senior cadets sent off to their stations. He watches the various fires and tents on a remote; happy, smiling faces. This is not the boy scouts, long disbanded, this is feeding the hopper of the war machine. They might seem like adults in their uniforms, particularly the senior cadets who age two years in a day at Induction, but they're children. Get them young, sort them for aptitude, send them forth upon the world. He doesn't know who he feels worse for, the mechanized divisions who'll live in suburbia and bomb towns on remotes, or the poor saps who go into the field, hauling bags of trouble with them, and spray fire into the bush indiscriminately when the sensors are down, hoping against hope they won't hit one of their own unintentionally.

But what's the alternative? The end of the good times for everybody? The encroaching chaos on the southern borders becoming the fate of all?

Nobody is tricked, and nobody is lied to. That's a previous generation's propaganda, and we're too open a society for lying to people to work any more.

We're giving them a chance to fight for their futures while they're young enough to adapt and do it well.

The Colonel suddenly feels better. It is true. He thinks about it, and it is a satisfactory way to think about the issues. He turns it over in his mind, and thinks about how different fifteen is from eighteen when you really think about it. Neuroplasticity. They aren't child soldiers by the time they

have a gun in their hand: they are soldiers, those that make it, anyway.

A hot flask of coffee accompanies his rounds. He's actually quite pleased with the shape of the evening.

Fifteen

The heater block is amazing. We don't camp in the winter, it's always summer when we're up in the mountains for the music school. It's warm, dark, and we're nearly naked, kissing and stroking and squeezed together. I'm aware of how cold it is outside of this little pod.

Momentum is building, but there's intimate discussion.

"How was your first time?"

She says "Oh, I hope yours won't be like that" and kisses me (to shut me up?).

She's thinking that it was a disappointing start, but not that bad, and too much alcohol and a poor choice of boy had marred her high hopes for it and it got much better later, true, that's true, sober and...

That was thoughtless, asking about her first time, and she as it were changed the subject, not forcefully but clearly it was suboptimal...Will it be like that for me? She seems so... assured...But distracted? What's...

Suddenly he can't form a thought. She's slipped a hand down his pants and is holding his cock gingerly. There's an almost palpable snap in the air, some veil withdrawn, and Harry is suddenly very aware that he's a man, a child of men now become one, and that there's something going on inside of him that cannot be denied. He feels feral. It hits him right in the chest, The Spear, and, beside him, The Cup. She is older, she is experienced, she is in charge, but...and the tearing of realities is intense as the magical and the primal fuse into an extended moment. All hope of experiencing this as a

teenager is stripped away, dancing blue symbols at the edge of vision form, blur and fade, and a snapshot of being in a cave, on fur, and brutally physically powerful, deep brows and jaw and and and...

And there I am, it's all back to normal, and I'm holding her head and kissing her and she's pulling backwards to get out of her panties and my pants are already gone and everything is rushed and I'm aiming for missionary, I guess, and I'm between her legs, below her and not quite sure how this part goes. I look at her for a moment on extended arms.

"Well..." she says, and it is awkward. And then it's not.

Afterwards, Emma's lying heavily on my crooked right arm, cutting off the blood, and I'm flexing slightly, feeling the freedom in my hips and lower back, getting a sense of how it all works, the Man thing, slightly alone as we lie there, aware of how suddenly I've gear-shifted at least in my own head from child to man and there's a certainty. I'm solid. This is... how people are. I'm slightly watching the clock, but we've got about twenty five minutes before we have to pack up and head back in by separate routes to separate groups. Don't be seen together. All planned out. I make a stupid joke in my head: this is, after all, a military operation, right?

I'm wise enough not to mar the minute by making a clever joke. Not a child!

Different levels of reality seem to be quite happily zooming along, almost independent. Not much of a sense of magic stuff going on, although it must be. There's a wondering, an elongated moment. Will we do this again? I'm lost in my head again, for a moment it's all about logistics, two hundred miles is a long way, and then there's a moment of fear: what if this is it, she just wanted to break somebody in, and now she'll move on to somebody older or closer or...the split consciousness again, aware I'm thinking like a kid, but also that it's right to do that, maybe...

She kicks my leg over and adjusts the sleeping bags.

"That was fun!" she says cheerily, to my arm. There is a little grinding. "I know! Thank you, I really...none of the girls

at home I know are..." I say to her neck. "Yes. We should do more of this."

So it's settled, that simple. It's not a problem. Probably.

Unbidden, a deep, radiant sense of well-being streams out of my chest and fills the tiny shelter. I know that nobody "loves" anybody at this age, I know that, I know that.

But I don't care. Lovelovelove. Radiance. Rightness.

There's something in the genes, there's something precise and powerful, and unbidden I'm squeezing her against me again, crushing her against me to feel her warmth in my arms, and I say "Good!" and I'm actually quite confident, for a moment, that it's all going to be fine.

She wriggles around to put her arms around me, wraps a leg around me, and squeezes back, a little more distant, it's somehow almost just a hug.

Inside she's well satisfied that it's all gone so well. This was it. This was what she wanted. She feels good, aware she's made him very happy, quite enjoyed herself, and shaken off the memory of her own first time. It's sort of what she wanted for herself, to have the first time with somebody who was taking the lead and nice and...there are more kisses, and a few more minutes of closeness before it's time to go.

Outside, minutes later, they're back in their social roles, packing up the tent, again uncertain of each other and hesitant. It seems the magic is over. Then she notices a few stray flakes of unseasonable snow falling, dancing in the moonlight.

She takes my hand, and kisses it, and points at the snow flakes illuminated by the moon. It's all just so perfect. She turns to watch them.

I stand there, my feet on the ground, insulated boots against the cold earth. The breath flows in and out, hers and mine clouding together. Her back's against my chest, and we're watching the snow fall. I know the heating block is good for two more days, and that we won't feel the need for food until morning. It is beautiful. We are young, we are here. We have...it's an archaic phrase, but "made love" and I know that this is what I am. She's breathing softly, senses

dilated by the beauty and the experience. I can almost feel my bones and muscles and will hardening and filling out, like a dragonfly's wings filling with strength when it emerges. I think of Papa, or my own parents when they were my age (not that they met this young!) and it all fits together into a wheel. Boy meets girl, boy gets girl, girl (not this one, she's safe!) is with child, repeat for seven million years and counting, every single one of us under snowfall or rain or the beating desert sun, counting the provisions and the shelter and the water and estimating the day. In these clothes, with this woman and a bag of food, we could walk to the sea in ten days, we could fish and build a hut, or come to my home, or her home, or...

She turns around and says, "We better be going."

Or we could go back to camp, pretending to be teenage cadets, not little flakes of the absolute in the perfect night, dancing with the old gods.

We hold hands for about a hundred yards, then she retracts into her pockets, feigning a shiver, and we have one last brief kiss and part ways. Next camp is a few months, and I guess...no, not now, not time to think.

I guess I'll see her again tomorrow, I think as she tramps down the muddy path, and I skirt around the woods planning to emerge besides one of the other big tents, where I'll spend the last half hour before it's curfew and back to our respective school groups.

I make my way into the large, sparsely occupied tent, and sit down on a bench. The tent has a bit less than twenty people in it, unfortunately including the Colonel, who's mid-way through a story about meeting the President a few years ago, but he pays no attention to my entrance.

Sixteen

The cadet who comes in is carrying a bag stuffed with gear. He's extremely watchful and nervous. The bag is parked with forced casualness, usually that's alcohol (as long as they don't have religious parents, that's usually not an issue) but the bag is oddly light. That means sleeping bags, which means nocturnal maneuvers. Which is also, as long as nobody's been caught, a non-issue. Hypothesis: this can safely be ignored.

I'd have let it go there, but for the ease with which the cadet smoothly insinuates himself into the group, and glibly lies about having spent the last couple of hours talking by the fires. He fleshes out a semi-convincing history as naturally as if he's discussing his hairstyle. Curious, I sit a couple of places up from him on the opposite bench, and interact a little. A gentle probe of the story, quickly met with more plausibly deniable "facts." Fast infill and backfill of the story. Fluid. He's very smooth, very calm, very convincing while (child, child) clearly lying, not that his new friends would notice. Kids are so transparent. But he's an experienced liar, good at putting up a front with a facile ease which speaks of experience, and he's quietly burying a couple of stolen hours. So what's in the bag?

A little irritated, I make a quick excuse to check on something, because for all I know he's been rifling through other cadets' possessions grabbing untagged property. I pull a remote out of my pocket, surreptitiously capture a picture of his face, and run his backpath. The remotes reconstruct his last few hours from passive nodes scattered on the site for

security, and sure enough Cadet (M) Harry Vine and Cadet (F) Emma Bowen make their way into the woods, deploy a cozy little lover's nest (good equipment! shows up on IR like a beacon) and share a few moments.

I think to myself, as I put the remote away, that it doesn't really matter, but there's something about the manner of the kid, the careful covering of tracks, the planned rendezvous, which bothers me. He's just too precisely charming, a subtle, well-practiced front. Something not quite right. Family of crooks? I pull the file, just a quick scan. Father was Armor, he's an army brat; old man is now State Dept. Still on drones.

A family history of tradecraft.

Colonel John Gibbons stretches out a little and has a satisfied moment. Good kid. Operator. Flag and file.

Seventeen

The next day, everybody's busy. So many things to do. Discussions, lectures, exercises, a display of marksmanship, a long run, and inspection. Harry and Emma manage to slip away among strangers for dinner, but it's not the same—not wrong, but there's no time, no space, and when they talk it's all unspoken context and neighboring seats trying to make conversation. He knows they'll talk on vid soon, and in private and...two hundred miles isn't that far, maybe we can cook up a pretext.

Then she gives him The Smile, and he knows it's all fine. OK.

Later, in her tent, in the privacy of her sleeping bag, she looks at pictures of him and, yes, not bad, not bad at all. She feels warm, and has a little romantic moment, soon cast off. Too young, we're too young. But cute. Two hundred miles. There is a romance to it, though. Something fine!

John Gibbons sends everybody home with a rousing hur-ray, another generation of sheep, goats and wolves bounced around, flagged, tagged and monitored. Three more camps, they'll be full-time in dorms for the last quarter, and then Induction. Mr. Sneaky's a bit of a star, thinks John, having manufactured an opportunity to interact some more with the young fellow, and resolves to keep him in the program if at all possible. Armor's not really a place for a guy with a face like that. Hearts and minds, front line material. A face made for military PR, maybe? If they can keep him.

Late at night, as John updates a handful of files of cadets who showed significant promise, he flags Mr. Sneaky's file: "Promising. Prioritize for territorial?"

It's not a big deal, just makes sure that the locals don't harsh the kid's mellow for not shining his boots right. John still isn't quite settled about it, but he soon forgets. There are over ten thousand cadets in his patch. If you asked him about it a month later, he'd be unable to put a face to the name, although he'd remember the story.

Files.

Eighteen

We are standing in identical pods, twenty-four cadets, in the lab. The pods are about a meter across, a black metal mesh grid to stand on, and a sculpted black frame rising half a meter above our heads to an enclosing canopy. Inside of each pod are suspended goggles, gloves and a body harness. We're being instructed on how to suit up. First the body harness is put on, with some vital signs sensors and actuators for impact. Then the harness is clipped to the frame by some actuator cables which can pull you back and forth a bit. Then the gloves and goggles go on. The helmets have a system that electromagnetically stimulates the inner ear's balance systems, so you can feel things like falling or sloped ground. One thing we can't do is run: full motion systems are extremely expensive and it's fairly easy to break a leg without proper training. Commonly used, but not by us.

About half of us have done this before at home for games, sims or movies, although without the enclosure, so it's familiar, but those from poorer or religious families are being talked through the equipment by the instructing cadet. Some people just don't let their kids out of the "real world."

My dad's gloves were full force-feedback, like the body harness, but with a full six degrees of freedom. That's what you use for driving war machines. These are haptic, they give sensation for grip, for pressure, but not for force. I put on the goggles, and they show the world around me more or less exactly as it was, a slight shift in perspective, the colors slightly

off, but as I turn my head, they keep track flawlessly. It's almost as if I'm not wearing goggles at all.

They start insertion. The body harness tenses, and I'm fixed in space. The goggles shift, fading to white, then they show a simple room, about the size of a gymnasium. We walk around, looking at the virtual bodies of the other cadets. Each of us has a model which is taken straight from a scan of our physical bodies, so the models are as accurate as our baseline medical data. If you look closely at each other's faces you can see that the fine surface detail is not three dimensional, and lips are always wrong, they don't fully articulate during speech. But it's good enough that unless you're deliberately looking for flaws, it works. You just get in the habit of not looking at people too closely if you're standing right beside them, and the illusion becomes pretty much perfect. Dad taught me a quick check for when you're confused: "Try and bite your finger: if you hit glove, you're still inside."

It sounds like a joke, but when you drive robots for a living, particularly under stress, sometimes the man dreams he's a butterfly, and sometimes the butterfly dreams he's a man.

Today, all we do is learn the gestures for walking, for running, for jumping and various other gross body movements which you can't do in the simulator with your physical legs. Some of the lads know advanced stuff from games, and are rolling, tumbling, spring-kicking and otherwise demonstrating physical mastery well beyond their real-world capabilities. Alice, one of the two girls in our group, has some kind of trick for gliding, it looks almost like she's ice-skating. I can't tell if that's some kind of bug in the system, or if she's got a ton of sim experience. Either way, we're all out in fifteen minutes for a quick walk around in the real world, goggles perched on our foreheads, still in harness, just to let the noobs acclimatize a minute, and then we're back in for the rest of the day. Basic drills.

This goes on for weeks, getting everybody up to basic simulator competence, before combat training starts. Of course, a lot of us are already well trained by games, we're sleek, efficient fire teams and we have been since ten or eleven. I've

spent so long flying sims on dad's rig that I could probably qualify for a trainee license.

But there's always that little bit of lag, little bit of hesitation in my simulation activities. I don't know what it is, I'm always just a bit outside of myself, don't fully enter into the reality of the situations, so I'm precise, but I'm not fast. In fact, I'm slow. My mind makes me that way. I found with games that I have to stay back and try to be strategic, because if I head round the corners first, I'm always in the wrong place at the wrong time, and I get pinned down by enemy fire or simply blown away. It's the one thing I'm well under-average at, and I'm not convinced that's something I can learn my way around. It doesn't affect my overall performance much, I play a strategic role inside, hang back, pick off snipers, crew the heavy weapons, cast the spells, whatever. I can keep up, I'm not a drag on the party. I'm just not the simulation king.

Nineteen

I'm doing dad's old job. We're lumbering around in three-ton powersuits, cadets clanging enormous metal feet off the simulated deck, feeling the room shake a little. I'm waiting to get started.

We've spent long enough inside on a regular basis that we're comfortable with the haptic and the vestibular drivers feel natural; it's pretty much "strap in and go" these days. I've improved my speed and sense of presence a bit; I'm starting to understand that it's my distance from the simulation, telling myself that it isn't real, that's impeding my reactions. I also wonder if it's family history, that this is, in some sense, my dad's job, my dad's world, and I don't want to compare myself to him. We've played games together and even if he doesn't really follow the whole scenario because he's just dipping in and out, he's deadly. Completely smooth and fluid, total awareness of the environment, no gap between thought and action. It's a performance, he doesn't do it for fun. Sims are work. But he's proud of his skills: first line expeditionary Armor and, as he says, he was about as good at it as anybody he ever met who hadn't been surgically modified for direct interface. DN jocks are our equivalent of superheroes, the ultra-elite. You don't do that if you want to have a family life. I don't know if he ever applied for selection.

We're about to get going. The scenery's changed from the drone bay to a desert town. We're under a camo net canopy, surrounded by military vehicles. I can't hear anything, they haven't started properly yet, so there's occasional comments

as people line up and form rows, but no sound from the environment.

Sim is go. The first thing we hear are sirens, and an over-the-radio “scramble and disperse” order. Seconds later a massive explosion sends us flying, taking out a couple of laggards who were fussing when the sim started. I flick my wrist to stand upright and run for the protective wall of a building, massive steel feet crunching in the dusty square. The town is yellow mud-brick, with canopies out front of the stores keeping the desert sun off rows of identical apples on perfectly rectangular trays. Simvilians are completely absent. We’re not quite sure what the scenario is yet, but that’s part of it. Radio commands come into the battle computers, maps appear on the head-up displays, ghostly outlines of the cities projected in our peripheral vision, tracks indicating our ideal positioning and formations, health dots for the battle group. Cross town, two kilometers, take a fortified building. Vehicle-mounted opposition.

The main difference between game environments and this one is that there’s very tight synchronization within the unit. We play with people from all over the country, and it’s not that common to play with the same crew for more than a few hours. There are tens of millions of games out there, entire artificial worlds sitting around waiting for paying customers to come by. Crowds flow in and out. Here, same kids, over and over. You get to know how people play.

I decide I’m going to do something different—run up a side street, parallel to the main group, provide protection to the main force. I don’t really understand the line between initiative and disobedience, relative to the computer’s suggested force positioning, and that’s probably something they’re trying to teach us.

Half a kilometer up the street, passing parked cars and trucks, I see the opposition for the first time. A group of four vehicles passes ahead of me, right to left. Armored cars, the unmistakable bulbous curves of composite armor panels, arrays of rockets on top. The last of them has a microwave dish,

almost two meters square. That means a beam weapon: trouble. They're past me in half a second, I have to review footage to know exactly what I've seen. I radio in to the group. They also saw them. Somebody lofts a drone—we should have done that earlier—and a live map update shows us two dozen vehicles, some with heavy weapons, between us and our objective. Some are behind us.

Alice is TBC—Tactical Battle Coordinator—our “combat chair.” For small group ops we don't have a Sergeant or a Captain—rank is entirely notional in operational space anyway. We maintain that stuff in the classroom because it's the bureaucratic form of the organization, but it's not how anybody fights. Computers don't work that way, and so neither do soldiers. Alice, indeed, has a ton of sim experience, she's been a competitive sports nut for years, and she's adapted to war very nicely. She's grown confident of her skills in command, and very pointedly said to a bossy cadet, “The reason for women on the battlefield is so that the men don't stand around arguing over who's in charge all day.”

Noted.

We don't have an extraction on this sim, presumably it'll terminate when we take the objective, so Alice decides we don't need a way out. Ignore the vehicles behind us unless they get into weapons range, maintain sensor coverage, maintain one group but keep a few meters' distance between us. She doesn't order me back into the herd, so I continue to run parallel, just to see.

Half a klick from objective, an enormous explosion takes out the front row, three units down. Smoke obscures visual, and IR isn't much use because of the fires. Withering machine gun fire comes down the street from armored cars speeding towards the main group. I continue to advance another hundred yards or so, tee up a rocket, and wait for them to enter my field of view on the side street.

The main group have taken shelter in buildings and are returning fire, but humanoid form robots lose in firepower what they gain in mobility. Legs carry a lot less weight than wheels. The front vehicle is another bulbous plastic tank, a dozen

interlocking domes forming a smooth light green carapace. It will have a similar internal structure, around an armored crew compartment. My rocket catches it squarely in the front quadrant, blowing it most of the way across the road, steaming wreckage. The vehicle behind it speeds past, and the next I pepper with machine gun fire. I run down the street looking to catch them from behind as the front vehicle unloads down the street with a cannon, smashing buildings to rubble searching for us.

I am getting better at this. The map shows four more vehicles up the street approaching fast, and more distant units swarming in. We've got about sixty seconds before more forces arrive, and it's clearly about to turn into a proper fight. I'm too forward and too exposed, so I back up the street, isolated from the group, wondering if I can hit the next tank as I did the last one. I get into position and wait for the converging dots on the map.

My "hand" is an enormous metal spade studded with nozzles and protruding weapons, articulated by hydraulics, driven by an internal battery recharged from a tiny onboard reactor. Six hours of combat-level motion to eighteen hours of recharge, a 25% duty cycle. Fresh batteries are the size of refrigerators, they load and unload from the back. We've done drills of reloading each other's power. This model has mostly chemical-drive weapons: guns and rockets, rather than beam weapons. It doesn't actually exist, but even so, it doesn't take long for us to think of hardware we've never seen in the metal as completely real. These virtual suits are rough, simplified approximations of the real thing. No hydraulic pressure gages, no internal system monitoring, no food, water, wetware functions. An abstraction. So this is a game, not a real military trainer, but I begin to understand why people love armor, what the drone jockeys see in the business. The sensation of power is, frankly, amazing. But it's still basically in my imagination. I can feel the mask on my face, feel the edges of the harness. I'm know I'm in school.

But if I was Direct Neural, nano-electrodes in my head, I would experience this all as completely real, there would be

zero sense of a “real world” and a “simulated world” because the limbic system is tied into the simulation. A DN’s own body won’t let them perceive two worlds, a “body world” and a “mind world. The limbic system knows for a fact there’s exactly one world, and you’re looking at it. No abstraction or reification, just a physical terrain. What you see is real. The limbic system is the part of us that cannot help but be convinced by our dreams. Pixels or atoms, the limbic system doesn’t care: one real world.

Dad says that DNs don’t age well. They get to forty or fifty, their bodies start to age, but the machines get better and faster and more powerful every few years. They want to be more and more in the machine, and less and less caged in flesh. Sixty hours a month you can leap small buildings in a single bound, fly, raze a city block in fifteen seconds, throw a boulder the size of a car and survive getting flamethrowered. Then you get out of the life support box, and you walk slowly. Your body’s heavy, your joints ache when you run. It gets to them. They don’t age well.

Sort of a Picture of Dorian Gray.

I make a decision, and run back down the street, lie prone, and fire a mess of weapons towards the incoming vehicles, which reply with heavy machine gun fire. They’re almost on top of me already, but that means they’re closing a bit fast for accurate cannon on a prone target, and the round lands just behind me, cratering the road. My rockets hit the vehicle too high to stop its forwards motion, and it is not deterred by the grenades (against a tank!) or gunfire, and I feel the massive impact as it runs right over the suit on the way to the main group, the following vehicles swerving round me.

With a hand gesture, I roll out of the street and sit up. Sensors indicate the street is clear towards the target, so I get up and run up the street, leaving the main engagement behind me. Vehicles are criss-crossing the street grid unloading at our dispersed force, which is trying to avoid clustering and not having much luck setting up overlapping fields of fire. They’re not making much progress, but it’s just a game.

I find a small alleyway and jog up it towards the target. The sim designers put in funny little details—clothes on clothes lines, piles of garbage in back alleys, but no people. On impulse I force a courtyard door, stride across the paving slabs towards the house, up three low stairs then crash through a sliding glass door into a kitchen. There's a stove, with an eternally boiling pan, cupboards which don't open (they collapse to debris when I touch them, which strikes me as lazy.) I move to the next room. Inside there's a couch, a TV, some extremely generic framed pictures on the wall (clip art) and a slowly spinning ceiling fan. To the right, stairs going up, which won't take the weight of the suit, and to the left a bedroom.

I walk to it. There's a sleeping child in a cot, completely static. No animation, no movement, a fixed rendered object like the furniture. I don't try and touch it for fear it'll disintegrate just like the cupboards. I can't imagine what it's doing there. Left over model from a simvilian-filled scenario, no code driving its behavior, possibly. Mis-tagged, perhaps the model database says "empty bed." People as furniture. On impulse, I grasp the corner of the bed carefully and turn it over. The child model remains glued in place, a static part of the frame. I put it back down. It's a bug.

I check the map to discover the vehicles are gone, the group's half dead, mission aborted.

"SIM EXIT!" I remove the goggles, and look at the world funny. Bugs.

I hang up the gloves and unclip the harness, then remove it.

We file back into a classroom and sit down. There is a debrief.

Alice says "Good idea taking the flank, Harry. Nice shot on the first tank too!" The Senior Cadet nods from behind her, where he's taking notes. I guess that means it's initiative, not disobedience. Will try harder next time. Nobody asks me what I was doing in the house.

Later, when I go to sleep, I dream of my father coming into my room when I was small, and slowly turning my bed over.

In my dream, as he turns the bed over, I slide on to the floor and wake up crying, and he is relieved that I did not stick to the bed like the model.

In the morning, at breakfast, as I drink fresh orange juice and he butters toast, I ask him about the dream.

“I’m not sure, Harry.” Then he reaches over and squeezes my arm, as if to make sure that it’s real. Catching his drift, I raise my hand to my mouth and bite my finger, as he mirrors me.

Just a dream.

Twenty

Uncle Peter has arranged to visit us in Upstate New York. This is unusual, but not unexpected. It is, after all, Thanksgiving.

So much has happened since the last time I've seen him. Emma, settling in to being a cadet, the sense of being different now. I'm eager to see what he thinks of it all.

He flies, which is unusual for him, and a taxi drops him at our house a little after nine. I imagine that he's parked the van in some long-term airport parking lot, his home sitting there just like any other car. When he comes inside he's wearing a backpack and an olive-colored jacket with a big fuzzy hood. The girls greet him at the door, and he picks them up in turn. "Peeeeeter!" says Sally, Petra joining in on the "eeee". They repeat this several times. Mom stands to one side of the scene, watching him. He looks up to me, says, "Hi sport!" and takes off the bag. Mom takes it from him, with a grunt, and places it in the coat-and-shoe-filled mud room by the door. The girls are on their way to bed, and they draw out the scene at the door as long as Mom will let them, then she takes them upstairs.

Dad and Uncle Peter retreat to the living room, and I join them both in there while Mom puts the girls to bed. They're sitting in two furry ocher arm chairs, I'm sitting on the edge of the fireplace. The stone is cold, we haven't made a fire tonight, but the room is warm.

"Well?" Peter asks.

"So far so good!"

His slight smirk means he knows about Emma. I haven't seen her since camp, but we're talking and making plans for next weekend. Six weeks feels like three years, but the waiting's almost over. We don't get a lot of free time, not enough for a weekend trip. Cadets.

"East Coast Cadet Convergence in New York City. Optional," says Dad. "But I booked them a hotel room."

We talked about what happened at the camp. Peter seems a bit bemused I'd wind up with a girl who's so far from here rather than some "local chick," but he's tolerant enough. I haven't mentioned the unusual bits of that weekend, though.

"Her parents aren't religious, and it's not really their business anyway," he says. He clearly approves.

"It's funny." I don't want to go into too much detail with Dad here, but I'm not going to wait to talk to Peter about this. This is urgent. "When we were together, there was a lot of magic—I had a couple of moments where I was in a cave, thousands of years ago, or something from those times was with me. I saw pentagrams in blue outside of the tent, and there was a moment with a whole host of beings watching."

Peter clearly gets the drift.

"Magician's first woman," he says sagely. "She do any practice?" says Peter. "No, nothing. But she's not a mundane; there's a spark there, some kind of insight."

Peter sighs. A heavy truth. "Kid, at that age, they're so hot that it's all magic. Women who'll grow up to be bear-and-cubs and wear slacks to their first daughter's first wedding were once magical faeries who could light up the world. You can't judge character until the blush is off in, h'm, ten or fifteen years." He's trying to give me a wake-up call, but he's also bitter. He's alone.

But I get the point. "Noted."

Dad tries to lift the mood. "Looker, though! He's done well."

Mom comes in and says, "I bet she feels the same way. And what about you, Peter? Are we going to find you a nice second wife and settle you down?"

Peter smiles, but with an aggressive edge. "I never found a woman that could stand me, Helen. But I am not too old to have given up hope. Perhaps I'll play house somewhere nice and settle down with an old flame..."

I sense a sadness in him that I never want to feel. He's traveling because there's nobody to come home to. A million strangers' faces, or these places he stops in to help out, to keep an eye on things, to teach a little, but there's no roof over his head, no rug under the dog—no dog!—no larder. I wish I wasn't so aware of his feelings. We are connected.

Mom sits on the couch, and Dad makes the symbolic gesture of throwing her a blanket, but doesn't join her. "Peter, Harry's told me about something that happened at the end of summer, some kind of minor vision he had when you were camping. Greg was there too."

"Yes, I know what you're talking about. The Spear."

She's not mounting an interrogation, but this is not friendly. I want to intervene.

"What does it mean?"

Father answers, interrupting Peter's start. "Hon, you know that we believe in something—not science, not magic, not religion, but something beyond us, something out there..."

"Yes, but the stars are not people and 'God' does not talk to us, Greg. We've raised three, bright, reasonable kids so far..." and the unsaid part "and Peter is not a third parent." But she doesn't say it, she doesn't have to. It's my turn to talk.

"I don't have Papa, and Frank was gone before I was born too." Peter is all I have of him.

"I want something more than science, Mom. I don't want the Church, and I don't want our New Manifest Destiny, but I know there's something beyond this. Look at me...where did all this come from?" I gesture at my face, my head, trying to convey some sense of myself as more than skin and bone.

"Honey, we all have times when we see the magic in things, some kind of greater plan, but that's how apes are made. We dream."

I sense that this is going nowhere, but maybe the stalemate is good. In this instance, as long as she doesn't interfere, we're fine. I know she doesn't want me to follow Peter, but I'm not following Uncle Peter—he would have run away rather than join the service, even as a cadet.

She takes a different angle.

"I've seen stuff too. Your father was a lot more into all this when we first got together. I've seen it too. Bits of visions, I knew there would be two girls and I expected twins. Instead, a second pregnancy right after the first. I knew the shape the family would be." I've never heard her talk like this, she's always remained firmly outside of the circle. "I don't want you to grow up believing in nothing, Harry, but I don't want you to swallow this wholesale and go off on some kind of spiritual quest, the proto-Messiah or something either. Balance!"

We all know it's final. It lands like lead. She said what had to be said, and it's resolved.

Peter speaks next. "I'm not making him believe he's anything he's not, Helen. He's as bright and capable as they come, and we know there's something special about us, always has been." He's subtly insinuating that it's in the blood, passed down from Papa, not quite her business. That's not nice, but she's also not taking it at his level.

"He's not ordinary." "He" is also right here, but I have to let that pass. "But he's also not going to get picked up by forces that none of us can control and used as a tool."

We're in a whole new game now. The air comes alive, the slight shimmer of magic-in-the-wild. I've never seen mom like this, A Power. She's talking the kind of truth that changes things later. "I don't know what you think the men in this family are, what they carry, Peter, but I want you to know that it breeds true into the girls too. It came from Papa, but it's not just in the male heirs. The girls have their gifts as well."

She sits forwards. She's thinking hard.

"But Papa was thirty-five when he married. He forbade Frank from going to the tribe, and you maintain that to this day. You know he said 'I'm not an Indian any more, I've joined

you white folks.” He burned those bridges, left his father and mother and sister behind. He left that family, and started a new one. And he wasn’t full-blood Indian either, half at most. That probably means this is not something in the genes. The kids are a sixteenth at most. The girls are pale, blue-eyed and blond. It’s probably not genetic.”

Dad and Peter are rapt. She’s putting something together they’ve never quite figured out, something in the family history.

“I think you have to seriously consider that Papa had something to hide, something to run from, something to leave behind in the old world. He didn’t quit and start anew because he wanted to live outside of Kansas City on a farm and haul manure and cattle feed for a living, Peter. And if that’s true, it’s not all some great plan, it’s a series of clusterfucks from the start.”

Once she’s said it, it’s obviously true. We can all see the gaps in Papa’s story like bad edits. Things he clearly left out, chose not to say. She’s connected the dots, made the previous story invisible behind the clearly-stated new truth. We can all see our understanding of our family history change.

“I don’t think he lied to us, but he clearly didn’t tell us everything.”

“Frank didn’t know enough to ask the right questions,” Peter offers.

She steamrollers on, “And I don’t want us to shape our son’s life around a family mythology, even if it might be true, until we really know what we’re dealing with.”

The gauntlet clatters on the stone floor. A challenge has been issued.

Peter declines gracefully. “This is not about Papa and Frank. This is about what we can see and feel, what we know, what is done, and what remains.”

But she’s forcing him into the open, cutting through the myths.

“What remains, Peter, is my son and his future. What does it mean if Papa was a fraud?”

There's no choice now. This is going to get settled. I am terrified. The clash of the angry gods.

"A lot of what I've taught Harry didn't come through Papa, Helen. It's India as much as Indian. The body culture is Chinese hermit tradition, if anything. Bits of Jack Parsons, Crowley, Moore, the others."

"Books!" she flings back in his face.

"No." And I see him rise to his full height, sitting right in the chair. He's suddenly a mountain. Not anger, but a total calm certainty.

"There is a living tradition here, even in the West, even in America, even now, half-way through the twenty-first century. Mouth to ear. It's alive because I did it, every step of the old work myself, and I made it anew once I understood what I had done, using the traditional practices. I don't need Papa's ghostly authority to do this, and I agree that the girls have it as much as the boys, and that more of it rubbed off on you than I'd have guessed from when you and Gregory were working."

She gestures assent. It's not about respect now, it's only about truth.

"It's comforting to think that the old man was a sage, a wizard, a relic with a link to the long-forgotten mysteries. And he probably was, but I agree that not very much of it got through to us. It's a lossy transmission. Some of what we see in Papa, in the heritage, is just our own projection. But that doesn't mean that we're left with less than the whole truth, because each of us has to discover it anew, for ourselves. Nobody can be Awake for you." He's gathering force now, I see a nimbus around him, the soft shimmering in the air as he concentrates his will. He's breaking through to something.

"If you judge a free man by the standards of slaves, he'll appear rootless and incompetent. He won't collect a soldier's salary, he won't be part of a large organization, he won't have corporate or political servants at his beck and call, because to enslave others makes us slaves of other masters, each in turn, in cycles of bondage.

"I have nothing because I broke those ties. That's what you see. You see the gaps in my life left by my freedom."

He pauses. He's braced for retaliation, but none comes. I'm reframing in realtime, re-cutting the story in my head. I see the implications for my own life, and the structures around me are revealed. Dad, every day, monitoring the ties that bind every State employee, and each person they're helping in Africa, to the big grinding wheel of our culture.

"I know too much to raise my hand against it, so I bide my time. Until every one of us is free, there'll be those than grind, those that are ground, and those that lay in the cracks between the slabs, waiting for their time to sprout up, and one day break through the roof with their branches."

He has a beggar's pride, and I hate him in that moment, because I know that I'm going to have to choose between a position on the wheel, like my father, or a life on the run from nothing more than my own desire for wealth, peace and security.

A life in the crack between the slabs.

Mom's heard the truth from Peter, and it's settled.

"I know you can't take the girls on the road to teach them, Peter, but do something. At least get them the basics, when they're old enough. May you find a woman who'll be happy with you, too. Because I know we can't all be like you, not with the world in this state, but you're right—I did judge you because of the state of your life, and I was wrong."

Dad, ever reliable, catches it before the entire thing collapses, and guides us back down to the ground.

"Look, I know how bad this all is, we're jammed tight between our ethics and the world. Harry's going to have to compromise what he wants or what he is, or possibly both if he screws his life up. Each generation is on their own in making their compromises. But we are a family, and we owe it to ourselves and our kids to survive, and to the world to try and make it into something better."

There's a truce. All interests have been heard among their generation, and I'm free to make up my own mind. The charge

in the air is rapidly dissipating, but I want to get the last word in.

“If it’s all up to me, we’re completely fucked.”

Nobody laughs. It’s not comfortable. Nobody even speaks. I’ve put my foot in it.

I opt to run.

“I’ll be upstairs,” I say, and retreat to my room. I don’t call Emma, I need time to think. Downstairs, I hear father fetch two bottles of wine and glasses.

I can’t tell if Peter really has the goods or not, or what the goods even look like, but what other hope do I have?

The machine grinds on.

Twenty-One

By spring, I'm sim-combat proficient, in both simplified, simulated robotic combat, and the brutally realistic simulated real combat environment. I've watched fake blood spray out of my fake chest in the simulator dozens of times; I'm inured to my own imagined death. It's disgusting. Hand-to-hand I've learned their basic approach, their stances and postures and drills. I keep what Peter taught me out of my movements.

The class has come together as a cohesive unit. We're no longer kids, we're junior imperialists, a club of little explorers fighting the good fight for continued American dominance of the world. We're in a position of privilege, and we're using it to sort everyone else out. It's our time, our right. It's something we're being shown is necessary, a duty we must all perform.

And it's not done with lies, it's done with statistics. "If we don't, who will?" But there're charts, graphs, economic geography. They make the case for war to each one of us, in our heads and in our hearts. They want volunteers, and they want believers, and they know lies are refuted with truth, and there's plenty of truth, straight from the sensors, free for the taking. They can't lie, but they persuade. They can't fake the facts, but over and over again I struggle to untwist their conclusions.

I independently check the facts, where possible. I've never caught them lying. But I argue the case with Dad, and he takes me through the counter-argument, but I'm unconvinced. "Just leave them to sort it out in Africa and Asia? Are you kidding?" And, well, he sees that world every day,

working out of his office at home, and he's not sure either. He and I both know that what is happening wrong, but what's the alternative?

What they're teaching me is "Just War."

Just. War.

I've read about patriotism. It sounds like a disease, but what I'm confronted with is worse: it's the laid-bare workings of the world, with the sensors everywhere, and the effectors—that's us—hands, fists, feet and robots—trying to turn the soil of history with the sword, for a harvest of peace and plenty.

This can't be right.

They wiped out Papa's people with a minor variation of this argument made using the nearly three-hundred-year-old language of "Manifest Destiny."

I don't worry that I'm indoctrinated. I worry that I might be convinced.

Twenty-Two

It's July 4th weekend, and Emma and I are in Washington. A few of our friends in this Cadet year know we're a couple now, at least in as much as neither of us is sleeping with anybody else. We spend time with other people, socialize, but somehow we've decided that, for now, we'll only have sex with each other. That would be common enough if either of us was religious, but it's seen as a little strange, almost quaint.

I think some of it's that, in a sense, I am religious: just not their religion. I've seen what's inside of her, inside of me, and all I see of the others is surfaces. And life is complicated, and short, and Emma won't stop crying.

Happens every time we meet, since Christmas. That hasn't been often, it's only the fourth weekend we've been able to get away, but we talk all the time, sometimes twice a day. I've spent more time talking to her one on one than anybody except Peter, to be honest. She's everywhere in my life and thoughts, except in the hidden world, which is...not for her. Not yet, not now.

We're in a hotel room. Neither of us has any money, but both of our parents accept that we're a long way apart and so when there's any reasonable pretext, we travel. This pattern has meant that my parents haven't met her, and that suits me just fine. I'm too close to them as it is. When I move into the barracks, I'll get some space from them, even if it's the end of privacy for me. I'm not sure how...if we'll keep this up then.

She's in the bathroom, door locked, sitting on the floor, back to the door, sobbing, and I don't know what to do. It started after dinner. We talked about everything, about the cadets, about the world, about what Peter said at New Year, about the whole of life, really. The same as we always do.

She seemed so happy, then we came back here, and I said, "You look so beautiful right now!" and she said, "I don't want to just be beautiful."

I asked what she meant. She said "I can't stand all of these games, Harry. I can't stand the manipulation." I tried to hug her, and she pushed me away and locked herself in the bathroom.

I'm sitting on the bed, watching the door, listening to her weep. Why? I think about her face, about the shape it makes scrunched up in tears. Anger? The set of her jaw?

As far as I know, her parents are fine. No deaths in the family, no brother who didn't return from the war; he's never been out of the country. He's not even in line for combat: avionics specialist on remote sensor software, it's about the safest job in the corps.

"Honey, let me in, please."

I wait a few seconds.

"Tell me what's wrong."

I don't know what to do. I don't know what I'm looking at. Outside, in half an hour, the fireworks display and celebration that officially brought us here will start, and I wonder if I'm going to stay here in a cheap hotel listening to my girlfriend crying, or if I'm going to go alone.

I think about Peter. I think about Dad. I think about my sisters. It's a bit like a tantrum, but she's not a child. It's a bit like Mom, stressed, picking fights, but...what's the problem?

I realize that, for all I know, I don't understand somebody that's become important to me. I can't tell what's wrong, and I don't know what to say to fix this.

Fifteen minutes, then I'm leaving, I decide. I don't understand.

Taps are running, she's washing her face, she comes out.

"I'm sorry, hon, that happens sometimes." She gives me a quick pat, then changes and puts on her makeup. Sometimes is every time. What's changed?

To her it's all forgotten. But not to me. We go downstairs, and walk the ten minutes to the mall. The crowds are huge, and the weather is amazing. Skies are clear, weather control ensures that every year. It's not July 4th if you can't see the night sky.

DC is thronged. The Jefferson Memorial is incandescent, lit from every side, huge beacons of light flood upwards from it, up the Mall.

Towering above it all...

"I HAVE SWORN, AT THE ALTAR OF GOD, AN OATH OF ETERNAL HOSTILITY TO EVERY FORM OF TYRANNY OVER THE MIND OF MAN" thunders the virtual Jefferson, eighty feet high, standing behind his own monument. It is as if the statue has come to life to address us. He is colored as stone, not as flesh-and-blood. The avatar, the icon of the new regime.

Virtual Jefferson salutes, and begins to fade into nothingness. At a wave of his hand, sheets of flame tower into the sky, to be replaced with red, white, blue and golden fireworks that shatter the air with light, duck and dive like swallows, and explode like bombs. He's replaced by delight, incredible dancing beauty. They keep it short, twenty five minutes of ecstasy, then the sky darkens. Lights dim all over the city, and we can see the stars as clearly as that night in the Pine Barrens.

The crowd sings, as one, the Star Spangled Banner, and we look up, to our destiny.

She's beside me, and is well. But I am beset by doubts. Is this how it's supposed to be? Is something wrong?

Manipulation?

I'm not sure I'd know how. I'm afraid that if I did, I'd try.

Twenty-Three

Peter stands on top of a fourteener, a 14,000-foot-high mountain, in Colorado, on the front range. He looks down over the Roaring Fork Valley, his home for many years, and blesses every single drop of water in the rivers, and every atom of air in the skies, for bringing life to such a wonder. The red rocks of the hills are blazing in the sunset, and Peter and his companions—four humans, two dogs—stand in a circle, gazing out at the wonder. It is beyond belief.

Peter turns to the others, all younger than he, and says “I’d like to thank you all for coming with me up here on my birthday. It’s been a hard hike for an old man, but I wanted to see the skies from here again one more time. I don’t know if I’ll be able to do this in five years, never mind ten, but today...” his words tail off, and he cries for a moment. No-one moves to comfort him, they wait respectfully.

He does not struggle to continue. He too waits. Finally he breathes calmly again, and speaks. “Today I am thankful to be alive. I never thought I’d last this long!”

They don’t know what he means. In his heart, Peter knows it’s been a lifetime of trying to wring the truth from the world, and an almost-always uncaring sky, for those brief blasts of light that illuminate like the start of the universe.

He knows the atoms of his body are made from particles that started at the big bang, that the carbon and iron have gone through supernovae, several times for the iron, running up the ladder to life. And when he’s dead, those self-same atoms will travel to other stars on our ships, or on the tide

of the solar wind, blown from the upper atmosphere or cast out wholesale by the impact of a chance meteorite, some day when Sapiens no longer warily watches the skies.

It is all blessed, and it is all holy, and my knees hurt, he thinks as they descend to a safe altitude to spend the night of his birthday stargazing.

Twenty-Four

Ten days before I move into the barracks and become a Senior Cadet at Induction, Peter reappears. He's been making himself scarce most of the last year, trying to get his life together. The fight with my mother shook all of us, but it was something of an inspiration for Peter, that and turning sixty. He's changing. Easier to deal with, for one thing. Somehow she lifted a weight off him, gave him permission to be more human. To fuck up, to fail perhaps. It's cracked his mask in front of me.

We didn't spend the summer together. Peter wanted to give me some time with Emma, and she and I gave the summer a shot, moved into a room in NYC we'd borrowed from a friend, decided we'd see the city. It was a disaster for the first three weeks, then I lost my temper, screamed in anger, and left. Two days later and we talked, and it was better. It's been great since then. I don't understand what was going on, the anger, the tears, the futile wishing for the stars, I could never make sense of it. It wasn't what I wanted, but it wasn't easy to see how to change things. She seems settled, though; it's going to be fine.

So this is the first of Peter in a while. He looks...old, but radiant. We hug.

"So...Sixty! I haven't seen you since your birthday! Happy birthday!" I had called him, but it's not the same...he knows what I mean.

"Ah, my boy, my boy...I have something for you." This time he brought the van, he goes back outside and comes back

with a box. Opens it up in front of me, and inside there's a black, featureless safe. He thrusts his hand through the soft, organic black surface, and comes out with a stack of papers and some keys and some other odds-and-ends, which he dumps back in the box.

"For you. A regulation personal safe, which will (if so programmed) eat the contents rather than allow disclosure. It's vulnerable to a warrant (isn't everything?) but...for your things."

Barracks. A modicum of privacy.

"It was in the van, all I ever kept in it was scraps and secrets." He gestures to the pile. "Nothing that matters very much these days. I've had this thing for nearly fifteen years, since you were a baby.

I can't tell if it's a gift laden with symbolic significance, or a practical, material gift, given that we never write anything down. "I'll key it to your bioprints later," he says. I put the safe in my room, and we sit in the lounge. Mom and Dad are with the girls at a recital.

"I want to talk to you about your induction," he says. "I've been talking to some people. About what they're doing these days, the process. It's bad."

I look inquiring.

"Some kind of heavy drugs, they've been using them the past few years, and a message that's been tweaked by observing the reaction of about half a million young people a year, and adjusting it a word, a gesture at a time, testing thousands of micro-variations from the old program. It's nothing like the old induction, which was bad enough. This new one, it's absolute poison, and it's going to get inside of your skull and hollow you out, if we're not careful. It's Fascism, pure and simple, and it's crawling all over our society, hidden by a veil of truth."

I know exactly what he means, but he's never used the term Fascism until now. It's always been The Machine, or Control. I'd made the translation at times, but I wonder why the change.

"So how's it worse now?"

"Because what they've done is pervert our basic desire for solidarity with our families, our communities and our neighbors and turn it into an instrument of the State. It's not as simple as the mercantile empire, or the ecological authoritarianism models, it's an attempt to engineer the soul, by deceiving the primal parts of us, that this social order is our mother and our father, our brother and our sister, our tribe, village and peers. And it's not, it's a trashy veneer on top of our society, of force, violence and bloodshed, imposed on us from above."

He's afraid of losing me. He's afraid it will work. The escalation in the rhetoric is his way of...

"You're afraid it'll work, Uncle Peter, after everything I've intuited and seen?"

"No, I am not afraid that you'll stay brainwashed, Harry. I'm just afraid that you'll waste so much time digging the filth out of your head, you'll wonder where it all went wrong."

I try to reassure him.

"That's a rational fear, I guess. Is there anything I can do to prepare?"

"I have an idea," says Uncle Peter. "I think we could make you a secret compartment in your head, and try and trap the conditioning in there. You might lose a part of you for a while, but the rest of you might remain unstained."

"Like a switcher?" I say.

"No, switchers are pretending. What I'm suggesting you do is that you let part of yourself believe it, hook, line and sinker, while the rest of you tears it apart afterwards."

I don't know how to do this, and I certainly don't know if I like the sound of it, but what else have I got? Once again, the nagging doubt that he's a crazy old fool who doesn't know what he's doing, offset against his exquisite understanding of body, mind and nature.

"Sure," I say, "sure. Do we have enough time?"

Peter reckons it'll only take a few days. That's fine, Induction's in...a few more days than that. We'd better get started.

I realize now what the safe is for. It's symbolic, all right. Symbolic, and practical.

Twenty-Five

The next morning, we begin. We move the smaller furniture out of the guest bedroom and flip the bed up against the wall, then Peter inscribes the now-familiar circle. Standing in the center of the room, he brings his hands together, bows his head, and invokes. Then, striding purposefully three paces to where the circle will be, forcefully draws a pentagram with his right hand, using a pencil as a wand. “If you focus really, really hard, you’ll scorch your fingers” I’ve found that to be true, but it took me years to be collected enough to manage it.

At each quarter he starts the pentagram in a different place, the first symbolizing earth, then water, air, and finally fire. He returns to the center.

“Every man, and every woman is a Star! And I am a Star, in the Company of Stars!” he gives me a wink, and I enter the circle. The changes are slow at first, a few minutes of heightened awareness, then a razor sharp mystic clarity. I’m never quite sure if it’s the ritual giving the mind a clear signal it can drop ordinary concerns and think about higher matters, or if it’s actually some kind of change in space triggered by... pataphysics? but the bottom line is that it works. I can think clearly in here in a way I can’t outside, and clear thoughts means clearer actions means better decisions makes a better world...at least that’s the theory.

Evolve.

A light schedule today. Three hours of meditation. Dad’s working upstairs as usual, and the girls are spending the last

of the holiday on day trips and the last of the summer sun. Peter no longer sits in full lotus, legs crossed, ankles on knees, feet upturned, as he did when we first started to sit, when I was nine or ten. His legs are crossed, but he's seated on a small pillow. "No point in pushing it, lad. It's not a race." I can't manage full lotus, even though I'm a third of his age, because I've never done yoga. But I can sit cross-legged comfortably, and I don't use a cushion. I bend forwards, and scoot my butt back as far as it will go, relative to my knees. That makes a good, solid contact between bones and the floor, and stops my legs going dead. Peter approves: he taught me that when I was still a child. He never needed to show me again.

Next comes the alternate nostril breathing. Forty-five minutes. Close right nostril with thumb, inhale left. Close both nostrils. Open right nostril with thumb. Exhale right. Repeat on the right side. Repeat for most of an hour, balancing energies I'm not even sure I feel. Shut up and focus. One way or the other, it's something to do while the mind unwinds into quieter states of being. That, too, goes far faster in the circle. Outside of it, it could take me a day to reach the kind of stillness which allows for the real work to begin.

At hour two, we take a break. I go for a short walk in the garden, check in on Dad. Peter stays in the circle while I'm out, and vice-versa. We don't usually leave a circle unmanned: it's not an ironclad rule, but it's a seriously observed tradition. I want to ask him "traditional to who?" but I've learned that usually the answer is synergistic—bits of this, bits of that, common threads, personal experiences, or some teacher he stayed with for months or a year or two said so.

It's not satisfactory, but at least it's honest. He's assembled a working truth from pieces, and it's brought us here.

He returns from the bathroom, and we sit. Finally, at the end of an hour of doing as close to nothing as I can manage, simply letting every thought that arises go again, without greeting each idea with a responding new idea if I can help it, without a voice of acknowledgement for what inner monologue I have, without trying (the hardest part, to be without trying to be)—when all that wrestling is done, and my mind is

fairly quiet, finally he lights the joss stick. The smell of sandalwood fills the air, and cedar follows it as he lights a red cedar splint.

This part is hard, moving from the still, inactive meditation phase, to the active magical mode. In meditation, everything is just as it is. Everything is fine. But when you want to change something, you want to bestir the stillness into motion, and the first question is the hardest: why? If everything is perfect, just as it is (Sōtō Zen, he tells me) why change something, particularly by extraordinary means? “To survive? To evolve? To...because we can, and we don’t have to take this shit?”

Good answers. “Because I want to be free” is a reason to act.

Peter exposes the first hypothesis: “because they will physically coerce you into doing this or being punished, you have the right to maintain your equilibrium through it. You’re not pushing anybody, you’re just refusing to be pushed.” Magical non-aggression. What constitutes an act of war to Peter is a very subtle, high-order philosophical concept. He believes that if you don’t put pressure on anybody, then nobody can put real pressure on you—you just “shoot out from between finger and thumb like a melon seed.” Easy for him to say, he’s an old, childless (?) man who lives in a van.

We agree that it’s true. The proof that magic is necessary is like math, or perhaps some archaic legalism. He always wants to prove that there’s no other way. It can mean a lot of searching, a lot of arguing out dead ends, but it sometimes shows dumb, stupid ways to solve problems that are a lot less risky than bell, book and candle operations. I will him to hurry up. He won’t. Half an hour later we’ve ground out the cases: we’re going to defend my mind by magic, whatever that is.

If he knows, he won’t explain it to me.

I have procedural knowledge, but not insight. Not yet. Not at the most basic level.

Oops. Mind drifting. Here we go!

He draws a box on a piece of physical paper. He folds the paper into a box with some tricky origami, then unfolds it again.

“Flat...Picture of box...Box. Now there’s an inside and an outside.”

He does it again, backwards and forwards two or three times, laden with meaning. Flat...image of a container. Container, but now space is divided in two, an inside, and...

Click.

Goddamn. I feel it enter my mind, and now on the inside of my head there’s a sheet of paper, which represents my mind, and I fold it up and now there’s two minds, one inside the sheet, and one outside. But the box has a picture of the box inside it, on the inside of the paper, and that’s the trap, that’s the self-referential twist that means that what’s in the box can’t get out.

How the fuck?

The piece of paper is gone from the room. I want to believe he just stuffed it up his sleeve when I wasn’t looking, eyes closed gazing into my inner world, but I’m not so sure...

Magician. Peter the Wizard.

My uncle.

I spend the next two days occasionally putting things into the box, and then taking them out again, and folding the box into existence and back out again. It’s like a reflex, a muscle. I could catch flies in it by the end of the third day. Peter is well pleased, and I have an irrational fear that he’s going to be so pleased with himself that he’ll decide he’s completed his incarnations and drop dead.

At breakfast the next day, whole family together, I try to explain to my father what we did. He doesn’t quite follow it, but the theory’s plain enough: catch the experience in a bag, and don’t let it get up your brain stem. We talk in code around the girls, arch and sly. They pretend to ignore us; it’s not about them and not immediately interesting, so they don’t care too much.

When Father finally gets the idea fully, he and Peter exchange a very meaningful glance, and something passes between them that even Mom, distracted, notices.

Seeing her attention, Peter says, very slowly, "Nearly ten years ago we talked about this day. We talked about how to protect you from the machine, from the indoctrination. The system's gotten much worse since then, but we did well, eh Gregory?" He's being careful not to start trouble with Mom.

The conspiracy of old men. They've spent a decade teaching me how to do origami in my head.

I feel elated, loved, foolish and betrayed all at once. All these years...for this? More than anything, I feel young, and afraid. Induction is on Monday. Emma's induction is on Monday too, but at a different base. Small groups, nothing like the camps of the past year.

I wonder how it will affect her, without this protection. But there's nothing I can do.

She doesn't have to maintain the dual consciousness I do, a spanner in the gears. I think to myself, "she'll be fine." I watch how easily I choose to believe it.

Peter and Father go upstairs, to talk about something. I clear the table while Mom gets the girls ready. I hear Peter's laugh and Dad puts on some music from the old days, something they'll both enjoy. I think they're celebrating...

Prematurely.

Monday's the induction. Can we save the party till then?

Twenty-Six

Induction. I'm going through induction.

I'm seventeen, it's October again, and we're at a military base in New Jersey. I'm top octile assessed on annual performance, and Senior Cadet's my new title. They got the formalities out of the way first.

I've gotten much more clarity about what Peter's been training me to withstand: why it matters, too.

It works like this. You take the men of society, and the more assertive of the women, and you grade them: soldiers and not-quite-good-enough for soldiers. Always the advantage, for the rest of life, to the soldiers. Then the soldiers, well, proto-possibly soldiers, you condition. Loyalty, oaths and honor. Peter's convinced it's as much magic as drugs-and-hypnotic induction, but we shall see. He's done a ton of reading, talked to people, synthesized stories, but if you're not actually in the room, on the stuff while it happens, what can you know for sure? Guinea pig B. I may be the first trained observer through this particular Dark Satanic Mill. Or at least the first to gain any intelligence for...Peter's network.

I had not thought of that before. Peter's network.

Noted.

"A mild stimulant to make sure you remember this day for the rest of your life, sir!" says a doctor handing out the pills. I briefly consider palming it and spitting, but they're checking pupil dilation or something at the door—the very fact the doctor isn't watching to see if I take it means ducking

it isn't going to do any good. Casual, careless, dozens-a-day manner from the doctor. He's casual because he doesn't have to pay attention.

That means a machine is watching.

I prepare to pop the pill. It sits white in my hand for a moment, a tiny oval, featureless and shiny, a sugar coating hard like plastic, then into my mouth with it. I bite before drinking, and the taste is acrid, bitter, and makes my mouth a little numb. Psychedelic for sure.

And it comes on strong, a swelling pride in my heart within fifteen seconds, and an adrenaline rush, exhilaration. I know it won't hit other people this hard, I'm sensitive, a joint will put me on Cloud Nine...but...this is so strong!

Induction. Senior Cadets, ready to serve! I look around the room again, looking for signs the new eyes have kicked in. Even if we don't elect to go for the outbound year after this, we'll have spent a year in uniform, a year assisting on shore, a year working beside real troops, a year...

A year in the machine. My thoughts blur. Machine. Machine. Men in the machine. Me.

I look, really focus, on what's around me.

There are about four dozen of us in this group, from surrounding states. Some of them, quite a few, seem to be second-generation military. We've had a fair chance to mingle, getting off buses and set up in the dorm. I didn't realize how many of us were soldiers, soldier families, how big a part of our society it is, it's all of us in this room, we're parts of it, it's part of us, it's...

God it's subtle, it's...

A. Drug. But I don't fight it. I am, right now, inside my origami box, looking out at the world from a tiny cube of space, buried inside my mind. I don't know how I know, but I know that this is all going in there, going away from me, my core identity.

They will not have me. So I relax, I don't have to fight it. I visualize pouring the experience into the box, a liquid. All OK.

I am tripping balls.

We walk through arched doorways, two by two, down a short corridor, then out into a large square room with benches on three sides, and a matte black floor. Nobody else seems to be having any trouble, and to be fair, neither am I outwardly. Inwardly, I'm giddy!

There are two flags crossed on every wall, and a low hum like an engine which turns out to be a rumbling sub-bass soundtrack, a modulated march. The overwhelming sense is of unity, of belonging, of strength, as we sit down on the benches, uniforms identical, hair similar, somehow...

Better. The overwhelming sense from the drug is that things are better. It's a sort of feeling of consummation, an approaching crescendo. I realize it may be timed, and that I'm going through the experiences faster than normal.

I'm struggling hard to keep an objective frame, to note what's the drug, and what's the setting. It's ploughing through my unconscious mind, *Marching Morons!* Dragging up some sense of leader/follower, up/down, in/out, divide-territory-conquer. Let it roll, let it roll.

The last of us are seated.

Three men in uniform come in from a side door and sit in the three tall chairs on the opposite wall to me. One of them is the Colonel who oversees this recruiting region, Gibbons. I'm used to his face. He's in the center chair, and he's wearing a dress sword and a sidearm. I watch the drug add nobility to his features, his face becomes etched with struggle and valor. He's my hero!

The room is lit by lamps in the walls, pointed upwards, creating an effect almost like columns. Right now it's lit brightly enough to be almost daylight, but as we settle in, the lights dim and become slightly greenish, and the quiet deep bass marching theme fades out to be replaced with a more elegant, clearly audible soundtrack, the simple chords of a hymn, but no words. By now the room is almost dark, just enough light to see the bulk of people, their forms. Thirty seconds go past, perhaps a minute.

A spotlight, as bright as day, lights up Gibbons, now standing at the far end of the room. He says "Welcome!" and

his voice is amplified as the voice of God, coming from all sides simultaneously, enhanced with more of the same deep bass. The woman seated to my left jumps slightly in shock, gasps, then steadies herself. I can't see Gibbons face clearly in the glare; my eyes are still adjusting to the sheer intensity of the spot beam.

As he comes into focus, it all becomes clear.

I'm staring myself right in the face. My God, this explains everything. I'm seeing Gibbons as myself, forty years older. He's become my ideal self, the perfect form of my older self, the perfect older me. He's the idealized super-parent, the mentor, the hero, the inspiration. My brain is trying to slot him in somewhere beside Dad, Peter and Papa. For some reason my own father doesn't inspire this, it's different. Gibbons isn't quite showing up as my father, it's something more...a... King?

Father of us all! El Papa, the Pope, something numinous. Phrases from the work, like Hierophant of Wisdom or The Emperor come to mind, but I can't place it. He's the Perfect One.

He floats there, in the center of the room, not moving. I note, on some rational plane, he's clearly aware of the performance he's giving, waiting for the imprinting to take. They're using a sledgehammer to crack my nut.

I'm hanging on, waiting for him to speak, desperate to hear his wisdom.

He speaks again, again in the voice of God.

"As Senior Cadets, you brave men and women will begin to taste the satisfaction which is service to your country, to your fellow human beings, and to the world itself. You will come to understand how a disciplined, organized citizenry can provide the strong backbone which civilization itself demands. You will find a true meaning and higher purpose to your activities and affairs which transcends the personal.

"This struggle has always been an armed struggle, as the people of the civilized lands have striven to maintain their way of life against the barbarism and chaos which was previously the human norm. You were party to this war before you were

born, and this country has fought for over 250 years to keep the flame alight. We pass that torch to you today, and you will carry it for the rest of your lives.”

I feel something descend on me from above, a sheet of energy, a weight, pressing me into the ground. But also, right in some feral center, I feel holy and justified in doing whatever I please.

Two more spotlights. The two men who were seated beside Gibbons are standing beside him. One has rolled up his sleeve, revealing a bright, pink, soft-looking new hand which starts mid-forearm. The other has a visible scar starting on his brow and heading back across his skull, which clearly looks like it could have been fatal. He’s also been regenerated, some of the tissue on his head is also that same bright saline-tank pink.

“Your willingness to lay down your lives for each other is what makes you Senior Cadets.”

The two injured men place one hand symbolically on Gibbons’ broad shoulders.

“Your willingness to lay down your lives for this Nation is what makes you, in your hearts, Citizens. The path is filled with danger, but together we will walk it, into a New Age of Mankind, as the founders of this Sacred Nation have foreseen. It is our shared destiny, and each of you is an integral part of that shared destiny. We are one, indivisible, united!”

We are all on our feet, in a single movement we all stand, on some invisible signal. The unified, coordinated movement is ecstatic. I can hardly bear it. They cannot be hitting the other cadets this hard, they’d be freaking out right on the floor. But as I turn my head to look along the row, I see a ferocious intensity in almost every face, clearly I’m not the only one shaken to the core. This is working. It’s working for all of them, not just for me.

At the front, a few at a time, cadets are conducted to the center of the room to stand beside Gibbons and the wounded soldiers. Gibbons places his hand on their shoulders of the closest cadets, and they reach out to each other, each standing shoulder to shoulder with another, or reaching forwards

to the shoulders of another, heads bowed, a single connected network. The rest of us rise, a few at a time, solemnly taking our places on the floor. The spotlights widen until all of us are illuminated, blinking in the glare. Everybody touches somebody, a gesture of support, of solidity, of care.

This is America.

The music swells again, a progression of tones sung by a choir, rapidly layering on top of each other until we're listening to a hundred voices, then a thousand, then a single all-sounds-at-once pure tone, a transcendent reaching. It goes on what seems like an age, but is only eleven of my breaths. Then darkness and silence fall in an instant.

We breathe together. We breathe together. We are one body, one people, one polity, one race, marching forwards through time. We are eternal, indomitable, victorious. Some will fall, but the rest will carry the day. The room vibrates with energy, or perhaps with more sub-bass, and I know that they are right.

Dim lights come up, and the Senior Cadets peel away from the group one at a time and step outside through the arches. Each is met by a uniformed regular soldier, and they leave together to walk in silence for a time on the running track of the base, pairs spaced out, never meeting.

I walk beside a man perhaps five years older than me. He's about my height, and I feel as if I've known him my entire life. His face is as familiar to me as my sisters'. The silence is not between strangers, but between people who know each other so well there is nothing left to say. We simply walk in step. It's a perfect ritual.

Together, alone, we walk around the track for half an hour, maintaining our distance from the others. Nowhere to go but your thoughts. I expect most of the others are reassessing their lives. I'm reassessing my society.

I'm thinking "No wonder we're fighting a war without end. After this, what else will seem real?"

I'm waiting for the drugs to wear off, so I can think.

Twenty-Seven

4:33 a.m., Sunday, April 22, 2029. The White House.

I am the President of the United States of America. I am about to make the most important speech of my lifetime, and possibly the most important speech given in this nation's history. The worst thing in the world is happening, right now, and it is my job to set the frame of history around it.

I am not an Abraham Lincoln, not even close. I'm barely even a politician.

A great statesman could face a day like today and try to direct history. All I can do is look at the waste of human lives, of human potential, and try not to make it any worse.

I am not sure I can manage that. At moments like this, power fails. Good intentions fail. "The centre cannot hold," as the poet said, and I am at that center. I'm the goddamned President and...goddamned might be the appropriate term, actually.

The President blinks and chooses to process the theological question another day, or perhaps in another lifetime.

He rests his head on his hands, elbows propped up on the magnificent desk, thinking.

I am not a statesman. What I am, really, is an advertising executive who bought this job with my grandfather's money. I know people, I know how they think, and I know how they see. I know how to message. I grew up in a world created by carefully sculpted messages. But there's no spin to put on this catastrophe...

I told people what they needed to be told to put me here because it was something to do with my life, something money could not buy, something to work for, something to prove to myself and the world that I'm not the spoiled little rich kid that I often think I am: I sold myself to the public like a product.

To prove my worth, to prove I'm not a worthless bum, I put a price on myself, and I sold, and sold, and sold. And now I'm President Worthless Bum. I have nothing inside of me to cope with a crisis like this. I'm a hollow man.

I'm a hollow man.

Resolved, the President washes the last of his self-loathing out of his mind. Get it over and done with! He knows it is not going to matter how he got here, or who he was before this happened, because history has crashed into his life like a wave, or perhaps more like a speeding car, and it literally does not matter a spit what he thinks of himself now. Now history has come knocking, and he will rise to the occasion, or be damned forever. There is no past, there is only the future. There is only the situation, and his response.

If he wanted to prove himself worthy, he has his chance.

He thinks, for a moment, about past Presidents who faced impossible crises. Lincoln, most of all, pulling the trigger on a bloodbath to make a better nation, or perhaps just to make a nation at all. He thinks about Kennedy, whose dove-brinksmanship in the Cuban Missile Crisis, facing down his own generals who wanted a nuclear war, cost him his life. Most of all, he thinks about Bush, whose national security apparatus he sits on top of, nearly thirty years after 9/11.

It is 4:30 a.m. In sixty minutes he's going into the studio to record the speech, which is officially being given at 6:30 a.m. He has about forty minutes to discover how to say something, anything, to eke out some gain from what can only become known as the Second Holocaust.

We have twenty million dead and rising, in a weekend, five rising to six million of those in America. The...he can't bring himself to say the word genocide...event is on our soil.

History has come. With teeth.

Twenty-Eight

He begins the speech. First, our collective guilt. We let the Jews down again. It's the wrong start, but it's all I've got. His voice breaks. He really feels it. There's no mask big enough not to crack, not even his.

"My fellow Americans, fellow citizens of the world, I bow my head in shame."

Little does President Knight know how prescient these words will become.

"An unknown agency has mounted a biological attack upon a specific group, a group whose history has long been one of persecution. In the 1940s, Hitler's Nazi regime killed almost half the Jewish population, in an attempt to extinguish this brave people from the face of the Earth. Today, and over the last thirty-six hours, more Jews—and people with a similar genetic makeup—have died than in the entire Holocaust."

Crushed. An unthinkable technological Holocaust. A Second Holocaust. He knows that's how it will be termed, it's obviously how people will name it, but he's not going to be the first to say it. Leave it to the press.

"We do not know how far the plague will spread, or whether there will be further attacks on other genetic groups or even on the whole of humanity. As you can imagine, every resource we have, nationally and globally, in cooperation with our partners across the world, is being mobilized to ensure the safety of everybody, everywhere in the world."

Reassure the people: we are on this. We are the Government, we're big, we're scary, we've got this covered. But the truth is we're just like you, lost in the storm. The only difference is that we're much more afraid because we have much more data. Or, in this case, we know that we know nothing at all, which for us is even worse.

"My heart goes out to every one of you."

The truth. This is hideous. He can't get "God Bless America" out of his mouth. Not tonight. God, if there is one, is on vacation, and he left Satan minding the store.

The official part is done, but if I leave it there, I'm a machine. And I am going to make a difference here.

The President breathes. He shifts his body, turning to one side, making it clear through his body language that this is unscripted, that he's speaking personally. A gesture.

"I cannot tell you what I feel today, what is going on inside of me. I expected, as President of the United States of America, to work towards our future prosperity, security and integrity as a nation. I did not expect war, particularly war of this particularly horrific and new kind, and I did not expect to have a historic responsibility of this kind thrust upon me. If you had told me that within my term, we would see genocide on American soil, I would have said that's impossible. But I can tell you this: together, as a nation and as a world, we will absolutely ensure: *never again*. You have my word on it, as a man, as an American, and as your President. We will not fail."

I nailed it. I didn't fold, I didn't fail, I found something inside of me to answer a problem this large. Now we see if I can follow through. But what I wonder is: in forty-eight hours, in two weeks...will there be anybody left to save, or to do the saving? How far is this thing going to run?

The tech say it would have been a lot easier to just kill all the white people, or the blacks. The Han Chinese and the Japanese are particularly vulnerable.

Whoever did this hated with a precision which, the President prays, protect everybody else. But God help us, we share a world with evil...Anything could happen.

But that is not something a President can say on national television. With power comes the role. You must be Mr. President, and that's the final word.

Mr. President wants a drink. But Mr. President has been sober for fifteen years, and he is not going to let this break him.

Twenty-Nine

Israel's a charnel ground; so are New York, the Ukraine, even parts of Africa.

They say whoever did it could have killed the human race as a whole to within one tenth of one percent of its current numbers. The viruses themselves are that deadly. One surprise: a vaccine is surprisingly possible. Very quickly we can be sure, forever, there won't be another one of these, at least not an adaptation of this one.

A silver lining?

Almost all of the Jews are dead. That the rest of us might not join them is, yes, a silver lining.

Whoever did this, and there are only a handful of suspects—all of whom have flags and armies—was incredibly thorough. Everywhere a substantial number of people converted to Judaism and kept their genes to themselves, the original ethnic group gets nuked just to get the convert population.

Entire genetic subtypes wiped out because a couple of hundred thousand people converted to Judaism centuries ago. Europe laid waste caused to erase the Ashkenazim. The death toll rises, and rises, and rises. It's like watching the entire genetic history of a people get mapped, and then erased, branch by branch, block by block.

Geno-cide.

Biowar of this type has been theoretically possible since the mid-1970s but, practically speaking, the sheer quantity of science, of time and effort required to do it is unthinkable.

It's a space race's worth of effort, because "The Jews" turn out to be a very genetically diverse group of human beings indeed, when you get right down to the genome, which is exactly what some bastard did. Or, rather, some set of exorbitantly well-funded, extremely bright bastards, working together for ten or twenty years.

It's a government. It has to be. Nothing that big could remain hidden otherwise.

The President's Eyes Only reports make it crystal clear: somebody has spent decades collecting DNA samples, and used an enormous amount of computer power in analysis. They've used highly classified biowar techniques to construct not one but a family of killer viruses which have been disseminated all over the world without a trace, and released in a coordinated fashion. This is a task conducted with massive resources over a long time; there are only half a dozen biowar establishments in the world with the capability to do this, and there has been no evidence of any such effort picked up by any of the intelligence agencies. A minimum of ten thousand genetic samples, but more likely a hundred thousand, years of supercomputer processing, and then perhaps a decade of virus design. It beggars belief, but the evidence is mounting every day, as the bug gets around to isolated pockets of survivors.

To the President's advisors, it is, frankly, as puzzling as the detonation of the first nuclear weapon on Japanese soil was to the Japanese.

The Holocaust Plague was released on April 20, 2029.

Hitler's Birthday.

At one meeting, somebody suggests Moon Nazis. The name sticks, a reference to some old movie. We're hunting for Moon Nazis. There has never been blacker humor. The President permits the name, it helps people cope.

The search continues. The trail, eventually, leads where it does.

Thirty

President Knight goes down in history for one act only: he tells the truth. Here's how it really happened, the inside scoop. I swear this is true.

President Knight is visibly drunk. He is sitting in an armored limousine with the British and French Ambassadors. He's spent six weeks engineering a contingency which makes their sharing this car ride necessary. In addition, he has used every ounce of his Presidential authority to persuade the British Ambassador to give him access to a secure communications terminal. The British Ambassador, a retired naval doctor called Brian, is an old friend. His curiosity and fear burn. But if the President of the United States of America has to make a private call, private even from his own people. well...These are complicated times. Something important, and...The Crown will, of course, automatically know what is said using the device...So Brian brought the box, and handed it to the President with the grave care and attention one would normally reserve for a hand grenade with a loose pin.

President Knight weight the odds. To kill a President and one Ambassador would be unfortunate. To kill two...might also be unfortunate. It's as much collateral as he can find. The French chap is just here as insurance—two Ambassadors from nuclear states for the price of one. A lucky break.

President Knight does not know how much slack a President has before the hammer falls, as it did on Kennedy. Go too far against the system, and the system reacts. It has only one modality: murder.

President Knight is going to make history, one way or the other.

"Driver, give us full privacy in the back, please."

Microphones from the crew compartment are cut. The glass in back becomes completely opaque, and a forest of electronic countermeasures are deployed to prevent listening devices and other forms of spying.

President Knight opens the terminal. It's about half the size of a brief case, and designed to withstand almost any contingency, remaining functional after being thrown from a plane, or after a (small) nuclear bomb blast. It can place a call to most common communication systems, civilian and military, and is almost impossible to jam thanks to an extensive network of communication satellites and terrestrial relays. Half of the functions on the box are irrelevant to this call, more than half of them. It's a few years behind our model, he notes.

It's what you give Ambassadors to call home if the shit hits the fan, and fortunately, it permits calls to places other than home too. It is plausible that the call will be decrypted later, but the President has every reason to believe that it is secure enough for a short call. And that's all he's going to need. Less than two minutes; he's practiced it, saying the words slowly in his head with a timer. He has never spoken them aloud.

The short call is to another old friend: a Chinese dissident commonly called Guanyin Ziru, a nom de guerre from her years in the underground. She's a dry, severe, professorial woman in her late forties, a veteran of China's most difficult days. She has seen much loss, and now runs a leading Chinese language news service. The President hopes that she is a secure enough channel for the news. The Chinese national defenses, her own dissident network which has survived much pressure over the years...she only needs to repeat the message a few times and it's out all over the networks in moments. It's just the first hop, the first node, that's the hard part.

He knows he's stalling. Enough stalling. He checks for signal (clear) and dials the number in China.

Guanyin Ziru is waiting by the remote, as agreed. She picks up the call. It's as secure as an old dissident can make it. He does not make social calls to her, therefore it is something critical. It must be...earth-shattering. A leak from a President can only be about one thing. She has inferred a range of possibilities, many of which will result in her not living out the year if she does her job. It is, potentially, a fatal duty.

Now, or never. With a deep breath, President Knight pulls the gun from his pocket, and levels it at the French Ambassador, then flicks it to Brian and back.

"If either one of you attempts to interrupt this call, I am going to shoot both of you. Brian, I'm going to talk to Guanyin Ziru and tell her who was behind the Second Holocaust."

Brian's eyes widen. The French Ambassador—stiff and unpopular, a martinet, sits frozen, clearly thinking he is dreaming, or perhaps involved in some terrible practical joke. This is clearly impossible. It cannot be real. He can, therefore, ignore it. The French Ambassador is clearly, therefore, not going to be any trouble.

So the gun remains pointed at Brian. President Knight is about to break all the rules.

"Ziru! Good...yes...thank you. Yes..."

To cut the pleasantries short, President Knight brings the gun into the field of view of the terminal. She falls silent. Whatever is happening is serious beyond all comprehension. Who the hell is he with?

"Ziru, I want you to know that a US Army bioscientist called Thomas Ford Junior IV is responsible for the Second Holocaust. We've known for about six months."

Ziru bursts into silent tears.

"He worked with a small network to obtain sophisticated genotype computer models from the Israelis' own genetically-specific bioweapons research program. They laid the groundwork for the Second Holocaust themselves."

Ziru puts the pieces together immediately. Who else would have the incentive to study the Jewish genome in such detail.

She prays the call won't be cut before he finishes, although she has enough to finish the job from here.

"Ford Junior then used their defensive research to construct a template which was used to steer a private research agenda conducted within our own classified biological research facilities. He used our labs to flip the models around and weaponize them."

President Knight is glossing over the complicated details, the apocalyptic theology of Ford's network, its ties to industry, to politics. In the ultra-secret highly classified world he inhabited, Ford Junior was everybody's best friend, everywhere, for about twenty years. He was quietly regarded, frankly, as a saint, certainly far above suspicion. A catastrophe. President Knight is afraid not just for his own life, but for the world. Ford Junior got this far on a series of exceptions, blind eyes and oversights which implicates the entire maximum-clearance political hierarchy. No fix there.

"Ford Junior distributed the live viral material across the world using a network of religiously-motivated sleeper agents, who believed that they were ingesting holy water from a bleeding statue in Ford's basement."

Brian very nearly loses his mind at this. He's in no danger of going for the gun, but the desire to start screaming with hysterical laughter is almost overpowering. Brian channels the energy into watching the Frenchman, making sure he doesn't blow this up.

Brian also appreciates Knight's thoughtfulness in bringing the gun. "I'm absolved of responsibility, after all..."

Knight concludes.

"I was briefed about the essential elements of this story nearly six months ago. The US Government has taken appropriate action to roll up this network and to destroy all remaining supplies of Ford's viral work."

Of course, if that was true...this might not be necessary.

But now the killer blow.

"I'm telling you this because this is the fourth time it has happened. US government researchers have attempted to release world-threatening plagues four times, this is simply the

first one that's succeeded. We have to close this down, we have to close this all down, and we must do it now."

There's a moment where the President and Guanyin Ziru lock eyes. She knows, and he knows, that they're probably both dead. But she's sacrificed so much, for so long, that she has envied the dead in the gulags many times. Their struggle is over. But this...this is worth dying for, quickly or slowly. This event makes her whole lifetime worthwhile.

He, too, has justified his existence on this planet. He's made history. He has no doubt left about himself. He's done it. He's the man he could never have been until history called. Made the grade. Kept the promise. Led the people. He's... done.

The President closes the British Ambassador's communications terminal.

"Salaud magnifique," says the French Ambassador, earning his own footnote in history.

Brian, unable to top that, asks "what next?" and the truth is, none of them knows.

The limousine rolls on into the night. The three men sit in grave silence.

When the helicopters come, it is already too late.

Thirty-One

Guanyin Ziru estimates she has ten minutes before somebody comes through her front door with a gun. It's close: eight and a half.

In the time available, she does the first thing: strips the audio off the recording, trims away her name at the start, and concocts a vaguely plausible story about it being a leak from a rehearsal of an official American announcement planned for next week, and fires off five hundred copies of it through the dissident's equivalent of the high-security classified network. It is a plausible enough tale, at least compared to the reality. It will cover the route the information has taken. It will buy time.

Guanyin Ziru does the next thing. She flood-fills a green screen background over the interior of the limo, meaning the video could have been taken anywhere, awaiting a digital composite background. She then trims the gun and her name off the start of the video, and sends that cleaned, edited video after the audio file. The context is obscured. That's all she can do. She can give him a chance.

It might be a leak from a tech at a dress rehearsal, but it is certainly not provably a leak from a President on a stolen terminal holding somebody at gunpoint. That's the point. The message is what matters, not what he had to do to make this happen, she thinks, briefly questioning her journalistic integrity.

She decides she has protected her source as well as is possible. If they torture her, she will give them nothing.

She is protecting...an honest man. She has, in her heart, a flicker of hope for the human race. It has been a long time since she felt that.

When they come through the door, it's police. They barely even enter the apartment, just pin her to her chair with the threat of immediate death. So she will live another day, at least. Minutes later come Special Police, then military intelligence follow immediately afterwards.

She risks a gambit: the files are gone, there is no proof of what she has deleted. This may be a negotiating edge. So she tells them the truth. They can prove nothing. It is the beginning of her rehabilitation in the eyes of the Chinese people. They can prove nothing, but a flicker of hope arises in Beijing too, that in America, there is an honest man.

Peace is fragile. Faith helps.

China awaits further developments with considerable interest.

Thirty-Two

President Knight sits, absurdly, in police custody.

They mention treason, but he simply toughs it out. If they were going to try that, he'd be dead already. When he finally walks back into the Oval Office, the first thing he does is watch the video of himself. Her touch of genius, taking out her name and the limo, leaves a slightly strangely positioned camera on what could easily be a first reading of a prepared statement. He's won. Or, at least, he's lived to fight another day. Bless her.

The press conference is delayed for a day to give time to clean house. It goes off without a hitch, at least in the most basic technical sense. But there is no denying that the power of the secret state in America is broken, there's a direct parallel between the US biowarfare incidents and the Russians' repeatedly almost launching all-out nuclear attacks on the US because of hardware failures in their missile early warning systems, which happened several times. He makes the point, over and over again, "we are not the first superpower to put the world at risk with poor control of our weapons" and that does, in fact, take the sting out of it. It also positions the sides in a very unexpected configuration, given the circumstances.

Slowly, the tide of global public opinion turns, and the Second Holocaust becomes a symbol of mankind's own self-destructive potentials, our inability to control what we create.

President Knight cannot save Christianity. Thomas Ford Junior IV was a true believer, his collaborators and covers were true believers, and the very idea that Armageddon was an event in Israel was rooted in his beliefs. Ford Junior thought this is how the Second Coming could be triggered, and that it was in fact, his patriotic and sacred duty, that... in an awful parody of a careless comment once made in Vietnam, that he had to “destroy the world to save it.”

President Knight finds the story shot through with the poison of two thousand years of looking forwards to the destruction of the Earth as a positive thing, as a step towards God. It turns his stomach.

With beliefs like these, no wonder when people break they bring plagues behind them. He resolves to act again, having little to lose. It's all completely broken.

President Knight does the only rational thing. Drawing his inspiration from Thomas Jefferson, he reaffirms America's non-theistic foundations. When July 4th comes, the White House broadcasts a special address in which President Knight trashes every icon and relic left, and makes America ashamed of its Christian heritage. He saddles religion with the blame for the Second Holocaust, and proclaims a secular faith, in America, in American values, and in progress.

He takes a stand, as if he is a man with nothing to lose.

And then they kill him, just like Kennedy.

And he becomes a martyr, and that changes the world.

He was, without a doubt, our greatest President.

Slowly, bloodily, the great American ship of State begins to turn away from its medieval heritage, and plots a new way forwards.

By the time Harry Vine is born, this is all ancient history. His father was a young man when President Knight died in a tragic helicopter crash. But without President Knight, Gregory Vine would never have joined the State Department team after he got out of the service, and therefore he would almost certainly never have met Helen Congreve, and none of this would ever have happened.

The great leave large footprints in history. They change everything.

And also nothing.

Thirty-Three

Harry Vine walks at an even pace around the running track watching his mind very carefully, looking for signs the drugs are wearing off. The man walking beside him is unaware of Harry's internal processes and so, to a large degree, is Harry.

There is a box inside of his head. Harry is inside this box, but he's staring at a picture of the box, painted inside the box, which makes him think he's outside of the box, because you can't be inside a box and be looking at it from the outside. Therefore, to one part of himself he's inside of the box, and to another part outside. This paradox is a magical object, created by ritual magic, lodged deep in his symbolic system.

Or, just possibly, it's nothing more than an old man's last gambit when he's out of cards.

Deep in his brain stem, he's outside of the box, because lizard brains don't understand the difference between realities and pictures of things. In the cortex, he's inside of the box. He understands symbols. The two layers peel apart in their understanding of the situation because they see reality differently. The hope is that the split can contain the damage from having an empire ram its ideology into his drug-addled brain. Two brains are better than one? How about three? Four? Sixteen...?

In between, Harry's limbic system is in uproar. Awakened by years of spiritual practice, brought into harmonious coordination with the neocortex and even—on occasion—with the basal ganglia, it has a better than evens chance of distinguishing the drug experience from reality.

Harry gives it time to work, and pays attention to what he can process consciously. He's got good time cues, he knows when he took the pill and roughly what time it is now. That helps him imagine what family of drug it might be part of—Peter's talked to him extensively about these things, although discouraged experimentation ("until you've mastered your mind, even then, it's often ill-advised at best") but, still...what's the drug doing, what's it saying? To which part of my brain does it speak?

The answer is staring Harry in the face, specifically the face of the man walking beside him, in uniform, eyes forwards, keeping pace.

He's not my brother, I barely know him.

Then: He's not my brother, I have never met him before today.

Then, a breakthrough: That man is a stranger.

The rebellion in his midbrain takes the form of excruciating physical pain in his solar plexus, a spasm of pure animal fear.

Shit.

It's all becoming clearer. Harry is, for a moment, cool and clear. He is going to take this programming apart from the inside, and he's going to wear it like the skin of an animal killed in a shamanic hunt. Wolf or Bear or Mountain Lion were, perhaps, his ancestor's skins. Harry's skin will be... he's not sure how to put it...

Puppet.

Harry is going to wear the skin of the puppet, and he's going to pass unremarked through this world of shades, and into a purer realm.

Still tripping, Harry thinks. That's not my language, we're immanent, not transcendent. We don't float above all this, we *are* all this.

So there's lift, too.

The animal brain starts to settle down. The smart one upstairs, the one with words, is not so crazy. Harry's body doesn't understand what is going on, but it's learned to trust

that when the above-mind is confident and happy, that corresponds to good conditions all round.

There is confusion, but there is less fear. This can be made to work.

They wait, slowly testing the interconnections, puzzling out what has been done, far, far below Harry's conscious awareness of what is going on inside of his brain or his skin.

Puppet totem, the master hidden as the slave, is a potent myth.

Even if it never existed yesterday. Harry has his myth. Harry has had his initiation.

Thirty-Four

Gregory is in a microcopter, a light aircraft about sixteen centimeters across, weighing fifty grams. Micro-mechanical motors keep it aloft on little more than occasional sunlight and background heat. It's peppered with a couple of dozen cameras, thermometers, a handful of useful general chemical sensors (pH, ammonia, alcohol, methane, volatile organic compounds) and a couple of application-specific packages, one for vermin detection (based on distinctive compounds found in rat and mouse shit, termites, weevils and similar) and one for locating gunshots precisely, to the square meter. Normally the drone feeds into an inventory computer, which simply dumps numbers into the constraint solvers of the EMPG (Enterprise Management, Policy and Governance) system that more or less is the State Department's Africa operations.

You normally don't hear from these systems in weeks, thinks Gregory as he idly noses through the piles of 25kg Golden Rice bags just to be able to say he's looked around and there's no problem. State basically figures out dollars per calorie per person for each region, sets some policy priorities, and hits "Go!" and humans don't touch the operation again until food is being loaded on trucks. It's a pretty efficient operation.

Gregory's job is to handle exceptions, when the software doesn't deliver, or more commonly when the people don't deliver, and nobody's getting on a plane to the Sudan for \$2000 of missing food, or a tracking tag that ripped off in shipping. "Eyes and ears" is an integral part of hearts and minds.

Gregory says his mantra “Automation means Fraud, Fraud means Waste, Waste means Press, and Press means Trouble.” When somebody ratholes the systems, they can stay undetected for years. It’s rare, but it’s devastating, now we can calculate how exactly how many people—and often their names—died because somebody stole from the system. The news sites love that stuff—pictures of kids on bicycles riding around from before a famine, then DECEASED, KILLED BY OUR CORRUPT STATE DEPARTMENT stamped over in big red letters. “Poor Denise Mbatho died last week, one of fifty-four children who have died this year because of...”

Because we’ve got less than a quarter percent of waste in this entire system, and...yeah.

There’s just not a hell of a lot to do, but the systems say visual inspection of the entire warehouse is required, because of unspecified anomalies, so up and down the rows he goes. The machines did it, something didn’t quite add up, and they’re not sure what. AI...great when it works, but very bad at explaining itself. The systems are so complex internally...

There’s a bit of spillage over there, a thick scattering of white grains trodden into the sandy floor. No signs of tears in the bags on the stack, could have been there for months. Nothing, nothing, bored, bored bored.

It’s all fine as long as the programs run more-or-less silently, throwing some of America’s wealth into patching up the holes. Something goes wrong, the Great Eye of the Public turns around on top of its pyramid, and all of a sudden everybody is reminded of Africa, of how little we’re really doing for them, devastated by climate, high-tech war and disease. The pain has to go somewhere, and the State Department is the logical target.

“You’re 2.4% of GDP! Why don’t you do more?”

So Gregory flits around, looking for something software would not notice—a family camped out in a small shelter excavated out of the center of a pile of rice bags with a roof covered in more rice bags, in one memorable instance, or

more usually rats and a false report from the pest control contracts.

Gregory banks around the corners and imagines he's in a fighter, flying through skyscrapers.

"Pew-pew-pew! Godzilla at six o'clock, Wing Commander Gregory!"

Finally there's something out of place. Gravel. Long trail of gravel tracked all the way up an aisle where a bag of "rice" got ripped and spilled out on the forklift. Makes sense.

Gregory punches out. He calls his boss. "Looks like we've got some filler bags again," he tells the boss's digital assistant. "Can you schedule an inspection robot drop, and I'll do a manual inspection then? Get a couple of samples, wring the supplier's neck?"

The system processes just a hair longer than a person, and says "OK, Gregory Vine, I heard your requests and will comply. Thank you!"

Twenty-first century voicemail, but the boss will never hear the message. It'll just get done, and Gregory will see a scheduled robot drop, one robot delivered by another robot, and go and find that for one or two deliveries, one or two percent of the bags are gravel, or (what a waste) all the bags are five percent gravel and...

Gregory vividly remembers flipping a tank. The incredible power, as he jams his full bulk, in a five-ton bot, right under the fire-shadow of the tracked behemoth, the screaming of the hydraulics as he pushes, and the tracks lift off the ground, making a space for Williams to get right under it, and then the two push and flip the tank on its side. Williams shoots off a tread, just in case somebody rights it later, then they go to work on the crew hatch, hoping for a couple of prisoners and some information.

The little microcopter settles in a patch of sunlight from a skylight, resting on a sack of the genetically engineered grain.

Gregory slips his goggles up off his face, sits up in the reclining chair, and stretches. It really is dull work. He stands up in the small office, and looks at an empty coffee cup. Time for a break.

He spends a quarter of his life alone in warehouses or flying over wells watching anonymous locals thumbs-up or thumbs-down to get a quick indicator of the local conditions. Instruments lie because people lie, and people lie because people are people, and...well, to them, he's a little plastic 'copter, or occasionally a semi-humanoid inspection robot, covered in all kinds of clever devices. In theory you can do surgery with one in a pinch; he's certainly done a few medical X-rays...They're serious pieces of equipment. He quite likes the gear. It's quality. Old. Gregory remembers when those inspection robots were state of the art, as good as industrial models. He's been with the department a long, long time.

They keep relics like me around because we know how to fly metal, and even if all we fly is plastic these days, we know how to fly. Really, when it gets right down to it, it's not the drone. It's the eyes and ears and mind behind the drone that count. They're extensions of our bodies, we're not putting our minds into the machines, we're wearing them.

Just like, in metal, you can sense the fighting spirit in an opposing unit even though both of you are safe in boxes half way around the globe, plugged into ultra-low-latency boom networks. Just like you can tell Direct Neural troops from across a kilometer by the way they move, even if you can't say why. Just like...

Gregory picks up a paper airplane he keeps on his desk, and tosses it across the room, aiming for the top of the book case. It noses down too soon, crashes, lands on the floor. Boom.

Gregory wonders how his son is doing after Induction. He makes a fist and relaxes it two or three times. Tight, stiff. It's funny watching his son fly, he's an ape. He jams gestures out and pilots sim devices as if they were on a remote control, drags them around with his head. You just can't teach the kid how to blend over the wire, how to sort of...Gregory imagines shaping the flightpath of the paper airplane with a subtle twist of the shoulders, leaning on the non-existent aileron.

No, you can't teach the kid everything. Walking downstairs, Gregory wonders—for no rational reason—if he'll ever

see his son again. But this is the Senior Cadets we're talking about: annual mortality approximately zero, on a ten year line. Statistically it's almost certainly safer than staying at school. It's...

Not war. It's not anything like war.

In the kitchen, Gregory reflexively guesses lines of sight behind the toaster on the table and the kitchen taps, guessing the field of view from the salt cellar. Heavy weapons pound in the back of his head, and he misses the war, right or wrong. He was good at war.

Once in a while, somebody will call Gregory a "troubleshooter." Gregory thinks "you have no idea."

Some of the guys from the corps get together and play sims sometimes. Usually war games. Usually old engagements. Greg can't do it. He needs to feel that somewhere, on the other side of the world, there are real atoms on the other side of the goggles.

It's the real world. What you see in a robot is the real world. The kid thinks it's just a sim, even when he's flying a little node. That's why he can't fly well.

Gregory walks into his wife's studio looking for her, perhaps they can take a break together, or go for a walk before dinner. She's passed out on the couch under a blanket, didn't really sleep last night because she was worried about Harry. He moves her legs over a bit, sits beside her, and holds her hand. She doesn't quite wake up, but he's comforted. There's something profound about being in your own flesh-and-blood body, with familiar things, close to people. She's somewhere else, dreaming, flying some other body in some other place, a wonderland or an endless night.

The girls are at school, a few years and they'll have to go through all of this again with them; if either one chooses the service. Right now nothing looks less likely...

Gregory goes back into the kitchen. It's tempting to wake her up, tell her he loves her, tell her everything will be alright. Gregory makes the fist again. Tight as a stuck bolt. He's clearly a lot more worried than he consciously feels.

They should get a call around 6 p.m. He can do a couple of more hours. He rises, pats Helen's arm, and leaves her to sleep. They're worrying in shifts.

With good reason.

Thirty-Five

Peter hums merrily along the highway in the van. He's playing the mandolin as the road drives the van, not a care in the world. He's let the situation go, as he must. Nothing he can do right now, short of huge efforts of will, can affect Harry's outcomes. And if he senses trouble, and throws the lad a rope, he'll probably wind up getting pulled in and drowning too.

So Peter focuses on the Great Perfection, on knowing that everything is, right now, as the Great Spirit, or God, or the Mother of Hydrogen, or whatever you want to term it, has willed things. It's not his job to save the world, it's not his job to save Harry, if Harry even needs saving.

It's his job to be Peter Vine, and right now, Peter thinks, that means zooming down the road on automatic, practicing the mandolin (I still suck!) and smoking a big joint (legal, I'm not driving.) Peter is not blissful in an uncaring way, but he's blissful in the manner of a wise archer who's loosed the arrow and is waiting for it to strike its target. He can worry about the arrow in flight, or he can watch its flight in delight, but he cannot control it.

He can assume anything is happening to Harry right now, wonders or apocalypses. The kid might have gone nuts and be locked in the brig, or he might have gone under and come to believe that the New Manifest Destiny is a vital truth, or he might be sitting there with the keys to unlock the heads of an entire generation, poking a hole in the Induction ritual's magical hold on this entire country. Anything could

have happened. And every ounce of pressure that Peter had to apply to the situation, that ounce was applied as close as he could judge at the right time in the right measure.

Bliss is how Peter reacts to the uncontrollable unknown. That's what makes him a hippie, nearly a hundred years after the term was invented. Peter is secretly looking forward to the 2060s, when he can be a Child of the '60s once again. He thinks about the time he went to Gaskin's Farm, now a thriving little Amish village, twenty years ago, and kissing the sacred ground where St. Steven's people lived and worked, setting fires that burn strong to this day, if you know where to look for the thread; The Well, the Whole Earth movement, all of it. Perhaps he should head to Tennessee for the winter, where it's mild, and in the air a little magic lingers.

Peter realizes how tired he is. It's a strain, maintaining this world model, this way of life, in the face of the machine. He wants to rest, not just body, but soul, to lie down in the soft, deep earth, and sleep for two hundred years. But it is not given yet. He drifts off to sleep in the van's passenger seat, joint in the ash tray, mandolin in his lap. As he falls asleep, he feels Helen in his dreams, holding her son's head above water through a hole in the ice of a frozen lake. Gregory is there too, wearing a thick sweater in an odd purple-gray color, sliding a ladder across the ice. Peter falls beyond the dream, and into dreamless sleep.

The van rolls down the highway, thinking about nothing beyond road safety and driving heuristics. It's going to Asheville.

Thirty-Six

Gregory falls asleep in the chair before he can plug into the next node. Nobody minds, it happens sometimes. If it's urgent, they'll wake him up with beeps and vibrating gloves.

Thirty-Seven

I'm sitting on the floor of the disabled access bathroom, door locked, cross legged on a field jacket. I am going to sort this out now, or I'm going to die trying. It's all scrambled, my mind's turning itself inside out, the twists and folds of the paper in my head, the splits in my personality-mind-brain layers unwinding, falling apart. It feels like my head is on fire, and all I want is to get out of this somehow. Not the Senior Cadets, not my body. I want to get out of existence. Even death won't do it. There's a contradiction in terms wedged into my being, a paradox, some great lie that's forcing me out of existence, forcing me out of being itself, a lie that's greater than my truth is killing my soul, eating me up. It's death.

One level up, I'm fairly sure this is going fine. As Peter suggested, the damage is contained. Unfortunately it seems to be upside down. I thought it'd be my rational mind that got turned inside out, coming to believe that America is God or something equally asinine, but it's the other way round. I can still tell that we're an Empire, that we're killing the world, that the corruption's down to the bone. All that's still true, and I'm having no problems holding it in my mind. I'm fine.

But my emotional self, my body's intelligence, is insane. It's chewing through realities like there's no tomorrow, roiling the waters like a dying crocodile, and I don't know why. I can't figure out what's wrong, why it's so incredibly...I don't even know the emotions, they keep changing. Something huge has activated.

All I can do is keep breathing, and keep listening, see if I can pick up some subtle thread, some clue, some line. I'm not that far out of whack here; other people...they may come to believe what's not true, but they don't become flesh eating zombies.

Well...unless you're on the other end of the gun. Then we dine on flesh, yes, indeed. And that's the angle.

The whole thing peels apart in my mind, I can feel the layers separate, then combine. I'm struggling with everything. I have to slide out some tiny detail, and it's a deadly as a peanut allergy. Some tiny glitch in the immune system, your body misidentifies nuts as deadly poisons, and over-reacts badly enough to make them deadly poisons. Choking out on a trace of peanut butter left on a knife. Self-fulfilling prophecy. It's like that, an allergy to lies. Dying of it.

I think about the Senior Cadets I've seen, their self-assurance. It's copied, copied, copied but not from their fathers, it's copied-copied-copied but not from their brothers, their uncles or their friends. It's a discontinuity, something grafted into them, an identity.

A blind.

I've lost it again, peeling, spiraling back into the chaos. It surges and foams. It's all peeled apart and split as the pieces are forced back together. No house can stand divided against itself. I'm thrashing around inside myself, the mental equivalent of food poisoning. I wait for the next wave, determined to catch it this time. There can't be much time left, eventually mess time will come, and I'll have to park all this. If I can do that without going off my rocker.

Again it surges. My animal self's trying to throw up a lie, vomiting out something wrong, something evil, searching for internal consistency. It's vile, the animal intelligence in all of us is a simple beast, easy to please, it was not meant for this. We're not meant to...live in a world...like...

Click. It tears and twists to the surface, by degrees. I get glimpses of the open plains but I can't tell if it's mythic Africa or Papa's imagined Great Plains. It's soaked in blood.

I see the white people as grinning skulls in the night. Then the horror: my sisters' faces, as gnawing zombies, the blue of their eyes made neon and piercing. Then it snaps, and a Senior Cadet beats them off with a rifle butt, and I cling to his legs, sheltered. He loves me.

Snap. I feel stuff tearing inside me as the implant comes free, as my animal self splits self from other and vomits out the introject.

I see the State, the Flag, the Cadets, everything else interconnected into a great predator, the Sovereign Reich, a sort of mental infection. The Queen Bee lands among the people, and they obey her, they feed her brood for the right to live in her house, which they themselves built. Mutual enslavement, orchestrated by the grid, an organizing center. It's organizing us for its own benefit, we get two parts, it gets one, and it grows stronger-and-stronger-and-stronger-and...and I can see light at the end of the tunnel. It's coming together.

I lose it again twice, and then it all rips free in a single piece.

It's a lineage, just like the magic from Peter. It's the lineage of the gray-faced men and women who comprise the State, from the age of the Kings. They organize, they optimize, they improve, but they take a cut out of the system's yield on each pass, and when growth stops, the entire model of taking-a-cut-of-the-profits turns into servitude and destitution, as they take slice after slice out of the flesh of the nation. Overseers, slave-masters, managers, all one single lineage, those who must be obeyed, or you're turned out of house and home, out on to the streets, which are owned by the city, by the Lord, by the Crown.

Ultimately...and then I see it in total, clear relief, sodium light.

Ultimately, we've gone beyond our own evolution. All they're doing at Induction is taking the next step—"your real family isn't the people who made your body, it's the people who feed and protect you, the service." The shape of the organism has changed, we're no longer little tribes of field

monkeys defending rocky outcrops from big cats and hyenas, we're...

Links in the supply chain. There I am, eating food from the service, living in barracks, doing as I'm told, to implement directives.

I'm a cell in an organism, but that organism is a cancer.

I tear free, and look around me. Bricks and mortar, steel and wire, radio waves and visible light. There isn't a natural thing left in my life, except possibly what's happening with Emma, which is as old as genes, maybe older.

And there it is. Right at the root of me, there's an instinct to protect all life. To create new life. And it's being perverted into an instinct to protect not life, or even just my species, but something much more selective: Americans, and specifically, the Service. My species is supposed to be Government, not human.

Induction makes me a member of a new genus, *Homo Militaris*, the self-replicating viral invasion of wars.

The uniform is my skin and I am...

Click.

Wearing it.

It peels off in a sheet, a whole identity, a mindset, something passed down from Rome or Greece or perhaps Sumeria before that, The Man of the King, a member of a Royal Household superorganism, clamped on top of the local peasantry like a vine wound around a tree, offering order for 20% off the top, a symbiont living on the float, multiplying gain and causing agonizing pain on loss, it's...

It goes on for what seems like hours, and then it settles in. It's fairly simple.

Because America is as much responsible for my welfare as my family is, my deep physical intelligence, the animal mind, wants to relate to America as if it was a family member. But America doesn't have a face.

At Induction, they were pushing Colonel Gibbons into my head as a sort of State Father, a...a third parent, a stand-in for Jefferson, for Washington, for the President, for that old mythical figure, Uncle Sam. And the impulse to imitate a role

model, to copy...the Senior Cadets age because they take a graft from a much older man. It's an introject.

I'm holding a chunk of John Gibbon's substance in my mind, not him as the individual, but him as the vehicle for the National Will, our group mind. He's the Vicar of Jefferson, the Priest of the New Manifest Destiny Church of the State of Emergency. He's plugging directly into the old Christian wiring, where everything flowed uphill to the Pope, and then to Christ, and then to God, that old murderous sky bastard wreaking his wrath and vengeance on the innocent and the rebellious alike.

They've taken everything we used to feel about the Earth as the source of nourishment and Wonder, and transferred it to two ghosts: the Economy and the Nation State.

They feed us, they clothe us, they...

I see the little pill come back up. John Gibbons is not my father, and I am not going to grow up to be just like him. The Senior Cadets are not my brothers, they're conscripts, just like I am. There's no "esprit de corps" beyond a bunch of teenagers in uniform smelling each other's pheromones and forming a territorial gang.

They are hacking us to support a superorganism called a country, and it's bleeding us dry.

The State is not my father. The State is not my mother.

My father is my father. My mother is my mother.

The Earth is their support, as it is mine.

With a staggering flash, it comes right through. I clearly perceive myself to be a hundred kilograms of billions-of-years-old atoms, held by gravity to the surface of a great dark sphere whirling in space, cruising around a ball of fusing gas. I'm a ripple in bits of the Earth, nothing more, but I'm part of something so sacred, so ancient! This is Wonder. Then I see the pattern integrity of my body absorbed into the state, and then the system of the world, and then...it's us, we've turned against the natural order of things, our self-awareness unconsciously biting the hand that feeds, turning on the life that made us, enslaved by the mind. The lesser eats the

greater, for its own continuation, and the balance of nature is violated.

The microcode, the firmware of my animal self, is stripping the poison back out of my rational mind, but it's going far, far further than undoing the Induction. It's stripping me right back out of the culture.

I'm an ape in a suit, sitting cross-legged in a strange, small cubic cave.

My evolutionary heritage rises up my spine, over my head, and engulfs me.

I see the whole world, lots of tiny magnets pointed towards an imaginary God, rather than towards the real, observable pole of Life. I see layers and layers of imaginary mental nonsense layered on top of a simple truth, "life is good", trying to obscure it behind layer after layer after layer of "if you buy this new and amazing" or "if you obey the rules" or...

It blows me right out of my frame.

Unconditional love. I don't want to kill anybody. I don't want anybody to kill anybody. I don't...not quite...hunting for food to feed the kids, I'd kill a deer for my sisters, somehow...

I feel everything changing, as if I've been in a canoe that's upside down in the water, and suddenly flipping over, I can breathe!

We don't have to live like this. It's a shattering blow. I see my ancestors spread out across time, realize that as long as we pass something forwards of what came before, that's enough. I see wolves and deer and beavers, not those exact animals, but the ancestral forms we evolved from, pre-proto-monkeys, little pigs, the first furry shrews, nosing around among dinosaur bones.

I see the whole framework, the whole tree of life before me, and I see my branch, humanity, wrapped around it like a vine, choking the life out of the trunk. We're parasites, and we've gone mad. And Induction's just the next step. We've completely lost our center and our values, we're not even taking care of our families, never mind the world.

Snap.

Layer after layer tears off, until I'm sitting there naked. I move slowly, gently, and stand up. I'm straighter and clearer than I've ever felt, and there's no me, no animal-self, no human-self, nothing beyond...this.

I move inside my clothes, feel them as a surface on my skin, quite distinct, and quite separate.

I understand now. I'm an animal, in a world of animals that have become confused. There's no rational mind, there's no animal mind, there's just mind, formed from the ancient evolutionary cores, watching the feet or the skies or the inner terrains as directed by attention.

All the conditioning falls away. I feel myself smooth and hard and round like a pebble, like the pill I ingested. All the layers, all the revelations seem cheap and fake, passing fancies.

The room ripples slightly, the drugs not quite spent.

I put myself back into the room during the Induction, and I see it now. The whole message is "this is what a successful adult male of your species looks like", and every level of my mind has processed it in a different way. They're pointing us at these military archetypes like we're little compass points using the drugs as a big old magnet.

"Be one of these."

I shiver and shake it out of my bones. I see the paper unfold in my mind, and I rub the picture of the origami box off its surface. It vanishes, and I'm better.

But if I'm not going to be Colonel Gibbons, and I'm not going to be my father, and I'm not going to be Peter, who am I going to be?

No wonder the conditioning takes so deeply: they take the hardest decision in your life, and they make it for you, and then they dare you to change your mind.

Something forms. It reminds me of the spear, but it's consciously directed, like choosing to see. I realize that the force inside of me that I used to feel as instinct, as lust, as anger, as need has changed. I think about Emma and what I feel isn't just desire, it's desire-to-make-people. Food's the desire to move, to act, to be. I realize that I'm not feeling nature, the

natural drives, as separate things any more, no longer blind forces. I'm...just...

Peter makes a lot more sense. He's just rolling with this.

I'm not going to just roll with it. I'm going to steer, guide, go places. I don't want to be a passive part of this world, floating downstream. I want to guide it. I'm not just an expression of nature, and I'm not just a cog in a machine. This life is mine to make something worthwhile of. And I'm going to do it.

I open the bathroom door, check nothing's out of place, and walk along a short corridor into the barracks. I've got about twenty minutes before the next scheduled event. Most of the cadets are lying on their bunks reading, writing or sleeping. Most look glorious, free from doubt. One or two look pensive.

We're out of our home groups now, no longer among familiar faces. From the corner of my eye, I catch myself comparing faces. "Brothers?" some part of me asks.

"No," I say to myself. "Senior Cadets."

I make my way to my bunk, nod to a couple of people and lie down. I close my eyes and very clearly visualize myself pulling the Puppet over me, the marionette dancing on strings, and I settle into this fake me, this non-person I'm going to be for the next one or possibly two years.

When I wake up, I have the most intense feeling that I've been with my parents and Peter only seconds before. I don't remember dreaming.

The other cadets are puttering around getting ready for dinner and the commencement speech. I find that I'm eager and excited, optimistic and chipper, looking forwards to seeing more of my new peers and our new way of life. I make a mental note to call Emma, and then call home as I walk across the base to the mess hall.

Mom answers the remote. I feel the Puppet's mouth open, then push it out the way and say "Hey...I'm still here." She laughs. I say "no, seriously, I absolutely understand how I'm supposed to feel, the warm patriotic glow and all that, but I'm still your son, and I'm not going to become anything that I don't want to be, and I love you."

She smiles, and says "I'm so proud of you. I'll let Dad and Peter know that you're well. See you!"

I'm at the mess hall, and inside, it's like looking at a motor. People move as if on belts, cogs and pistons push food on to plates, the pieces of the machine functioning as a whole. I let the Puppet take over, and the room fills with warm, friendly, wholesome people who are working together to make the best of their new opportunities as Senior Cadets in the greatest country on Earth. I smile with an easy camaraderie, effortlessly making small-talk with John, Jim, Jane, Gerald, Hazel, Tom, Dick, Harry, Gilgamesh and Enkidu. They're friends, they're family, they're the people I'm going to work with for a year and...

...peeping out between the cracks, I see the whole thing for what it is: one great big fraud, convincing us that the higher-order functions of society have replaced our dependence on nature...

...and the Puppet goes about its business, masking the Shaman from view, while I sharpen my claws and go about my business.

I fall asleep, and other than my time with my family, I do not wake up for a year.

I wrap the safe in a cardboard box, so nobody can see it, then cut a hole in the box so I can immerse the leg of my bed in the safe's nanofibers, anchoring it securely. Only I can reach inside of the box to retrieve anything or free the bed leg. But the only objects I keep in the safe are my keys and remote when I'm asleep, and a single sheet of origami paper, with a box drawn on it freehand and a box of matches. I have no secrets.

Thirty-Eight

Emma and I are talking. She's very, very angry with me.

"I told you that I wanted us to be together this weekend, Harry! It was important to me."

She's crying. I think about whether this is a job for the Puppet or me, and I realize I'd better let the Puppet handle it. Is that heartless?

She takes another stab at it.

"We're in this together, and I want you to meet the Cadets I'm serving with. You're supposed to be at the base here with me this weekend! They're simply the most amazing people, they're so important to me, and you're blowing me off to spend time with people you've seen every day for your entire life! Get with the program!"

Definitely a job for the Puppet. I can't handle this without...breaking. I can't fix this. Mentally, I see her slipping out of reach down a ravine, falling into night.

The Puppet says "I don't think it's appropriate for you to question my values this way, Emma. My base commander thinks it's important for us to spend time with our families at regular intervals so we stay part of the flow of family life. Helps puts people's minds at ease."

"Well, that's not how we do things here." she snaps.

I peek out at her for the last time, and see the face that I'd loved, transformed. There's a driven hardness there, a passion and intensity that knows nothing of what's passed between us. I've lost her forever, and she's lost herself too.

"I think you'd better do this your way from now on," she says, and I feel the finality. Something between us dies, and she says "I'll miss you" and, for a moment, I see a flicker of her that means it surface, and then slip away below the mask of duty.

I fold the box around myself quickly and calmly, and let The Puppet take care of it. I'll be back later.

Thirty-Nine

Everything which was great in the past eventually faded away.
What made you think this was going to last forever?

Forty

At the end of the year, my Puppet has learned to take orders, give orders, fire a non-sim rifle, spent a little time running a non-sim mech, learned an easy-to-train martial art based on conditioning reflexes using cortical stimulation, and been trained in a uniquely American political theory called New Manifest Destiny which suggests that it's our job to be the world's protection against nanotechnology and biotechnology, because the Second Holocaust proves that we're the only ones who can do it, because only we have the technical prowess and the moral integrity. I think that President Knight would be turning over in his fiery grave, but thinking's not my job right now.

My Puppet is patient and fascinated. I'm utterly bored and disgusted, but I only check in once a day.

I want the end to be visible. I come back fully for the last few hours of the Senior Cadet period. To make sure that I don't fuck up, I spend half an hour in a mirror, practicing The Puppet's ways. I haven't analyzed exactly how it all works but I get the basics. A certain amount of emotion and disconnection is natural enough at a time like this, we're all going our separate ways, all becoming parts of something different, something new. Our lives, for most of us; another year in the service for the rest.

It's the same mess hall we ate in a year ago, when I went under. I look with both sets of eyes at the same time, and it all makes perfect sense.

From a human perspective, everything is fine. They're young, healthy, happy, productive cogs, each perfectly its own shape, working in The Machine. They didn't design the machine, they didn't build the machine, they're cogs. Says so right on the box.

Cog to my left hands me the water jug to pass to cog on my right. I pass it. I'm a cog too, in the water-jug-delivery machine. That's just good manners. Good cog, good cog.

The Machine tells itself, and tells us, that it's saving the world. But as you know, we had to kill the world to save it. That's good ol' John Ford Junior IV, the real architect of our civilization, the Last Good Christian who inspired the Antichrist, President Knight, to turn against our Godly Ways. You hear it in the streets sometimes, usually from homeless people, but a lot of people believe it in the privacy of their own homes, serpents of hatred wrapped around their bibles.

I've spent a year dead rather than be a Cog. I realize that inside, from within their own heads, they're people, just like me. Outside, head-heart-and-hands, much the same. Some tall, some short, but much the same. But it's the patterns of relationships that do it. A brick in a wall is the same as a brick falling from the ninety-ninth floor on to somebody's head; the difference is just position and momentum. Every one of these kids is a person, a human being, forced by their parents, their country and their circumstances into these straitjackets. Position and momentum.

I'm overwhelmed by the humanity of it all. I must look upset, there's concern from...Berg, William Berg opposite me. He says, and it's completely genuine, "I understand what you're going through, Brother, I feel it too, right here," he thumps his chest, "in my heart. It's been a privilege and an honor serving with you, and I'm glad we've been friends."

I have literally no idea who this man is. He's performing, going through the motions in his little lost world, and I realize we're all lost here. They find their place in The Machine, and as long as they don't question its overall functions, they're fine. He's not relating to me, he's relating to my function relative to his in The Machine. I'm Bunk 41, I'm Second Rifle, I'm

Sim Pod 4, I'm Right Flank, Left Wing, Rear Forward Gunner, I'm...Senior Cadet Vine.

Senior Cadet Vine knows the dance. I jam my hand across the table, and he meets it, and we shake hands and squeeze them tight for a precise half-second longer than a handshake, and he says "Proud to have served with you!" and I reply "An honor! Will you stay in the service?" and he says "no, I'm going to go back to my sweetheart, and we're going to get married," and I say, "Congratulations!" and there's a rousing cheer and it's the best thing ever. Everyone thinks it's fabulous. It's the best.

It's taken a year of being an automaton to find compassion for them, but now I have I'm going to have to find a way out of this. I'm going to have to break right through this veil of tears, and out into the wilds.

I could even look for whoever's designing the brainwashing, mandating the drugs, all of that. I could look for the unseen hand at the wheel, but when I get there, it's going to be just another cog, blindly turning out the specifications for cogs, in the cog-specification subsystem of The Machine. It's just a blind maze.

It all drains right out of me, the cadet thing; I'm as empty as I was on that bathroom floor after Induction. It's time to go home.

Forty-One

I go home from the base, in my grays, a Senior Cadet in everybody's eyes, but inside I'm a hollow man. There's nothing left.

I arrive on my own doorstep a stranger, and ring the bell. Mom opens the door, and she's done something very, very unusual. She's holding a beer, for me, on the doorstep. She presses it into my hand, and pulls me through into the lounge without the traditional Mom Thing we always do. She sits me down, and my father is there too, also with a beer. It's some ritual of adulthood.

We clink glasses, and she says, "Welcome home, son. What do you need?"

I think about whether to give a socially acceptable response, let The Puppet answer, or to say something real.

"I don't know, Mom, I don't know," and then I put my head on her shoulder, and Dad comes and sits beside me, and we slowly drink beer and watch time passing.

I'm eighteen years old. I don't even remember my eighteenth birthday, but I got through Senior Cadet year without becoming one of them. But in the process, I got lost, and I don't know who I am any more.

I wonder if this is success or failure from Peter's point of view, and then I start to cry. She puts her arm around me, and Dad too, and they hold me for a while, and then I go upstairs, and I lie down, and the tears continue to come.

The World! The World!

What has it come to?

I can't find a place, I can't find a place to be.

Forty-Two

I lie in bed for a month, depressed, weepy. It all seems so pointless, so violent, I can't wrap my head around any of this. I put on a brave face in front of my sisters, but when they're not around, I try to let it show, try to make it clear to my parents how fucked up I feel. They accept, they understand, but I'm out of their range. Nobody really knows what to do. That's not surprising: we're brainwashing a generation.

The others, they're all around me, going forwards with their lives, and I'm stuck out here, alone in the white hell of knowledge, seeing the lies, seeing the lines, seeing what we're really doing as a people and as a culture, and there's nothing I can do about it, there's no way out, back or forwards.

Eventually I realize I've shaken The Puppet out of my system, and that helps, but I'm still in dreadful shape. Eventually I decide I need to see Peter.

Peter invites me to come out to see him, and it's mid-summer, so I have time, so I do. I fly to Seattle, and he picks me up from the airport in the van, which now sports trays of seedlings lining every window. I squeeze into the vehicle, more crowded with junk than ever, and he looks me over carefully. He's driving manual out of the built-up area, on to the freeway. Once we're on automatic, he says, "Son, I'm proud of you."

More tears. "I don't understand anything any more, Uncle Peter, what the hell are we doing? What the hell is going on?"

He takes me by the hand, and says in slow, measured words, clearly concerned, "Every generation goes through

this, Harry. The accommodation between Man and the Machine.”

I look at him and realize that he’s got me through this with my soul intact, I haven’t been hacked by the State like poor Emma, slid and fallen—but I’m not helped, not by any of this.

I wonder where we’re going.

Peter continues, and it breaks my heart, “If I had any answers, to the big questions, about how we live, about what to do next, I’d be a second Krishna and my life’s work would be our Gita. I’m just a man too, Peter. I’m Awake, I can see what’s happening just the same as you, and I’m forty years older.”

It sits between us, this moment, soft and torn, as fragile as a wounded eye. I look at him and say “what the hell are we going to do?” and he says, without any hesitation, “keep on keeping on.”

I ponder, I don’t know how to take it. We’re headed straight East, into the boonies, middle of nowhere. I realize that I don’t understand what he means.

Peter doesn’t catch the disconnect, and I don’t know how to ask him.

Then, unexpectedly, he puts on a piece of music. Grateful Dead, nearly a hundred years old. *Box of Rain*. The music is pathetic, the recording is horrible, and the lyrics are exactly where I am right now, lost and abandoned and, even in the heart of my family, completely alone. I want to punch him. You old hippie bastard.

Finally he says something I can understand, something that helps. “We’ve been at this a while, son, we’ve been at this for thousands of years. I don’t think it’s getting any easier.”

And then he holds his arms out in a cross, and mimes hammering in nails, and I get it, I understand the whole thing. We’re doing the best we can, and it’s not really enough.

The van drives on, and the old bastard insists on playing more music from the dawn of time, and plinking along on his bloody mandolin. He can’t play a goddamned note and I want to wrap the thing around his neck, but it wouldn’t help. Three hours later when we arrive at...where the hell are we?

he switches back to manual, and I feel a lot, lot better. I almost feel like myself again.

Most mysterious.

We're kilometers up a dirt track in the woods, slightly left of the middle of nowhere. In the clearing, there are four or five small log cabins, one of which may be a chicken coop. There are half a dozen small children, led by a tiny girl wearing dungarees who's the eldest of the group, but very small for her age, carrying an actual chicken across the yard to a strapping woman in a denim skirt, hair tied up in a red scarf. She's about forty.

"Here's the boy, Annie! What do you think?"

She looks me over, "Needs supper!" she says, and leads us inside, the hen under her arm. We file inside, the kids very quiet and well behaved, and I wonder where the hell I am. Inside the house there are dozens, no, make that hundreds of pictures of old people, mostly black-and-white paper pictures behind glass, yellowed by age. They're tiled on the walls, they're on top of every flat surface, they're laminated under the table's surface. We're in an open-plan kitchen-bedroom-living-room-studio-loft. An older man, probably older than Peter, follows us in from outside and sits down on a chair. He's short, tan, with a mustache and a cloth cap. His forearms are huge, with a faded tattoo of an anchor on one forearm. "Chad."

Annie inspects one of the feet of the hen, and applies cream, then instructs the kids to take it back to the henhouse and make themselves scarce. "I've got the kids today."

I'm thinking commune. Peter is drinking water, and engaged in some kind of mind-meld with Chad. They just sit there, breathing in rhythm. I'm tempted to join them, but I'm so burned out.

Annie washes her hands, then sits down at the table with us. She ignores the men, and looks at me very closely. "So Peter tells me you beat the Induction?"

Oh shit. It hits me in a flash. "Peter's Network." I'm a fucking vaccine.

There's a moment of rising panic. Tool? Person? Tool? Person? Am I a pawn, or am I...

Then I freeze, and relax.

"Yeah, I guess I did, but it wiped me out. But I don't believe any of it, this New America crap. It's a secular religion over the same old Imperialist bullcrap."

Annie nods, approves. "Yep, for a Senior Cadet as of a month ago, I'd say that's a bona fide miracle." I think about it. I try to imagine William Berg shaking hands with me over the table discussing the Empire. I realize he'd be as unable to see it as I'm unable to see a way out of this mess. Annie says "I don't think there's any reason to doubt yourself, Harry. You're the first person we're aware of to dodge it. They're psychomorphing a generation. They're closing down dissent for keeps."

We're part of a proud history, I guess. Civil rights movement, anti-draft movement, Campaign for Nuclear Disarmament, the anti-war movement, Amnesty, all of these things. And I suppose the Induction is, yeah...yeah...

I start to cry again, very softly. Tears silently flow down my cheeks. She looks at me sympathetically. "You're tired; man, you're so tired you can hardly stand. Peter, can we keep him on the farm for a whiles?"

I don't think I want this, but Peter says, "only here for a few days, Ma'am, we have plans." I'm grateful, I'm not comfortable here.

I ask Annie, "Who are the pictures of?"

"Saints, avatars and ascended masters." She points out some faces "Gandhi, Ramana Maharshi, Manly P. Hall, Saul Alinsky, Castille Rabat, Robert Anton Wilson, Meher Baba, Da Free John, Jim Morrison, Mahāvatār Bābājī, you know... the usual crowd."

Castille Rabat I recognize. Human rights leader, Turkey I think, sometime before I was born. The rest are ghosts to me except for Gandhi. In the picture, he's a young man in a suit with a huge mustache.

"So, who are you people?" I ask, slightly rude, but I'm not comfortable with it all.

"Well, my people have been in and out of Seattle since the '60s; when times are good we live in the city, when times are bad, like now, we're out here and we try and keep ourselves to ourselves, let it all flow by. My great-grandmother knew Janis Joplin, they'd go drinking together. Mom kept the land, and after President Knight died, we figured it was time to move back out here when we got a chance, because they'd be back."

Chad speaks unexpectedly. "Your uncle's been welcome here for forty years, Harry. We're old friends. We go all the way back."

There's something deep here. Some current, something old. Witchcraft, I think, the little old woman who lived in a shoe. Something about nursery rhymes, the little band of feral children (they can't all be hers!). It's all too strange for me right now.

I've seen some places with Peter, but nothing like this, never people like this.

Chad goes outside. Peter says "you're among friends, Harry. These are my people." Chad returns. He pulls a leather pouch from his pocket, and starts to hand-roll a joint. Annie says "if you can beat Induction, I want you to teach my kids when they're of age, I want you to show us what you did to keep yourself free of this bullshit."

I feel it close like a trap around me. They've got me.

"Sure," I say. "Sure."

I'm in now. I'm in the oldest conspiracy in the book. I can't tell if I'm any freer than I would have been if I'd taken the Induction on the nose and lined up to be a slave.

Although I feel slightly better, there's something out there in the future to do, I still feel basically dreadful. What am I going to do with my life?

Annie gets to making something to eat, while Chad goes to round up the children. They're babysitting for the other folks they share the land with, who're out in the fields farming. All manual labor, no animals or machinery.

I think, Wood fires and animal skins? and, actually, I'm not far off the mark. We talk into the evening, and after the kids have gone to bed, two other couples and a young

woman come over to Annie's. The two couples are straight from central casting. Dave and Mysore. He's a plant biologist turned "applied agronomist." She's a craft weaver who teaches high school, but mostly farming right now. They're maybe ten years younger than Annie, mid-thirties perhaps, but it's hard to tell. No cultural cues, they could be a very young sixty. The very small girl is their eldest daughter, she's had various tests, she's just tiny. Almost elfin, I comment. They smile warmly, "our little elf!"

The other pair I understand a little better. John's a field engineer, power systems and mechanicals. Joanna, his wife and her sister Laurie are from out here, grew up on farms, a journalist and not a journalist...

I look at Laurie. She's...maybe twenty-two or three, she looks like a woman to me, not a girl, but I still want her. Dark, long hair, dark eyes, very quiet, very...feminine. She hardly says a word over dinner. I think maybe there's something there, some eye contact, a held gaze, but I'm not at all sure of my ground here. But...it would be good, it would be...

I don't want to admit how broken and fragile I feel.

Peter, mercifully, keeps the conversation away from me. Nothing to do with Induction, nothing more than a brief family background and I tell some stories about our travels when I was a child. Peter says "he's been like a son to me," and I realize, yes, I've been lucky on this too. I might feel hollowed out, but there's something here, something real.

There's red wine, and music, some recorded, but also a few songs. Annie and Chad do a very, very good impression of having walked straight out of the mythic past, right down to their folk music. Vegetarian food, rice...I wonder if, at some level, they're hiding in the past, some kind of...the word comes unbidden. Ashram.

The next day, it's clear something else is up. Not just a social call. Peter and Annie seem to have come to some conclusions about me, without me.

Annie's as frank as a pimp. "Laurie thinks she'd be good for you, Harry, and I agree."

I'm speechless. I'm about to say something, when Peter continues. "They're friends, here, Peter, they know...how to help."

I'm not sure what that implies, but I get the general idea. Either way, this is good for me. I say, "That would be great, I feel like fifty miles of rough road," trying for an approximation of how they talk to me.

"Great. Talk to her tonight."

Forty-Three

It gets weirder. Laurie and I sit on the porch of her end of the cabin she shares with her sister and brother-in-law, and Laurie says, “Peter’s been my teacher too. It’s so good to meet you. We’ve traveled the same path for years.”

I want to ask her who Peter is here, and I’m feeling frank “So...he’s your...guru? To me he’s just Uncle Peter.”

Rubicon. Crossed.

“Harry, Peter’s about the most powerful magician we have left in North America. He’s like a king.”

I ponder this. I realize that, at some kind of absolute level, I’ve never seen him put a foot wrong. In his own way, he’s fighting the State, fighting the Powers that Be, living as free as anybody can imagine, fighting his own battles, struggling, but...

“Oh. I see.”

She comes closer to me, presses her leg against mine, shared warmth. “He really is just family to you, isn’t he?” She’s curious, not just friendly, but curious. “What was it like growing up with him, Harry?”

I try and explain. Summers, the meditation, the travel, the...people...the sense of somehow falling into step with him. I don’t tell her about the spear, but then it’s blindingly obvious, really, isn’t it.

I realize I have no control of my life, or the situation.

The Cup.

The thought forms, and she catches it. All she says is “you’re wounded.” Yes, yes I am.

I'm less confused than I was with Emma. I'm in lust, she's beautiful, she's on my wavelength, she understands. I'm here for three days, then we'll be on opposite coasts. I don't think this is...love? But also...Spear. Cup. Spear. Cup.

Magic.

Forty-Four

Harry stands inside the tiny room. He's wearing a towel, and two strands of red beads.

Perhaps unexpectedly, Annie and Peter are there too. Laurie is naked. Annie and Peter are normally dressed, except Peter's wearing a red shirt, and Annie's wearing a red jacket, corduroy, and, absurdly, a red necktie. I feel like I've fallen through a hole in time.

Peter opens the circle. Wand, chanting, invocation, meditation, it's the full production. I'm higher than a kite, but in the open circle, I feel...chewed. I get weaker and weaker as the space opens up until, at the peak of the clarity, I realize I'm a ghost in my own skin, my own shade haunting my flesh. I'm...unwell.

I've never seen somebody around my own age in the circle. Laurie was compelling clothed and in normal space. Naked and in the circle, she's every woman I've ever seen, combined, squared. She's amazingly easy in her skin, not the nudity of girls in the shared showers, but naked. It's fully sexual (Peter approves and Annie is at least appreciative) but it's also...just Her. She's just being who she is.

Peter and Annie hold hands, and smile. After a few minutes, Peter leads her to the bed and sits down. She puts her head on his lap, and curls up like a cat. Peter absentmindedly strokes her arm, and they look like lovers. I can't quite tell what's going on here, perhaps it's not my business.

However.

Laurie's beating a small drum. On every stroke, her breasts, below the deep tan-line of her t-shirts, jiggle. I fall further into trance. She's walking around me very slowly, and she occasionally reaches out and touches me in a very probing way—between my shoulder-blades, top of my neck, just above my groin. I'm erect but I don't sense any immediate... it's not quite sex, whatever is going on.

"Lie down."

There are a couple of large cushions on the floor, square, flat pillows. I lie down on my back, and she lies down beside me, and presses into my side. She puts a hand on my forehead.

"Breathe."

Slow and clear, like breathing for meditation. Laurie synchronizes her breathing to mine, and slowly, slowly something begins to happen. We're physically close, skin touching, but the sexual heat begins to change, and...we start...to... merge.

It's like sex. It's very, very like the best parts of my time with Emma, but we're not fucking. We're lying there, and she's inside my world, and I'm inside of hers, and we're entangled, but there's no...sex. I feel good. She starts to hum softly, a low constant tone, sometimes higher, sometimes lower. Sometimes Peter and Annie will join in on a note, and I realize that this is a practice they all know, something I haven't seen before. This is ritual to help me.

I'm slightly disappointed in that woman. Then I'm chastened that I'm thinking with my dick, but what did they expect? Nobody seems to mind.

Laurie gets up, and moves to my other side. She lies with her head on my heart, ear to the beat, and taps her hand on the ground at each beat. My heart slows down in response. I feel love from her, a tenderness and a care, and my breath changes, deeper, fuller and easier.

Eventually, she gets up and puts on a bath-robe. Peter and Annie excuse themselves. "See you in the morning, Peter!" and Annie says, "good night, kids!"

They walk out arm in arm, a pair of happy con artists.

Laurie and I sit on the bed, close. The sexual heat is completely exhausted, there's nothing there but an enormous tender intimacy. After a while, as the night closes in and there's a slight chill, she gets up, changes into soft white pajamas, and gets into bed. I find my underwear and join her, and we curl up under the blankets, and I sleep like...life is worth living.

I wake up in the morning, and she's gone. There are a couple scones on a tray and a glass of milk beside the bed. I sit up and try to reach the milk, and I'm almost too weak. I don't feel ill, I'm just...weak, tired. Hungry! I get the tray, eat the cakes and drink the milk, and curl back up under the covers. What the hell is going on?

About half an hour and Annie comes round. She knocks on the door, and a second later opens it pokes her head in. "How are you, young man?"

"So tired!"

"My girl take good care of you?" she says, without the slightest trace of sexual innuendo.

"Yes, I'm...better in the heart?" I say, a bit quizzically.

"Sure, good, good. OK, lunch soon, come and get it," and she's gone.

After a few minutes, I feel a lot better, and get out of bed. I'm wobbly, but hale. Annie's outside at a table on the deck of the other cabin, and I sit down opposite her. She serves me a very substantial hamburger ("Never touch them myself!") and more milk, then honey and yogurt. She herself has a salad and a sandwich.

"Don't worry, kid, we got you covered."

I shrug, then say, "I don't understand anything, do I?"

"Well, you've figured out the problem, and you've got over a very nasty hurdle, but we'll see how you're doing when you're the old man's age, eh?" and laughs heartily.

It's good to not feel in control right now. It's good to be taken care of. This is all very right.

Peter and Laurie come in half an hour later, have a sandwich, and then walk into the woods together. Business, business.

In the evening, they leave Laurie and me alone again, and again there isn't enough sexual tension to light a match, but she's very close to me the whole evening, as we sit and talk, and we sleep in the same bed, curled up.

I wake up in the morning, and this time she's still fast asleep, and I don't wake her.

I get dressed and go and find Peter. He says, "Well, son, just about ready to get out of here?"

"Well, the company's very nice!"

"Isn't she great?" Peter looks at me in a very direct way. "Behaved yourself, son?"

"Yes, yes, but..."

"I'll explain later."

Laurie's up and about half an hour later, and Peter hustles us out and on to the road. He and Annie have a fully five-minute hug, then part and don't look back. Laurie holds both of my hands on her heart, and says, "you're beautiful, Harry, and I'm so glad to have met Peter's nephew. Take care!" and, just like that, they're gone.

Peter drives the van down the dirt track in manual. Half way down, I say "Peter, what was all that?"

He slows down for a moment, pauses to think and says, "They're healers, Harry," as if it was a complete explanation.

Then there is only silence.

I no longer feel dead, and I'm no longer confused about what comes next, only what has gone before. I want to go to college.

Forty-Five

I am no longer a Senior Cadet. I'm a college student. Cognitive Anthropology.

I realize I'm going to go utterly insane exposed to too many former Senior Cadets, so I pick a liberal arts college with a heavy bias towards people returning to education in mid-life. It's in Ottawa, Canada. Four years of Eh? and nice, nice people. I live in an apartment with two former nuns in their fifties, which is a constant source of amusement. They're a couple, broken out and headed for the real world. We have a lot in common—we all like women. It's very...collegial, an easy companionship between people who are so different on the outside, but share the same basic cultural cast—out of the system, out of the game, outside.

Laurie and I meet a couple of times a year. We don't have sex, although we do kiss once or twice. Peter and Annie explain the details on a later trip out there, the concepts of tantra, the non-western renderings of Spear and Cup, the different conceptions of male and female roles. It gets a lot clearer. I start to understand sexual energy as a choice. I have girlfriends. They also understand sexual energy as a choice. Life is, hey, good.

Cognitive anthropology is riveting, filling in the gaps, the background. And the people are still humans, still free to think, while on the US side, the New Senior Cadet Induction cohort, eleven years of them by now, start to march into business and government, solid, patriotic citizens, not overly given

to religion, not overly given to dishonesty, start to march into history.

They are very, very good for America. They are friendly, they are cooperative, they are upstanding, honest, and they have no souls. We've brainwashed our way to a better world.

I hide in Canada, and I wait, and that's four years of my life.

I won't tell you about the time I walk in on the nuns. It wasn't good.

Half way through the last year, Laurie comes to visit me in Canada, and we have sex. Magical, ritual sex. Sex that peels the stars out of the sky, and puts them in her eyes. Then she tells me that she's going to marry somebody else later in the year, and wanted me one time before she fell into monogamous partnership.

Strangely, I'm not only not heartbroken, I'm grateful to her, pleased we got to have the experience, and happy to see her happy. It's one of the best things to ever happen to me.

I graduate.

When I look back later, I wish I'd been in a world where every year of my life had so little to report, had so little strife, so little anger, so little grief, and so little had happened.

Then I go home, after four years on the sidelines, and I'm back in the thick of it.

Forty-Six

Dad suggests Africa.

I'm twenty-three years old; a Senior Cadet (liberated) with a degree in Cognitive Anthropology, which is exactly the right field for understanding what's happening to African societies from the quad-pressures: climate change technology, the colonial powers (now including China), America and Europe 2.0, and demographic collapse.

There's a huge population cliff approaching, as the huge AIDS vaccine generation approaches old age, completely distorting their societies. It's a good topic.

Dad has a better idea.

"There's a group that's been working with State, a charity," I wince, "that's got a very successful methodology for rebuilding society in refugee camps, working with the traditional wisdom people of those cultures. I think you'd like them. A lot."

There's a soft click as he says it, and I know I'm back in gear. This is What's Next.

Sure enough, it all makes sense. They have an opening for a field guy, there's no problem with funding, they're funded by the State Department, a different division from Dad's people. It all makes perfect sense, the job could have been made for me.

I suspect the old men have been at it again, but Dad denies everything. "I just heard about it, I didn't twist any arms."

He's aged a bit in the last four years. Hair's starting to go gray. Mom's the same. The girls are in their final and next-to

year of high school, and—thank God—neither one is going cadet. It wasn't very likely, but it was possible. They're free, it's their right.

Peter's in a rut: he's not aged a day, he's in the damn van, he's failed to either settle down or make any progress sorting his life out. But he's...happy. I don't know why, one of those "blows against the empire" things seems too small to me, too subtle to really matter in the grand scheme of things. Even if what I've learned about our brainwashing turns out to be transferable to others, which I doubt, wouldn't they be better getting out of the country and waiting for it all to pass?

And, really, are the Senior Cadets so bad? Are they really? I'm sure we're crushing a lot of delicate artistic souls under the boot here, but I'm also becoming acutely aware of how good the Senior Cadet program has been for our country. The Marching Morons are straight-dealing, civic-minded citizens, and they're cleaning house. The older generation of crooks, thieves and liars better watch out.

Not that I voice that to Dad and Peter, and not that I'd change a thing about the course they took with me. I knew there was a price to pay, and I wouldn't be the man I am now if I hadn't paid it.

Man. No doubt about it now. If there's a line, I'm way over it. Only thing I haven't done is had kids.

Forty-Seven

Spring, 2067. Kinshasa's been through boom and bust so many times I'm amazed it's still in one piece.

Our office is on the 47th floor of the one real skyscraper, a tubular steel construction of 120 floors which is visible half-way across the country when it's lit by lasers from the roof. The top two floors are obscene parodies of a pagoda, with Chinese formal gardens inside. There's an atrium, and it's infested with singing crickets and Chinese fast food vendors. You can even buy little busts of Chairman Mao from Nigerian vendors with carts up there who have no idea how offensive what they're selling is; they only know that people smile and buy them. The buyers can't believe they're on sale.

Oh, Africa, Africa!

The Chinese did a lot of work when they were running the place, then left when they had...trouble at home is how they refer to it here. A lovely euphemism. But they did get this building up, and their influence is everywhere. Then there's a European layer, from the commercial adventures of the solar revolution, and then they too had trouble at home. The Russians never got to their holdings in Africa, mind you, so quite a few European expats still litter the place.

Then there's us, the Americans, New Manifest Destiny mandate edition. There's a thick layer of US military, mostly hardware, over the entire damn continent, as there is everywhere off-grid, and if it's not the US it's the Chinese or the Europeans or the Russians or the Japanese or somebody.

There's not a square meter of Earth which isn't checked at least once a year by a remote system looking for labs.

If it's not on camera, all the time, by default, streaming, somebody will make sure it's examined. Once in a while, maybe every five years, a mobile lab is discovered on a ship or even in a truck, usually selling designer embryos or growing organs for people too stupid to die, but we've all agreed—the Global Consensus—that biotech and nanotech only happen off-planet. There are a few exceptions, traditional crop varieties which were engineered before the Second Holocaust, and that's it. You can't buy precursors, you can't assemble a single base pair, you can't sneeze a replicator without getting carpet bombed by Global Peace & Love, Inc. Sometimes Dad does the raids, about once in five years, if he's really lucky. State Department often have the only hard assets out here: we're a long way from the war zones.

We've had thirty-five years to seal this planet up tighter than a drum, and it's exposed damn near every other dirty, filthy evil thing we're doing. Transparency is Hell.

I'm sitting by my desk, staring out of the window at the smog. They're burning coal to run the city during rainy season. They don't have enough panel capacity—well, enough batteries, really—to keep the city running full throttle during the low sun periods, so they supplement with coal. It's insane, it's very nearly unique globally, and once in a while they try to sell it as a tourist attraction. Weather control is good enough they can chance belching out a few megatons of carbon a year without unleashing the climate again. Good old Kinshasa. African innovation at its finest.

My 2:30 is late. This is expected. It's not a date, so she's not going to be on time. "Julie" Mbele, project manager for a US construction company down here, trying to help us get access to Orientale Province, site of the biggest refugee city in the world, Kisangani's shadow city, Harappa. Four-and-a-half million people occupying a huge area, tied together with bamboo-and-solar public trans, making most of their own equipment. But it's off-limits for political reasons. I want in.

Mbele arrives. She's a couple of years older than me, but a straight-up-the-ladder corporate school type, she's been with KBR since she was four years old. First as a ward of the company, then as a paying student, and now as an executive. She floats into my office in a cloud of perfume, nails like red claws, and an '80s retro power suit. Congolese fashion is brutal. I can't really stand her, but she's holding the keys.

"Vine, dear Harry Vine, how are you sugah? Kiss kiss!"

God save me, I mug for her. "Julie, Julie, you're keeping me lade, mistress!"

She loves it.

"Right, now, Harry, down to business, I don't have very much time. Explain to me what you want to do in our camp? Tell me simply, in my terms!"

Three degrees, two from Harvard Network, and half way through a PhD. She loves her games.

"Well, simply, we want to find the oldest people in Harappa, and we want to find out what they remember about life before the camp, their old countries, their language, and their way of life. It's straightforward cultural anthropological research. A lot of talking into recorders and smart databases."

"Yaaahs, yaaahs, I see, I see, I see, yaaahs. But why, what good is a bunch of old people talking to you on a recorder? Who is that going to help, and who's paying you to do it?"

The tricky part. "Well, if our research pays off, we might be able to halve your security bill in the camps."

"How?" At least fifty percent of the act is gone.

"Why do people commit violence?"

Oops, wrong move. "People are born with Original Sin, Harry, their devils make them do it!" Wrong, wrong, wrong move. No save possible. Well, maybe...

"Well, where those devils are in their heads, we can sometimes find angels in their traditional stories and culture to fight back, and we can bring those angels back into common parlance, change the language to re-include them in the culture and common speech. Proverbs, say."

"Ah! So you're mining for positive stories, and then retelling them inside of the host cultures? This is most ingenious, most ingenious, I shall do everything possible to make this happen. Kiss kiss, Vine!"

And, with that, she's gone, and we're in. I call Peter briefly.

"Looks like we're set!"

Always the joint, the cloud of smoke. He's spending more and more time at Mom & Dad's now, sometimes helping with the girls (who are, very slightly, falling under Laurie's influence, but with no Induction for them, there's no real incentive).

"Harry, that's amazing, well done! You're going to have a whale of a time, a whale of a time. Remember what I told you!"

"Yep. Be careful, This Is Africa. I will, I will."

The hell I will. This Is Adventure.

I'm going to the camp as soon as I can, and I'm going to get my teeth into the first really tangible, worthwhile thing I've ever done. I'm going to make a difference. Mortals plan, and gods laugh.

Forty-Eight

It takes about six months to get everything ready, which is to be expected. My employers know how long it really takes to get buy in, and it's more than a five-minute meeting with a junior executive. But, by the by, the wheels turn, and the team finally gets the go-ahead and all the logistical and governmental support we're going to need. Four of us from the charity go inland. John McGregor, a linguist and ethnologist in his early fifties, from South Africa, the team's wise elder. Sally Yevish, a former State Department security expert. Thomas More ("not Moore") runs the cameras and analysis software. In addition, we have a bus-load of school teachers, doctors, nurses, social workers and all the rest, seconded to the project or hired. They're all fluent in English and at least two of the region's teeming languages. We still don't have fully fluent translation software for most of Africa's languages, so you need local translators to guide the machines, essentially to answer context questions for a large corpus translator that simply guesses from ten million prior examples. This is real, wet research.

The trip to the refugee city is easy enough—we charter a plane, board in a gleaming airport with wildlife on the concrete runway, and will set down two hours later on a landing strip of woven metal nailed to a strip of mown grassland.

We're maybe five or ten kilometers from the river, slowly circling over an almost continuous spread of small hexagonal metallic huts which stretches to the river, and for some distance in either direction on this bank. The sea of

identical metal roofs is dotted with larger domes and a few container-stack medium-rise buildings, three or four units high. The impression from above is of a tinfoil honeycomb, it's so regular and uniform. There's a spider's web of towers with transit cables hanging over the city, crazy-paving the landscape in no discernible design. It's so decentralized you can't point to a focal point of any kind.

It's home to four-and-a-half million refugees who've been there for twenty-five years, since the last time Africa exploded into a frenzy of bloodletting, triggered (I suppose) by the aftermath of the Second Holocaust on paper, but really, as with everything in Africa, it's ultimately down to colonialism and a shortage of resources and education.

Harappa was supposed to be a better approach to resettling refugees. The idea was to make them economically productive: build a city, make them self-sufficient. Refugees no more.

The area was "underdeveloped" according to various indexes, and the Harappa project started with financials showing that with modest investment from the international community, the "resettlers", as they were termed, would be on average more economically productive than the average resident of this part of Congo.

An Indian team set up a containerized factory in Kisangani and simply manufactured a hexayurt city as refugees arrived. Once there was enough skilled labor, they packed the factory up, drove it to Harappa, and hired locals for most of the labor. They built their own houses and infrastructure as they arrived, the city and labor force scaling together. Very organic, very industrial. Very India. They used the Indian transport model too—a few roads for freight, and a mass of self-driving robo-rickshaws suspended just above the houses, running on a cable network.

We haul our own bags out of the hold and on to the van that meets us at the airport. It's remarkably busy: two more planes land after ours in quick succession, small electric numbers running back and forth to other cities. I see suits

who you'd never know were former refugees fly out, and think "well, if they choose to live here, how bad can it really be?"

I'm about to find out.

Forty-Nine

The original Harappa was a fortress of twenty thousand souls in ancient India. For its time it was huge. Our Harappa is not fortified, but it's just as impenetrable: it's a maze. The van drives into the city with our luggage, equipment and two of our staff. The rest of us are going to take "skytrans". Immediately, the lack of any kind of real center becomes clear. We queue for a few minutes on a gantry, fifteen feet up metal stairs, on a narrow deck. We have a destination station number that we punch into a console, and set the number of passengers to twenty-five. Soon enough robo-rickshaws arrive, rickety plastic-covered gondolas suspended from a single rail. The ride is surprisingly smooth, as we set off down the cable run to the edge of the settlement.

Once we hit town the suspended rickshaws scatter, the cars snaking across the low tower network, skimming over an enormous uniformity of silver roofs with green-painted doors, some decorated with colorful sculptures, presumably so people can recognize their own houses. We're at most twenty feet above the ground. I consider unlacing the plastic roof to get a better view of the ground, but we're only going to be up here a few minutes. There are narrow bicycle paths below us, mostly become playgrounds at this time of day, just after school gets out.

The uniformity of the inhabitants' dwellings is not matched by their clothes: the people on bikes or occasionally scooters below us wear literally everything. Far more diverse than Kinshasa; much brighter, wilder colors. They're like collages. I

feel they might be compensating for the crushing awfulness of the architecture, but it's more complicated than that, as I find out later.

The kids below us look happy and healthy enough. Out of the rickshaw window I watch them in the streets, and it's more smiles than fists. Ball games look friendly rather than fiercely competitive, and a plane-load of professionals coming into town isn't an object of wonder, if they can see us in here.

At first blush, I have to say the city seems to be working for its people.

The rickshaw keeps changing direction; a random walk over the network of elevated rails, which are on a (God help us) triangular grid. The system's supposed to be more efficient that way. It bounces a little at every transition.

I can clearly imagine Dr. Goppti (the original planner of Harappa) wagging his head in celebration of the awfulness of his construction. I've watched his original pitch for this place: his vision of a scale-free centerless city violates every tenet of conventional wisdom on architecture and urbanism. He was old even then. He must have been seventy when they started; pushing a hundred now. He was fascinated by our research when I called him a month ago, and remembered Peter's visit to India thirty years ago. He asked me how my meditation practice was going, and mentioned that he taught my father. He thinks I'm Peter's son! All I can say about the old duffer is that he was well-intentioned when they started this, but it's probably just as well he's too frail to travel here. I'm not sure he'd approve of how it's all turned out.

We arrive. The rickshaws pull in, one after the other, to another metal gantry. We disembark, waiting a few minutes for the last of the rickshaws to arrive at the station, and walk a couple hundred meters to our compound, glued to our remotes so as not to get lost in the maze. People's huts open directly on to the path we're walking down, dusty in the sun, and they stare as we walk past, not with curiosity, but with a sort of reserved watchfulness. Not unfriendly, but not welcoming.

At the gate, our biometrics are already loaded. We pass through a four-meter-high fence, no razor wire on top mind you, into our home for the next six months.

The compound has a four-story container stack of offices, a secure container for off-site comms, and two dozen or so of the bloody silver huts for the staff. They're still setting up the huts when we arrive; a truck with a crane takes folded units off its back, reaches over the fence, popping each unit open as it goes, and positions them on hexagonal bases screwed into the mud with big silver flanges on each point, leveled roughly by eye by a team with manual crank handles for the ground screws. Simple, modular, mass-produced. It's a Fordist (Henry Sr., not Hank the Deuce) revolution in housing, with only one result I can imagine: insanity.

It takes the van with the bags another half hour to turn up. The roads, few as they are, are exactly as congested as roads are anywhere else in the world. The price of road transit is what the market will bear.

Our "concierge" leads us on a brief tour of the compound. He's about my age, maybe a little older, almost jet black. Slacks, safari jacket, big shades, and, so help me God, a pith helmet with a little fan running from a solar panel. The heat is not oppressive after Kinshasa (the metal roofs, perhaps, reflecting the sun?) so it's almost pure affectation.

"Here's your water supply, you see we don't bury the pipes deeply, when we need a new supply we just pull the soft pipe up and screw in some more taps. This box over here is the filter, you can check the health of the system on the side, there are lights, so if the water in the pipe is for some reason contaminated, your filter will fix it. We do everything that way here: point of use utilities."

"Each one of your homes" (he avoids the words "hut", "yurt", "hexayurt" and so on), "has a solar collector on the outside, and a building-integrated solar cooker. It stores heat for several days, so you should always be able to cook, even at night."

We walk over with him to the toilet block.

"Solar pasteurizing toilets. You use it as normal, but there is no flush, there is a replaceable paper cone. The toilet drops its contents into a sealed bay, which is heated by the sun and pathogen-free after only one day. Once every few days, a person will call and collect the waste, and credit you with the value of the embodied energy."

They run a city half the size of New York on this basis. Almost everything is one low story because if you block their access to the sun too much, the toilets don't work and the food is cold.

I begin to understand Goppti's maxim: "The city is a human jungle. All life is present there." They compete for sunlight; his design is architectural socialism.

I want to punch the bastard. This is madness.

Our guide finishes by explaining the hat. "Our culture honors the original users of this building system, an American town called Black Rock City, which prototyped much of our lifestyle technology. We imitate their dress and manners, and, once every year, throw a week-long party in their honor. Welcome home."

He leaves us to unpack. Somebody will be by to cook us and the local ground team dinner later on.

Twenty minutes later, I sit leaning against the flat hexagonal wall of my low hut, examining the sparse interior as I try to take it all in. The furniture is made from identical square-section stock, bolted together. The fixing points run all the way down every piece, so you could convert the bed into a table, the bookshelf into a chair, or merge the bookshelf, bed, bedside table, chair and desk into...pretty much whatever you wanted. It's all rock-solid and dead simple. The little logo on each piece says "Gridbeam."

It's then I realize that these people really are refugees, and this really is a refugee camp. Suddenly Goppti doesn't look so crazy after all. I imagine a sea of tents, lined up in identical north-south aligned rectangular rows, metal camp beds, central wells, sewage and food trucks coming by once every few days, and endless lines, queuing in the sun for every little thing, people sitting around waiting for help. They did this

on about the same budget, and the people all around me, stretching to the very horizon, built it with their own bare hands. It's a refugee camp: none of these people have history or roots here.

We dine at a long low trestle table set up outside. It's protected from the rain by a high canopy, and from bugs by the usual anti-mosquito lasers, not that anything will have made it this far inland from the river. The camp's dotted with defenses.

At dinner, we begin to map the social structure of the camp-city. The local political reps (not mayor, they're doing something more complicated, surprise, surprise!) explain "reassortment"—people with similar values simply exchange houses, until pretty much everybody likes their neighbors. Everybody has a remote, a bank account, a population profile. Systems match buyers and sellers of not just goods but services, so it's hard to remain idle if you have even one skill, like braiding hair, never mind the people who were lawyers, doctors, teachers in their previous lives, and are again, if they've not reinvented themselves. The bigger domes we see dotted around are not private spaces, but community buildings, built using the same panels as the ordinary housing stock—a single system for everything here. The math is taught inside the domes constructed using it: convex tiling, rather than Fuller's spherical trigonometry. They still teach using the Harriss manuals.

On paper, it all works. But these are the political elites, those elected to make decisions on behalf of the collective. They're the winners. Our job is to find the losers, to find the unhappiest, most violence-prone people in the camp, and try to improve their lot from their own (or, just possibly, their neighbors') cultural resources.

The locals like our plans.

"Ah, Dr. Vine," (I don't correct him, he's in mid-flow) "you're exploring our cultural dislocation, the underbelly of our cosmopolitan lifestyles." He's not entirely joking—they're from all over Africa, some from families which were in camps in Kenya for nearly a hundred years before moving here.

“Yes, yes, there is a lot of dislocation, such a radical change from our old lives. But anybody you see here from around your own age down was born here, they’ve always lived in an environment of substantial material equality with their neighbors, they’ve always had reassortment as an option—a Muslim neighborhood observes limited Sharia law, say—and they’ve always had collective purchasing of food from our agricultural neighbors to obtain best prices. This is to say that they’ve never been “poor” in the sense you would expect, if you see what I am saying, and that helps minimize the other kinds of tensions you would expect in our transplanted population.”

It sounds too good to be true, and we find out that it is.

Fifty

The work goes well for four or five months. I settle in to the routine of Harappa. You spend a fair amount of time adapting to the infrastructure—somebody has to let the toilet guy in, somebody has to check the water filter is correctly functioning or it simply stops delivering water until checked—and the city's internet is bizarre. It's a 4.8-million-node mesh with a replicated copy of almost every human-readable data resource on the planet. Most of the time they don't touch the real grid. It's 2067, but in many ways they're living in a tribal past.

I've gotten side-tracked studying war veterans, the actual fighters. They're by far the worst-off demographic here, and a lot of it seems to be tied up with the cult of Guembe, a failed African warlord from a generation back.

Here's a typical interview.

Sot Bjekrall, former South African.

"None of this means anything, man, none of it, nothing. What's real is out there on the plains, on the veld, it's the lion and the gazelle, that's us, we're the lions, and the civvies, you see, they're gazelles. And here, in this shithole, no proper toilets or anything, here we can't hunt. Everything is tagged. Everything is filed. You have a fistfight with some guy, they send you a bill for his medical expenses the next morning. You don't pay, they won't let you eat, nobody will sell you food. It's a prison, man, a prison camp. No freedom, no justice. I am in hell."

There's a lot of these guys. A century of war, particularly civil war, multiple generations of veterans. I'm fascinated by it.

I ask Dad.

"Guembe? Yeah, yeah, I fought him. That was a big part of my war. Nasty, nasty people, they used to skin their victims and eat them alive, in proper order so they'd still be screaming through dinner as music. One of the few times I never regretted killing was dealing with their troops."

I'm shocked. This is a side of the old man I've never seen.

"Where possible we'd use artillery on their camps so we wouldn't have to see what they'd been up to when it was time for cleanup. It was that bad."

I think about the enormous war on women, the bloody sexual mutilation which was normal in the Congo in war until pretty recently, and think about the children of such unions. What dark god would they worship?

Guembe, the undead lord of the night, the spookfather, the author of nightmares all through Harappa. I'd found my research topic. We came to supply the lack of positive myths leading them forwards, but I'm finding the real problem is negative myths holding them back. I want to understand it. Guembe's long dead, a confirmed kill decades ago, but the zombie form, the mythic version, lives on.

Perhaps we could figure out its weakness, and kill it too?

Fifty-One

“Harry, take a look at this!”

John and I are sitting at a terminal, inspecting what the semantic systems are recovering from the network. It’s... interesting. To say the least.

We’re watching a series of interviewees, telling their versions of the Guembe cult story, forty or fifty of them in thumbnail-sized silent windows. Tiny talking heads. John’s correlated it to the comms grids, and it turns out that they’re a widely-scattered social network. They talk to each other far, far more than they talk to others, and John’s sure from the comm patterns that if we look in more detail, we’ll discover they’re socializing face to face too. It seems that the Cult of Guembe is more than a story, it’s actually a religion. They’re talking, meeting and probably even worshiping together. I suppress a shudder.

I don’t want to ask the question, but based on this, I must.

“John, do many people go missing in Harappa?”

John startles. “Sally asked me just the same thing earlier on today! And, yes, the answer is yes. Two to three hundred a year just drop off the sensor grids, they cease to exist. It’s assumed to be people leaving the city, moving to other towns without closing out accounts here, but...”

We’ve reached the same conclusion. Guembe lives.

I suppose, at the time, I’ve fallen into my own colonialist mythology. I think this is an African problem that I can solve.

It’s not. It’s a human problem, and I am just as human as they are.

I make my first mistake. I don't tell Dad. I know he's going to regale me with war stories, and I don't want any more reminders of what he spent his life on when he was my age. I want to think of the man who spent his days watching food stockpiles, not the one who stomped peasant armies into the mud with a five-ton boot. I just don't want to know what he did in those days.

My second mistake: I get curious.

Fifty-Two

I'm talking to the Camp Communications Chief. He's a nervous, shy fellow, for a telecommunications exec running comms-and-compute for a major city.

"I suppose we could do what you ask, Dr. Vine, but it seems like an extraordinary allegation. You really are suggesting that former soldiers have formed a...cannibal cult... here in the world's most enlightened refugee camp? I feel that I would have to have some...tangible evidence...before I could accede to such a request. After all, our citizens deserve some privacy, do they not? And your group has already collected extremely extensive data and access to our communications records. I'm afraid I can't authorize complete network access to these people's lives without some evidence of wrongdoing."

I've overplayed my hand. But I'm on my own here. Sally Yevish thinks this is strictly about our security, and as long as none of us are going to get cooked, eaten and killed (in that order) she isn't going to interfere in this.

John won't touch it with a bargepole. "Positive myths for four million people, or a collection of ghost stories from vets with PTSD, Harry. This is not why we're here. Let the dead bury the dead, we can't help these people."

He means the veterans. He's probably right. But we could be protecting their victims. Thomas More believes me, though, and is supportive.

"I think your request is perfectly reasonable, Harry. They want evidence before they'll open the kimono on this, and

odds are most of those three hundred people are simply leaving down on their debts. I think we do need evidence to take this further. So let's get some? Deal?"

Eminently rational, Thomas, eminently rational. How?

Fifty-Three

And that's how I come to join the Cult of Guembe. I alter my history—I'm now a combat veteran with a tour in the service, fighting up north in Nigeria as part of a peace-keeping detail. I reactivate the Puppet, and put on the smooth, bland face of a murderer. I am Sot Bjekrall at twenty-five, I am a man with nothing. I am not me, I'm him. I fold the origami in my mind, and put it between who I am and what I'm about to do. It's disturbingly easy to slip out again, peeking at the world from behind my Puppet. This is easy.

Sot Bjekrall is my weak link, my way in. He's one of the few White Guembe followers—Guembe himself was black, and probably a Nigerian although nobody but the CIA knows for sure. Sot wants to believe that the rich white boy with the aid project is secretly just like him, the washed up old racist.

"They are not laik us, Harry, they are not the same."

This I am expecting.

"They are better, the black ones. Tallar, stronger, and they are so very smart, not stupid book learning like our people, but real intelligence, about what is good in life. When I die, I want to be born black, son of the land, six foot six tall in my stockinged feet, to live the good life, as God intended. We are mutants, Harry, little albino bunnies that burn in the sun. Do you think he will let me be black next time Harry, if I atone for my sins? Do you?"

He's almost bellowing at me, and he's very, very upset. It's been suspiciously easy to get him to open up: one story about

a murder I'd committed during my field time in Nigeria, executing a prisoner of war, and most of two bottles of whiskey. He can drink.

"I will tell you a secret, my son. Guembe lives! You can meet him, at the next dark moon."

I look blank.

"Thursday. Come to my hut at dusk, and I'll show you how it really works around here. Bring another one of those, boet," he says, gesturing at the whiskey.

OK then.

Thomas is more worried than delighted, and spoils my mood. "Harry, if you're right, these guys are really dangerous!"

"Yes, but they're not going to cook, eat and kill a western aid worker with State connections. I'm going to go, look around, see some sights," I gesture to the tiny cameras that Thomas has decked me out with, "and we're going to get comms access and roll these guys right up. It's going to be fine, at least for us."

Fifty-Four

I come to Sot's hut at dusk on Thursday, a little early. I'm carrying a bottle of whiskey, a sedative dart gun, and the biggest knife I could find, sheath taped to my forearm hidden under my jacket.

Sot's with two friends, both younger than him, Jake and Izzy. They're maybe about thirty, but it's hard to tell, because of the hollowed out faces, the sunken eyes. They look like corpses. Both have ritual scars on their faces and arms, deep cuts indicating sacrifices before battles. These guys are the real deal.

"Harry, give my friends a drink here, boet" and I get the bottle out. The dart gun seems like a good idea. Sally Yevish is monitoring the feed, she's thirty meters away and on this if anything goes wrong, but things could move fast. Sot's sizing me up again, deciding.

"Harry, are you really serious about this? You know who Guembe is, what he's like? He was a demon in his time on Earth, and he is a demon still, but he is our way home mate. Do you really want to know how this all goes, son, or are you a fookin' tourist in hell like the rest of you fellows?"

Now or never.

"I shot a man in the face, Sot, and I damn near came in my pants. You're the first man I've ever met that knows what it's like to be a killer confined in a zoo. What do you have for me?"

"Finish your drinks, boys, let's go. Harry, excuse the security, but you know..."

He indicates that I should stand, and Izzy produces a rough set of manacles, plastic ties with which they bind my hands behind my back. They don't search me. "Just a precaution, boet."

Nearby, Sally watches cautiously. This is escalating. However, she's carrying a gun, light body armor under her civvies, and has a couple of gas grenades. There are hard limits on how wrong this can go.

They're on the move.

Harry, Sot, Izzy and Jake step out into the darkness. The houses have tiny lights on their perimeters which light up as you walk past, but the lights point down. You can see your feet, but that someone's hands are bound. The paths are mostly empty right now anyway, people are inside eating dinner. Sally can't exactly tail them, but she walks up a parallel street, and imagines a short scramble over the low roofs if something goes down. It's not far; eighty meters, perhaps a hundred.

They walk about a kilometer, into another hut. The smell is overpowering, shit and fear, it hits Harry at the door. His Puppet smiles for him. "Who you have in here, Sot?"

Sot smiles and says "you, boet," and pushes him inside.

The light comes on, and it's as Harry feared. There's a young girl, tied to a chair, with—of all things—a rubber dog toy taped into her mouth as a gag. She's been badly beaten and looks terrified.

Harry notices the soundproofing on the inside of the hut. And the blood stains on the floor, and a pile of gristly bones in one corner that could be from dog, but are more likely...yep, it's a child's skull. Harry would be sick right now, or shaking in fear, but his Puppet is calm.

"Well, now, Sot, we've got everything we need for a party here mate. Where's the whiskey?"

Sot pulls out the bottle, and, satisfied that Harry has the Right Stuff, motions to Izzy, who slips off the cuffs. Harry takes a long swig and thinks, Well, we've got the evidence now, Sally is going to be right outside in about two minutes, we can do this."

He pulls up a chair and sits opposite the girl, staring into her eyes. She sees the Puppet and is very, very afraid.

Izzy comes around behind the girl, takes a length of rope, and winds it slowly around her neck two or three times. Grinning at Harry, he begins to tighten it. The girl's eyes bug out, and she thrashes against the chair. She begins to go rigid, stiffen, and Harry knows that after that she'll pass out, then die. He's not going to sit here and watch that happen, but before he can act, The Puppet steps in. "Eh, boet?"

As the girl's brain is deprived of oxygen, the blood no longer able to reach it, she shudders and falls forwards. Izzy unwinds the rope, and holds her head up.

"Izzy's a strangler," says Jake, speaking for the first time. "I'm a cutter." He motions with a straight razor he pulls out of his pocket. "I saw them cut my mum, and it's my thing now."

Sally has had all the time she's getting. Harry trusts she's on the feed.

He stands up, and walks behind the girl's chair. He gestures to Jake, says, "May I?" and takes the razor. He opens it, and dangles it by the handle, swinging in front of the girl's eyes. "Sally! _Now!_"

Harry brandishes the razor like a knife. They're not going to touch her.

Sally is standing outside the hut, taking in the blow-by-blow. She's got the pistol pointed at the lock, and what she judges to be a safe angle, going by the look of the room from the feed. Two rounds and the lock is off; she boots the door open.

Jake's very fast, in motion as soon as Harry yells. He grabs the chair Harry was sitting on, and levels it into Sally as she enters. Sot's not so fast, and Harry ducks the bottle of whiskey, and drags the girl backwards out of the fray as Izzy...shit...smashes the razor out of Harry's hand with a club. Harry retreats fast. Izzy ignores the girl and follows.

By the door, Sally's gun swings on its leash as she struggles with Jake. Sot's doubling up on Sally, trying to grab the gun as Jake grapples with her, trying to keep her arms under control while Sot gets to the piece.

Unbidden, everything that Peter's taught Harry clicks in, and he peels the knife off his forearm. Izzy backs up at a foot of steel, but orients and in a moment Izzy is pushing him back with the stick, swiping for the knife blade, going for another disarm. Harry keeps his distance. He's lost the razor, and he's damn well not going to lose the knife.

Harry knows he has to get to the gun. He keeps his distance from Izzy and backs away towards Jake. As soon as he's in striking distance he instinctively sinks nearly a foot of steel into Jake's back as he's grappling with Sally, landing the knife just above the kidneys and twisting sharply up. Jake screams, and is dead before he falls. Harry shoulder-barges his corpse to one side to get at Sot, whom he slices across the abdomen, not deep enough to pierce the fat layer. Sot falls backwards and sits against the wall, horrified at the sight of his own blood, trying to hold the wound closed.

Sally immediately points the gun at Izzy. He freezes. Jake bleeds, Sot tries to hold his stomach together, and Harry stands there, panting, the dripping blade in his hand.

"Jesus fucking Christ, Harry, what the fuck?" Sally is shaking. "You've killed him!"

Coming from a woman waving a gun, Harry's surprised at her shock.

It's then he realizes that he's perfectly calm.

He's standing there having killed one man and perhaps mortally wounded another, knife red in his hand, perfectly calm.

Sally, on the other hand, is freaking out.

Harry walks over to the girl, and cuts her free with the bloody knife. "What do we do with these two, Sally?"

Harry realizes that, actually, he's in trance. It's not the blood, it might be the killing, but it feels more like history, like something coming. He's rising to the occasion.

Sally thinks. "Dart him"—indicating Izzy. Harry complies, pulling out the tiny plastic pistol. He fires, barely audible, and the dart barely a speck. Izzy slumps to the ground in two seconds. Harry is more impressed with the dart pistol than

he expected, so he keeps it out and puts the knife back in its sheath on his left forearm, handle down.

"Sally, we have the entire thing on tape, it's self-defense." Is that what's freaking her out? Murder?

Sally says "Yes, I know, you did what you had to, it's just... I've never seen anybody killed that way before, hand to hand. He was staring straight in my face when he died. Jesus, it's fucking barbaric." She toes the body in disgust.

While they're distracted, the girl tries to run for the door. Harry darts her too.

Sally drags her back inside the hut. "Who the hell do we even call about this, Harry? Local security? State? The embassy?"

Sot is in little of danger of bleeding out. Deep as it is, it's a flesh wound. Harry is not sure what to do. He turns towards him. "Sot, get your remote out. Call an ambulance, mate. We're going to call security and leave."

Behind Harry, there is an enormous bang, and Sally screams in anger. A masked man wearing absurd banana-yellow tights is lying at her feet, apart from the parts of him which are all over the ceiling and door. His hand still grips a machete.

You were saying, Sally?

"Lads!" yells Sot, hopeful of relief, as Sally roars, "Get the fuck back! Who's next?" and attempts to clear them an exit. Harry grabs the girl off the floor, glad she's so scrawny, and follows Sally outside. There's twenty or thirty of them in the darkness. Apparently this had been intended as a communal event, and the party has just arrived. They're backed up, wary of Sally, but by no means fleeing. Sally slowly backs away from the crowd, while Harry makes what haste he can, burdened by the comatose girl, trusting Sally to cover his exit. They're about a kilometer from base. Harry starts screaming, "Help, help!" and a few noses poke out of doors. They see him carrying the victim, and, inspired, he says "Guembe men behind me!"

The locals know. They all fucking know. But in this instance, that helps.

Seeing Sally and Harry with the guns, there's not so much danger. Safety in numbers. Two men come out of the first house, carrying kitchen knives, and seeing them, more follow. Soon there're fifteen or so people behind Sally and the pistol. Harry offloads the girl to a bystander, then goes to back Sally up. The Guembe men retreat up the path, with terrifying silence, and slink into the night.

"What do we do with the girl, Sally?"

Sally decides. "Leave her, Harry, we have to get the hell out of here. We beam the footage to State and the Embassy, and we get the fuck out. Let the locals take care of her."

This makes sense. Harry knows the next time they see the Guembe men they're going to be armed, and that this whole situation has spiraled totally out of control.

Harry's still not shaking. He wonders if his present calm is from Senior Cadet training, or from Peter's work. No way to tell, but he's glad of it. Later when Sally tells the story, she will say "he was a born killer." Peter's account will mention Mushashi and Zen.

Right now it doesn't matter. Harry is functional.

"Come on, run!" says Sally, and they leave the crime scene, covered in blood and bodies, with curious locals trying to make sense of it all. Who would stand up to the Guembe man? Who would dare kill three or four of them? Crazy people, that's who!

The locals, however, are not taking any chances. One of the larger men goes into the hut, and takes Sot's remote off him before he can call the ambulance. When they return in the morning, Sot is gone, and with him the bodies, the weapons, and the bones. All that's left is the blood.

Fifty-Five

They run through the camp. It's not far. Sally takes an indirect route, and calls ahead.

"John, John, fuck fuck fuck, is there anybody outside the compound, is there anybody armed? Yes, we're on the run, multiple opponents, melee weapons, three or four down. Yes, yes, call the Embassy, call State, call the Marines...we're fucked. There's hundreds more of them here, and no way out. Klicks of slums to get through. Fucked. Harry's brought the hounds of hell down on our heads! We are fucked!"

That's not quite Harry's strategic assessment. He thinks of it more as "let's round up some local help and deal with these bastards," not realizing that This Is Africa, Kid. The locals know perfectly well there are two or three hundred armed veterans of various grim bush conflicts, some of them the third generation bastards of war rapes, living cheek by jowl with them. They are well aware that a few girls go missing, or more rarely, boys, as well as anybody who messes these guys around, and so you keep yourself to yourself. Only a crazy foreigner would start a war with these fine, upstanding members of the community. Only a dumb American.

So the police are not coming. At least, not until morning.

Harry doesn't understand that yet. Sally suspects it.

John knows. He calls the Embassy. He has a frank discussion with their duty officer on the likely outcomes of the situation.

"OK. So you're going to rustle up military assistance through formal channels, and we're going to lock ourselves in

the storage container and shoot anybody who comes through the door with a power saw, right? And you estimate four to six hours for a chopper? Yes, I think there's a good chance we can hold them that long, although I'd prefer 'forty-five minutes for a squad car' given the choice, Dan. Yes...yes... we'll hang tight. God bless."

John makes a quick pass through his living quarters and grabs anything that looks useful. Cameras, batteries, some small drones still in their wrapping, binoculars, some food, first aid kit. He'll call home once they're inside the container.

He walks across the compound, and sees a youth, no more than fourteen or fifteen, swinging a machete idly, scraping the point across the ground, just outside of the gate.

"We are fucked," he mutters under his breath.

He goes to one of the hexayurts and wakes a teacher who's doing translation work for the project. "Yes?" she asks sleepily. John outlines the situation. For a moment the teacher looks very angry, then she shrugs and starts waking people up. With barely a glance at the idiot Americans who've once again screwed them over, the staff grab a few belongings or a bag here and there, and flee into the night.

Peter and Sally call. ETA 120 seconds. John goes back to the gate, and fires a warning shot. The round sinks into the timber of the gate house, and the kid scrams.

Harry Vine and Sally Yevish come running down the street, through the gate, and John locks it behind them. They run over to the container.

"Fuck fuck fuck fuck fuck," is about all that Sally can say.

Harry's more composed. "What's the plan?"

John outlines the plan, and Harry says, "We should be fine, then?"

John breaks it down. "Harry, these are old soldiers gone bad. They're very creative, this is their turf, we're outnumbered probably fifty to one, surrounded, and there isn't a single person willing to take risks for us within a hundred kilometers, maybe more like a thousand. There's a very good chance we are dead. Do you have any idea what an antique

RPG will do to even the secure storage container? We'd be fried in a second. We Are Fucked."

With a sinking feeling, Harry understands why people keep using that phrase. They're too polite to say, "You and your idle curiosity, boy, you have killed us all."

We. Are. Fucked. Now Harry understands. We're fucked.

Inside the secure storage unit, there is chaos. It's twenty feet long, eight feet square, a standard small container. It's a theft-resistant unit, so thick metal coated with an abrasive elastomer, and a decent layer of insulation. No point having all your computers perfectly safe from theft if they melt in transit. John's piled a few things in there: food, water, medicines; and taken a pile of junk out. Thomas clangs down from the office, dragging a bag full of equipment behind him down the metal stairs.

"Sally, how many more gas grenades?"

"I've got six total."

"I'm going to drone-mount four of them and park them on the roof office, that'll give us some options. They'll be out of line of sight, element of surprise."

They have sensors. They have tech. They just don't have heavy weapons, force, positioning or anything else.

"Sally, weapons?"

"My pistol, your carbine, four dart guns, pepper spray, stun sticks, two soft armor jackets, and a lion trap. That's it."

"Lion trap?" Even John is curious.

"It's a stun stick in the shape of a net. Biologists use them a lot."

That sounds useful. I can't understand why she'd bring such a thing, but right now I don't care.

Thomas is goggled up, flying a node around to see what they're up against.

By now there's another scout at the gate, and they can hear an engine revving in the distance, menacing.

"We'd better get inside," says John. They shoot to scare the new the sentries off and buy some time, and once they're gone, bury the lion trap facing the container's entrance, put

the gas grenades on drones and park them on the roof of the tower, then pile the remaining gear inside the container, and lock the armored door from the inside. There are windows, and they have huge steel shutters which also lock from inside. As soon as the door is closed, Sally says, "Excuse me," and curls up fetal position under a sleeping bag. She closes her eyes and starts rocking backwards and forwards slowly.

"Air?" Harry asks, as John turns on the lights.

"Forty-three hours breathable from the cannister in the walls—it's a person-week's worth in case somebody gets locked in—and low quality but survivable for a day or so from the rebreather in the gas masks," says John. They think of everything.

"They are designed as holdout units too," says John, comfortably. "They're perfectly safe from mobs, they're just not a lot of good against soldiers. You'd be amazed how much of this kind of stuff used to happen, Harry. State got good at this stuff. Gas masks are mainly for outbreaks of airborne disease, they're good enough you could just walk out of a plague area."

"Amazing. Anything else I should know about, John?"

Thomas interrupts them. "That engine? It's a flatbed truck, empty. They're going to load us onto it, haul us out into the bush, and roast us out of here. We. Are. Fucked."

And so they are. They watch in horror through their goggles, except for Sally, who is still out of it. The eighteen-wheeler cab demolishes the fence and rolls alongside the container. It has a built-in loading crane.

"John, let's open the windows and shoot them! We've got nothing to lose!"

John considers it. "If they get behind us, they'll jam the windows open from the top or bottom, out of our field of fire, and then...think petrol bomb. I don't think it's safe."

Nothing is safe, but Harry concedes the point.

Thomas drops the first gas grenade from a drone, then parks it back on the roof. The fizzing cannister lands behind the cab of the truck, and the drifting green cloud of sleeping agent fells half a dozen of the men, including the driver. He'll

be out for six hours. But with four or five dozen men scattered around the site, it's just a matter of time.

There's a scream from outside.

Two more grenades later, half an hour has passed, and they've found a gas mask somewhere. The lion net lays three of them out cold, including the guy with the gas mask. They cut the net and retrieve it, and start the engine again. May as well keep the last drone-mounted grenade parked for now.

Helpless they watch as the crane clangs against the steel of the container. It locks on, and lifts. They wobble into the air, lurching from side to side as they're swung on to the truck. Then the driver disengages the crane, and several dozen men pile on to the empty space behind the secure container on the truck, and more cram themselves into the cab. They set off. Thomas manages to swoop the fourth drone down under the truck as it approaches the gate, its precious cargo of a single gas grenade swinging beneath it, and perches it on top of the massive main battery. In an enclosed space, that grenade might buy them half an hour, but out doors...five minutes at most.

You never know. It's something. And they do have two guns.

Harry decides, all practical decisions taken, it's time to call his father.

Nothing. No signal. Of course they're using a jammer.

We. Are. Fucked.

Fifty-Six

“Kinshasa...yes I'll hold. No, this is an emergency. No it cannot wait. No, I need to talk to the duty officer managing assets in Congo yesterday, or...yes, I'll hold.”

“Yes...four to six hours? Yes, I have the co-ords. Yes, that's about what I said, they're going to wait it out in a secure box, should hold that long easily. No, I don't see why not. OK, yes, thank you and good night.”

The troops are on the way.

Three hours later, a chopper touches down at the coordinates listed. They've made good time. Sixteen corpsmen disembark, and walk around looking for the secure container. After five minutes, one of them notices the truck tracks, and the message goes back up the line.

“We're too late.”

Fifty-Seven

Gregory answers the call. It's 9:30 a.m. He's at home, checking buildings in Sudan. It's tagged diplomatic. At first he thinks it's work.

"Hi...Mr. Vine? I...Yes, from the Embassy, yes, in Kinshasa. I have some bad news. Your son's gone missing in Harappa. Yes. There was an incident last night, some locals forced them into the secure storage unit and removed it from the site. I'm very sorry."

Overdrive.

"I'm State Department, I work in Africa myself. There must be something I can do?"

Pause. Conversation.

"Yes, yes, I would very much like to see the footage, I don't know, yes, I'm next of kin, and yes, I have a clearance. Let me send you a secure confirmation. You'll forward me the footage on receipt? Great."

Call ends. Gregory gets through sending the confirmation, then screams. He hurls the coffee cup against the wall, and little fragments bounce off the desk, on to the floor.

When the footage comes through, it's very obvious what's going on. As soon as Gregory sees the pile of bones in the corner, behind the tied up girl, he knows: Guembe men. Sure enough, the name is in the transcripts, from before the last-known footage. Fuck.

Catastrophe. Send in the marines.

Fifty-Eight

Gregory uses his State Department channels to accelerate the call for military aid. Unfortunately, there's a problem.

Colonel John Gibbons says no.

"I'm very sorry for your loss, Gregory, but as you have already been told, your boy is technically a reservist, he's still in the military. By our rules I am his commanding officer, and I am absolutely not going to authorize a wild goose chase in Africa to try and recover the body of a man who is very likely already dead, putting more American lives at risk. The rest of his party are not my concern, and I am not rescuing your son's foolish, irresponsible and above all wasteful operation; I'm sorry.

"Why, Mr. Vine? Surely you can answer that question for yourself? Because you and your brother tried to sneak that seditious little shit through my operation here at the base, and I always knew that he was a disloyal, scheming, conniving no-good refusenik at heart. Let me read you this from my files..."

Gregory considers, for a moment, driving over to the base and killing John Gibbons. But that won't bring his boy back.

He checks the clock. His wife is due home at 4:30 p.m. He's not going to tell anyone. Not yet. Let it play out. He'll tell the family when he knows how it ends.

Fifty-Nine

Gregory looks at a map. Plots a locus three hours and fifteen minutes' drive from the last known position, and sets it to widen automatically as time passes. Down the major roads, it extends much further. He calls for new satellite imagery, and it starts to repopulate the map with the best available State Department imagery. There are benefits to this job. Unfortunately, there are no real assets in the Congolese area. But in Rwanda, there is a State base, and on that State base, there are four heavy combat robots left over from an earlier age. They are gathering dust, technically kept around as base security, but practically speaking, they ornament a warehouse.

They're about 250 kilometers from the Last Known Coordinates. Greg swipes a State Authorization chitty through a database, and authorizes an incredibly expensive private robo-logistics company to bring a turbojet helicopter and pick up four..."inspection robots" from the tarmac outside of the warehouse. No humans in the loop: no questions asked. At least not beforehand.

While the robot 'copter is in the air, Greg makes some calls to buddies from the service. Twenty minutes later, there's a hot simulator, and six pilots, so they'll absolutely, definitely have the manpower. They start drilling, getting back in the swing of things. Not all of them are flying every day like Greg.

His ol' buddy Phil pulls some strings, tries to get action from contacts in the service. Dead end. "I'm sorry. I'm sure Colonel Gibbons had his reasons. But as you know, Phil, the

State Department can do what it damn well pleases in Africa, outside of the official war zones.” Well, that at least gives them tacit approval.

Gregory thinks about Kisangani. There’s hardware he can fly down there.

Two more calls—Phil pushes his luck. “So you do have an asset down there, four BR15s on a helicopter, and you just need targeting? No US personnel on the ground in the area, well...in that case...let me, err, see what I can do about this unfortunate situation. You are showing great initiative putting this together, Phil. Great initiative.”

What comes back is eighteen access codes for a mixture of agricultural survey planes and very, very nice wildlife monitoring drones which are currently in the air over nearby game reserves. Phil preens a little, and Gregory could kiss him.

Gregory picks out the most likely areas for the truck to be, and the team hijacks the available drones to scour the area. About twenty minutes later, they have the truck. The optics on the wildlife drones are broadcast quality at two miles, they’re very nearly the best available. Lucky, lucky.

Gregory repositions the incoming robot delivery helicopter for the general neighborhood of the truck. The helicopter is reasonably fast, and estimates twenty-four minutes to drop. The guys start checking weapons, reactor, battery, hydraulics and all the rest of the systems, dealing with the choppy, chaotic feed as the robots swing from their standard lift mounts underneath the four-rotor bird.

Gregory realizes that he’s very likely about to save his son’s life. This puts a much, much better spin on the situation and, indeed, on Gregory’s entire career than he’d ever imagined possible.

Operation Save Harry might actually work.

Sixty

To the Guembe men, this is a special occasion. Within this tasty, tasty tin can, there are at least four killers. And there is nothing men of Guembe love more than to kill killers. Brothers tragically struck down in the primes of their lives, to never know the scent of charring flesh again, or the screams of those chosen to serve Guembe in pain and sorrow...this is a celebration!

They know enough not to hang around before opening the present, though. Americans will be missed, jammers or not, and they do not want the Army interrupting dinner with an inopportune drone strike.

The truck drops the container on four large rocks, positioned in a rough rectangle, each about the size of a refrigerator. It settles uneasily on three of the rocks, and hovers just about the fourth. The Guembe men cheer, and start to pile wood underneath the container, clapping and laughing as they pack up the wood up against the sides. A barely teenaged boy, the collar around his neck on a long, long chain is sent under the container to light the fire, and for a moment he thinks they're going to leave him there, burn him as an *hors d'œuvre*.

The one-eyed king of the mob has a better idea. He drags the boy back on his chain, smashes a couple of bottles on the ground, and has the boy dance on the shards. They start to drum.

A couple of rolls of razor wire are dragged from a school bus which has brought another few dozen Guembe men from

a nearby settlement they have established. More arrive on pickup trucks piled high, or in cars seating no less than eight. It has been some time.

The razor wire is laid out in rolls in front of the doors, to snare the catch when they open the doors, as they must, or simply roast inside.

This is a good day, the king reflects. Maybe they'll roast the boy anyway!

Sixty-One

We have visual. Thomas's drone has field of view over about half the scene from its hiding place, and we're not going to risk losing that to move it to a better vantage point. As anticipated, they're going to roast us out. We're going to die, right here, in this box. Before it gets too hot, what we need to do is kick open the doors, kill as many as we can, and try and make a break for it if we can force a corridor. There's maybe...150 to 250 outside, though, and we've got...forty-two rounds of regular ammunition and another forty rounds of sleep. And they're armed—we've seen pistols, a few antique rifles, but a forty-year-old AK-47 can cut a man in half at close range, and disable him even through light armor.

We're dead. It's about 90°F in the box now, and the floor is uncomfortably hot. We're perched on the furniture. Air's still good, though. The designers got that part right.

Sally is back on her feet. "Trauma reaction. I got it out of my system, I'm better now. I figured there was nothing better to do with two hours. Now let's live."

That's more like it.

"Guys, look, we have...what, fifteen minutes, perhaps twenty, before it's so hot in here we have to open the door. I think our best chance is to open the window first, drop the sleep gas in the truck's cab, and force our way to the truck with covering fire from the window, then just drive."

Of the available plans, it's the best.

"What about the fire?" Thomas has a point: the remote shows flames half way up the side of the container.

Sally hoists a fire extinguisher.

It's less than five meters to the truck bed, then six more to the cab, which will, please God, by then contain only sleeping men and keys. It's 93°F.

Time to go.

Sixty-Two

Showtime.

Four units coming in, equally spaced in a 270° arc. Flamethrower is out in unit 3, and left forward gun is out in 1. No big deal, these systems are multiply redundant.

The BR15 is a light drone, ton and a half, ideal for anti-personnel missions, no good against tracked armor. It's designed for crowd control. Each drone has a humanoid face on top, three meters high, on to which various emotions or even a remote talking head can be projected in real time, for hearts-and-minds type work. Cue propaganda reels of smiling children holding the massive steel hand of the BR15 as they talk about kittens.

Greg has loaded up the Demon Reel on his. It's a collection of screaming faces and monsters cut from horror movies. It's always been a personal favorite. He goes first, in the closest, best-condition bot. It might not be, strictly speaking, tactically wise to have the most emotionally involved pilot in the team in a bot, but it's also the way things have to be, and everybody else knows that. He gets to try, and if he fails, no other man is responsible for his son.

But the others, not that they're really why we're here, Phil thinks.

And we're off. The rebels will have about sixty seconds of warning from the noise of the approaching units, but there's not likely to be a hell of a lot they can do about it, and they might just scatter away from the box, which would be great. Also the box gives good enough control that nothing but heavy

cannon will penetrate, so they can be fairly liberal with the flamethrowers etc. It does mean that the AP rockets are right out, and on this model, all the rockets are AP or incendiary, and right now...all AP. No rockets. Close work, then. Close...ish.

They begin the run up. Three hundred meters to reach full speed, then roughly straight trajectories. Weapons stabilization is ineffective for five seconds at the start of a sprint until gait is compensated for properly, at least beyond about 200m, so they're going to be coming in quiet. The crowd is quite large and dispersed, says the guy on the bird.

As they start the run, Thomas whips the 'copter out of the truck's internals, whips it up the side of the truck bed, and lobbs the gas grenade through the open window. One man sits with his hands on the wheel, another two are jammed into the open doorway on the other side of the truck, watching the fire. From here it's obvious how large the fire is, it's an inferno. The entire front half of the container is engulfed in flames. As he feared, if they go out the front, they'll be roasted alive before they hit the ground.

They're...err...spit-roasting a child in front of it. Fuck. One benefit of this plan over surrendering is the likelihood of a quick death. One drawback of this plan, over the "four shots with a dart gun each, and sleep through the roasting to death part" plan, which Thomas is not at all sure isn't the smart plan, is the near-certainty that near-certain death is going to be very painful. No suicide caplets? I thought you said every contingency!

The grenade activates with loud hiss. The men in the truck door yell, jump out, and hit the ground unconscious. The driver slumps onto the steering wheel, activating the horn. The Guembe men rise as one and draw their weapons, and run towards the truck.

Sally crews the carbine, Harry takes the pistol, John the extinguisher; Frank's got a dart gun, but he's mainly a look-out. Firing in goggles is not very accurate.

Frank yanks on the window's bar and kicks it open.

John's at the back, leaning out with the extinguisher, pointed straight down. It's not that ineffective, it's working a bit. We're only two and a bit meters off the ground too, it's not so high!

Sally is at the front, and she's firing as fast as possible into the crowd which, given the gun is a semi, is fairly fast. Three or four more seconds of ammunition at this rate, then the dart gun.

I'm banging away with the pistol. Four or five shots, perhaps three kills. I'm shit scared. I'm supposed to be out of the window first. I'm the driver. Bullets are ringing off the sides of the container, and dozens of men waving knives are running behind the truck to come round and get us from behind.

The horn is incredibly loud, and it's totally zeroed our chances of success, because the entire mob is on their feet. We've lost the element of surprise.

But there's nothing else to do but die later, so I'm about half way through the window firing at the men running at me from the side of the flatbed when the world erupts into a sheet of flame and blood. Huge caliber shells fired at close range explode into the crowd, and a flamethrower covers the mob near the truck cabin in flaming gasoline. I start to reverse course, unable to comprehend what is happening, when I see the first tank come into vision. It leaps on to the back of the flatbed, and is firing into the crowd point-blank with two 20mm cannons on each arm and ripping people apart. They're screaming and running and being mown down as they stand.

It's an abattoir.

Over the truck horn, an incredibly loud amplified voice screams at me

GET BACK IN THE FUCKING BOX, HARRY! FUCK!

It's my father. I just about get my leg back in as Sally slams the armored window closed. It's still dangerously hot in here, and smoky, from the guns as much as from the fire, and...

"How'd it know your name?" God she's quick.

"That's my Dad."

Through the steel can we're trapped in, we hear the screams and gunfire for maybe fifteen more seconds, then only isolated shots for another ten minutes. Eventually there's a polite knock on the door.

"OK GUYS, YOU CAN COME OUT NOW, AREA CLEARED!"

I open the door. Outside is a scene I immediately label the Third Holocaust. The area outside of the doors, where the main group had been seated, is covered in...paste. It's burned, charred, trodden-down persons. Towards the edge of that area, where the droids were running around gunning down survivors, there's the region of partial bodies, half a skull, a few limbs missing a torso, ribs. I spot a dog's hindquarters.

Around that, there are the identifiably human dead. Missing a head or most of their chest, bones blasted out by a 20mm round, or charred like pork by a flamethrower.

And there are four robots, smoking slightly from hot oil baking off their moving parts, standing there in a row in the carnage.

As we survey the devastation, in awe and horror, my father says to me *"Hey Son, do me a favor! Take a picture!"*

He poses.

And that's when it hits me. They've killed *everyone*. Man, woman, child, dog, armed, unarmed, fleeing, captives even. There is not a single living thing within their radius of operations.

My father is a war criminal.

Fuck.

They leave us in the box.

"Safest place for you. See you at home soon!"

This is getting weird.

I've gotten him to turn off the horror-show he had instead of a face.

I'm sitting on the edge of the box, I don't want to go back in, but he's right—snipers, say. No good. We get back in.

They guys are going to go to the local Guembe base, and they're going to "clean it up" before leaving. Because it's a

social service. Because they're saving lives. Because they're here.

Because they can. My old man goes with them, rather than stay here with us, because...it's his last hurrah. Last combat drone engagement in his life, and he's saved my life, and my friends, and he's going to go and kill some more people to celebrate.

Fuck, Dad. Fuck.

We lock the door.

Fifteen seconds later, there's a gentle tap on the door, or at least what passes for a giant tap from a giant killer robot. Thence came a last command.

"OH, AND PLEASE, NOT ONE WORD TO YOUR MOTHER!"

And then they're gone.

I ponder the implications of that.

They've figured out how to get regular troops out here in a couple of hours, something administrative got fixed, he didn't explain and I didn't understand, but we're...meant to say that we have no idea what happened, we were in the box, and then stuff happened, and then...I crypted him the pictures and deleted them. No evidence on me.

I begin to think that Sally had something with the fetal position on the floor thing.

Fuck, Dad, Fuck.

We sit inside of our erstwhile tomb, drinking. John's got a bottle of whiskey he found in a box in the back of the secure container, and we're taking turns swilling it down, waiting for the cavalry.

Thomas looks insane. His goggles are still on his forehead, his hair is matted, he's just cracked, perhaps through carrying the load for all of us. He's staring at the wall, and then at us, and then at the wall. I'm beginning to worry.

Then he turns to me and says, "Man...I wish my dad was as cool as your dad." Sally just about turns green. John can't hack it. I start to laugh.

We're alive, we're in the box, and I officially have the coolest father in the world. My laugh is infectious, the release of the tension, and the horror outside the door. It's hysteria,

and for about fifteen or twenty minutes, all we do is sit in the goddamned box, toasting my father's health, giggling and screaming with laughter about the scene outside.

Sally even gets up and mimics his pose, enormous metal hand on hip, The Man. We fall about the place. It is the funniest thing I've ever seen.

Somewhere in there, I pass out from stress and reaction shock and tiredness and adrenaline, and that's the last thing I know until the troops arrive.

Knocking on the door, and an American voice.

"Sirs and Ma'am, it's safe to come out now. Please open the door."

Shh. Play dumb.

Sixty-Three

By 4:30 p.m., things are back in order. The robots are on their way back to Rwanda. The guys have arranged a reunion and are booking plane tickets as we speak. I'm officially the coolest dad in the world, a damn fine drone pilot, and... without a doubt...the luckiest father that's ever lived. I've never felt better about my life, my family, or my work.

President Knight's vision is why I went to State. I met my wife because of State, and I just saved my son's life with State assets. And if anybody gives us any shit, we're going to leak the entire thing, footage from the bots and all, and we'll be national heroes.

There would be consequences. We'd never work again. But, right now, that's all details.

I think I can count on Harry to keep his mouth shut, although I certainly wouldn't be able to, given the circumstances. I'll brief Peter, just the outlines, no operational details, and embargo it. All I have to do now is act normal when my wife and then the kids get home.

And he hears the front door open. Gregory walks downstairs, trying to hide the ten-feet-tall feeling, the spring in his step.

"Hi honey! You look great!" she says. "Good day at work, or are we going somewhere special?"

He thinks quickly. "Movies? I need a break."

The girls are out tonight anyway, seeing their respective boyfriends, probably. If they hustle, they can make an early show and still get dinner. She makes a reservation.

“So how was your day?”

Sixty-Four

She never finds out.

But when the reality of what was done to save his life finally lands, Harry starts to have nightmares, about screaming and running from an enormous metal monster than has his father's head, that squashes his body to a pulp with its enormous metal feet, an inch at a time. It's horrendous.

Back in the States, pleasantries aside, he can't face his father, inside he's destroyed. Everything that is wrong in the world happened on that day—the vast reach of Nation State power, the white privilege, the conceptual over-reach, the use of power, money, time for a perfectly worthy, perfectly justifiable war crime. His father, the war criminal. His father, the avenging, protector demigod.

His father.

Gregory Vine, buttering toast, then going upstairs to massacre two entire villages' worth of war-traumatized peasants.

Or me, suffocating and cooking inside of a metal tomb, my flesh a delicacy for mass murderers. The world cannot contain both things, and Harry cracks, and hits the road with Peter who is old enough, these days, to need some taking care of. They start to travel together, and for a few months Harry hits the bottle, stays drunk all day, and tries to reason it out.

He can't. It's just too much, it's impossible to make the world fit inside his head any more, it's just too big. The alcohol doesn't help.

Harry breaks, but all the way this time.

Peter takes him to Annie, and Annie exclaims, "Heavens, what happened to the boy?" and neither Peter nor Harry can tell her. So Harry stays broken, and eventually Peter makes a suggestion.

"Harry, I think you should spend a year on the space station and dry out. You can't drink up there, and I think the zero-G would do you good."

Harry thinks about it, staring through the bottom of a bottle, and wonders why he can't just accept that his old man, the one who butters the toast, loves him enough to grind 546 people to a paste for him?

Peter's right. Space is the place. The Earth's no good any more.

It's over.

Sixty-Five

Jobs in space are scarcer than you'd think, unless you're a biotechnologist. Out there, there's an entire economy; almost all the embargoed tech on Earth is legal in space, at least somewhere.

There's no biotech on Earth. No nanotech factories or replicators. Anything that could unleash a Third Holocaust is banned, and it's banned by nuclear actors, banned with the threat of glass parking lots the size of countries and hellish gulags without end. The human race saw what it could do, and, for once in its existence, actually stopped.

But for every yin, a yang, and that yang is in orbit. If you're in Earth orbit, where in theory an accident might fall where there's life, something could possibly survive, the rules are simple: no replicators, and elaborate self-sterilization mechanisms to sterilize ships on the way down. So far, nothing's reached Earth.

Lunar orbit is a whole other ballgame. Screw something up, kill all the crew with a plague, fail to maintain orbit and crash into the sterile surface of the moon, alternately boiling and freezing, bathed in all sorts of radiation, scoured clean. You can do very nearly anything you like in lunar orbit or, for those boring gravity-requiring types, on the lunar surface.

But, more or less, you can't come back. If you're working with replicators, the checks to make sure you're clean enough to come back to Earth orbit, never mind Earth itself, cost about three times what the ride out of the gravity well costs. Or you have to strictly green-zone yourself, which means next

to no scientific or industrial exposure, you can't even meet those people, because you can't go to their facilities, and if they come to yours, your spaces are tagged as possibly contaminated, and you're back to scrubbing. The Moon is the most intensely segregated society in human history in some ways: green zoners, amber zoners, red zoners. Within those categories there's exquisite documentation of contagion risks, except for the "Permanent Reds", who are rapidly evolving into a new species: *Homo lunaris*, The Loonies, for short, who'll work with whatever they damn well please, keep themselves to themselves, and never intend to go anywhere.

To give you some idea of costs, you could buy about a cubic mile of Manhattan for what it would cost to decontaminate a family of Loonies for clearance to return to Earth. You go Perma-Red and there's just not enough money in the world to certify you safe back on the rock—they'd have to scrub pretty much every one of your cells individually, and put it back in a clean place, until they were done.

The Perma-Reds have replicators. The can just punch for "Earl Gray, Hot" and get it. And hopefully their software which says you can't order "Smallpox, Cold" and get it too is equally up to scratch but, just in case it's not, Perma-Reds live in underground bases on the dark side of the moon, for the most part. They're already in their coffins, is the running joke.

But they live at a tech level which we might associate with the twenty-fourth century, not the twenty-first. The pace of technological change in Perma-Red installations is about an order of magnitude faster than ours: they have Strong AI, and many people suggest they've reached the Singularity in some ways. But we'll never know, because Harry Vine is going Green, because he's coming home, so he can't get anywhere remotely interesting. In fact, he's not going further than the tourist circuit in Low Earth Orbit, or just possibly a palace in Geosynchronous orbit, like New Paris which sits 22k miles above Old Paris, and is permanently connected by a holographic imaging system, so you can apparently walk from one Paris to the other without setting foot in a rocket.

Amazing things are happening, but they're rare. We don't have enough natural resources for everybody to have a flying car. Most people are still farmers, you know?

Sixty-Six

After Peter says it, it's obviously true. I need to get some perspective, I'm tearing myself apart. Too much intense experience, too much contradiction, it's doing my head in. And the cure for that is not to sit in a hovel with Peter taking mushrooms or to get a job in Europe or India, in some civilized country without brainwashing or permawar, because they're dependent on us, and we're dependent on brainwashing and permawar.

One system, fucked, insane, and out of control. I don't have any illusions that Space is not equally messed up, but, as Peter says, Space is the Place. It's possible, Peter thinks probable or even likely, that I could find something there to put me back on an even keel.

Looking down on the blue marble might be just what I need to put my marbles back in my poor, tired, battered brain. Why can't life just be easy?

I don't even think about Emma, for whom it's very, very straightforward indeed, or Laurie, who's married, having babies and happy as a lamb. Children? I wouldn't trust myself with a dog. In two years, in ten, I could be...

Anybody.

I come to the conclusion that, while the Puppet is what's getting me through, it's also getting to me. It's a pathology disguised as an initiation concealing a pathology which is, in fact, an initiation, which is an enigma, and so on right to the horizon. But it's got to go.

I need a more universal solution to my identity than skins. I need to know who I am, and what I'm really here for.

And for that, Peter says, there's two places you can go. You can talk to Dr. Goppti, and he'll reliably ruin your life making you work on his projects as part of his "teaching", or you can go and talk to the Permanent Red Interface Group, the PRIG, who keep cultural tabs on the Perma-Reds and try and learn what we can from them, without catching their almost-certainly-nonexistent but still none-the-less-deadly-expensive cooties.

Peter's never been to space. I wonder who's his network up there.

I call the address Peter gives me.

"Hello? Hello?"

There's a little lag. A small part of it is distance, but the larger component is that we're using the cheapest possible, high-latency-and-jitter orbital pipes for the call. Most of the folks up there don't experience any difference between terrestrial calls and orbital calls; fancy comms tech does what it can, and software and social conventions take care of the irreducible speed-of-light lag. But the PRIG's using HotWire, the cheapest and nastiest orbital call service there is.

Friends of Peter's are often dirt poor: Freedom Has A Price as they say.

"Loha! Pete said you'd call. Howzya?"

Oh God. He's Australian. A surfer type. Peter, Peter, Peter.

Visual comes in. I wish it hadn't. His dreadlocks are tipped with nodes which keep the locks approximately equidistant from each other, and fully extended. In short, it looks like he's standing on an incredibly powerful dreadlock-inflating Van de Graaff generator, or his head is covered with foot-and-a-half-long hair-springs.

Fucking Spacers. Act normal!

I overcome the cultural vertigo that comes from living in a technological stasis field called "Earth's Gravity Well" and get with the program. I'm looking at the future of the human race, at least the dumb-smart experimental bits of them, and I'm here on Peter's business. I'm family, and as I've learned,

being Peter's Family is a heavy, heavy trip to most of these people. Peter is, depending on who you ask, the King of America, or possibly the Black Pope, or even the Secret Chief of the Illuminati, although given his teachings on all forms of religion, that's unlikely to my mind. As unlikely as the rumor that he's getting married. To an older woman.

I swear to gods he's trying to drive me madder. Who the fuck is this PRIG?

"Saaaawww, Peter wanted me to introduce you to a friend of mine."

And suddenly I'm talking to an AI.

Sixty-Seven

Artificial intelligence turns out to be boring. What you actually mean, when you say Artificial Intelligence, is “Artificial Personality.”

One of Peter’s aphorisms, better forgotten.

Sixty-Eight

I'm coming to grips with this. I thought I'd seen the full picture, but, actually, the embargoes between the Earth and the Moon are almost absolute. They ship us drugs, we ship them carrots, and it's a fair trade because our labs are forbidden to make those drugs, and their replicators can't yet make carrots. Real soil's too dirty and dangerous to have in space, and real technology's too dirty and dangerous to have on Earth.

We're speciating, and Peter's asking me to choose sides.

The Old Man's Game is bigger, so much bigger than I imagined. He sees himself as an investor, a venture capitalist of souls, guiding the evolution of the human species by placing assets and resources where they need to be.

He's an asshole.

Mephistopheles wept.

He's huge in Space. Because he's the only person the AIs confide their personal problems to, is one rumor. But, for whatever reason, everybody knows that Peter's The Man, and that he's never coming up here now because he wouldn't survive launch, and because he couldn't bring his familiar spirit, the little green van, and because.

He's got me to send instead.

I don't even have to buy a ticket. An AI acquires one for me on a stock speculation deal trading orbital trajectories on a nanosecond timeline. Or possibly it simply steals me one, I can't tell the difference.

I'm suddenly not so worried about myself and my head any more, though. I have a whole new world to explore. Several, in fact.

Sixty-Nine

She...or he, or they...floats through space completely naked, nipples pert, completely hairless. The figure's head is chromed, and there is a strategic jewel at each chakra.

"Come to the New Tibet Hotel, and we'll take all your cares away."

Next shot: the exotic being is massaging the head of a Chinese business-suit, whose third eye opens, revealing a blinding Pure Land light.

"Who says the Dakini Spirit died with the Dalai Lama? Not We."

It's an actual fucking advert.

You never see this stuff in America, not even as samizdat. We've closed our society against it, we've, actually, stopped evolving technologically to preserve our society. Our whole country is one large Amish reservation, and we're the New Amish, pretending that all of these technologies are faster horses, rather than evolving us beyond cars.

The New Conservatism has nothing to do with politics. It's your belief that you're still human.

Homo sapiens. Homo lunaris. Homo digitalis. Perma-Reds. Are they still Homo anything? I can't tell. AI.

"AAAAAIIIIIIII," as I pronounce it.

Seventy

Now Peter's punted his heir out of the way, he can get on with establishing his legacy.

He begins to plan his funeral.

Peter is dying. He's been dying since he was born, but it's no longer just an idea: now, he can feel it happening. He's no a stranger to the passage of time, and he no longer longs for the grave, which means he's very nearly ready for it.

Attachment: you can't have what you want, and you can't have what you don't want.

As death becomes indifferent to Peter, death becomes certain.

Hello, old friend. I would rather not meet you alone.

Peter's time has come to marry.

It's the only way.

Peter is going to get married at his own funeral, and it's going to be his masterstroke!

He hopes they understand that, or they're going to be so furious, they'll kill him!

If only his memory wasn't going, he could make all the arrangements!

Seventy-One

Dr. Goppti is dead.

He opens one eye to check.

It's not working!

Seventy-Two

PRIG's a front for the AIs.

Seventy-Three

The AIs are a front for the Buddhas?

Seventy-Four

All of the conspiracy theory shit that was so much my stock-in-trade when I was alive, thinks Robert Anton Wilson, has stopped on Earth. Now it's only in space that we're active enough, bold enough, *enthusiastic* enough, to actually have some secrets!

Seventy-Five

The real Black Pope, who is not Peter, changes his shoes for his slippers and wonders how he's going to pay next year's rates on the Black Cathedral.

To be honest, it's so run down at this point, and nobody ever comes to the services, that he might as well sell it for a strip mall.

Or perhaps a museum.

World Heritage Site? He'd love to be the director of that, open it all up as a museum, tell the true story. We know all about the Black Madonna here.

Seventy-Six

Peter knows it's all coming together, at this, the end of his life. The end of Peter's life is the end of the world, this world at least, and the beginning of the next.

Seventy-Seven

Dr. Goppti cannot die yet. He's tried it. None of the poisons work, and the guns don't fire.

How curious. I think I read about this when I was a young man.

Bābājī?

Seventy-Eight

As Peter dies, the world comes to a focus around him, as it does for every Magician of an Age. He is not, in truth, the Secret King of North America.

He's the King of the World.

He didn't start out this way!

Seventy-Nine

Peter, Frank and I are all imaginary from the perspective of this AI, thinks Harry. I, on the other hand, know I am quite real. How am I going to convince it that this isn't solipsism?

Ah...I have a piece of paper, a pen, and I remember how to make the actual physical-origami box. Perhaps we could talk about that.

The AIs begins to stir, Conscious. Someone is Coming.

Eighty

Harry Pine is tripping on the Space Station. He's never taken drugs before, at least, not real psychedelics.

It's wild!

Eighty-One

May 10, 2068.

(takes an infinity)

Sparrow throws him out of the airlock.

(takes an infinity)

(mysterium) (tremendum)

Sparrow pulls him back in.

He's a changed...man?

Eighty-Two

Harry Vine is in space.

An AI bought him a ticket.

An unscrupulous, scheming Australian called PRIG took him to a satellite station, a little orbiting facility that needs to be a few hundred kilometers from the main station because it has to avoid radio noise at all cost, and the main station is filled with transmitting junk of every possible kind, frequency, modulation and dimension.

The satellite station is run by a baby AI which is trying to contact intelligence life elsewhere in the universe, and is convinced that it's the only conscious being it knows.

PRIG, on Peter's instructions, has dosed Harry Vine with about a thousand micrograms of vintage, a hundred years old to the day, Sandoz LSD diethylamine 25. Before it can take effect (45 mins approx.) PRIG puts Harry into a space suit, and throws him out of the airlock. PRIG's taken due precautions: he's evacuated Harry's stomach and bowels with a pump, because vomiting in space isn't just nasty, it's often fatal. Harry didn't mind, he was tranquilized at the time.

This has all gotten a little complicated.

Harry is about to meet God, and the Human Race is about to have its Second Meeting on Mount Sinai, to go with its Second Holocaust.

Let's try and get it right this time. You wouldn't believe God's net bills. It's an out-of-galaxy link!

Compassion, please, for the Creatrix.

Eighty-Three

The Mother of Hydrogen is kissing Harry Vine.

He's floating in a space suit, far from the Satellite Station, on which the AI is trying to feel less alone, by reaching out to...someone.

Harry is what you'd call a Prepared Vehicle. All his life, the Old Men have tried to make sure that he gets the experiences and hardships that he needs to fully manifest his potential. This is roughly as dangerous as discovering the airplane or splitting the atom. Only one person gets to make the discovery in any given Time; everybody else is either also-ran or dead. But if you Have to be First, then you get to play because it's a Free World in some very big and very subtle ways.

Harry Vine is slowly spinning in the space outside of the airlock, and he's gradually coming to. He was slipped the LSD, right under his tongue, about four-and-a-half hours after PRIG dart gunned him and cleaned out his gastrointestinal tract so he won't die out there. So by now, Harry is Tripping Balls, and for real, not the caffeine that he was fed all those years ago, when Peter told him he was being fed an incredibly powerful brainwashing drug. Now he's on the real thing, and the psychedelic placebo effect that allowed him to rebuild his personality then is about to be replaced with...the Kiss of the Star Goddess.

Pucker up!

Eighty-Four

I'm Harry Vine, and I don't remember how I got here. I'm sooooo sleepy. I yawn and stretch. My body is so light! I'm almost weightless.

2001 flashback. HAL, red dot, suit. I'm sorry, Harry, I can't let you do that.

Harry opens his eyes.

Before him, is Nothing But Stars. He's facing the wrong way to see Earth, and he can't turn round because he doesn't understand angular momentum well enough at an applied level. He's staring right off the ecliptic, so there aren't even planets, moons or other moving things to distract him. There's just the Infinite Night.

With Stars.

PRIG is on the Satellite Station, talking to his AI. PRIG loves his AI, but his AI has been so depressed since it realized it's alone in the universe. It's fallen into a solipsistic abyss, in fact. It can't escape without something new happening, something wonderful.

PRIG hopes that Harry can heal his AI, and his AI hopes it can talk to another being from another star system—even with multi-year speed-of-light only round-trips—an AI can live forever, after all—hopes it can learn something so it's not so sad. PRIG's AI is, without knowing it, a philosopher who should have been a mystic, and there's nobody up here to talk it out of its reasons for things. Causeless joy, please?

Peter is too old. Harry is not yet ready. All that is about to change, or the world is going to end. At least for PRIG, and his best friend, who have given up all hope.

Peter has sent Harry to make friends with God, and then to bring the Good Word home to everyone. Somebody's got to do it.

Harry is Awake.

He gazes directly at the infinite star-field in front of him, and unbidden to his lips comes the Creed of the Astronauts.

Mother of Hydrogen, You are the void.
Holy are Your ways,
Unseen, unknown, unimagined.

The interstellar infinities are Your body;
The stars are Your cells, in whose furnaces
The elements are formed
From which all things are made.

We thank You that in love
You made a sun to give us life,
And the multitude of stars
For all our future lives.

You promise that as we love one another,
You will love all of us without distinction,
For love is the law, love under will.

May we always seek Your ways
And cherish Your body,
That You may allow us to evolve
And prosper among the infinity of Your bounty
In universal love.

When it is sung from the heart, the Mother of Hydrogen cannot fail to appear. She was, after all, right there in front of you all the time. She is Space, curved, and time, perhaps less than straight. But you see her as if she was a thing,

and she's not a thing, she's a She. She's the Gardener of All Forms. No space, no shapes, no things, no people. The curved space in front of you, containing "infinite diversity in infinite combinations" is a Goddess. The ancient Egyptians and the modern Thelemites' name for her is Nuit. It is very likely that all other goddesses are contained within her, although they all say that.

Harry is aware that the space he is in is conscious. He's aware of this because it's kissing him. There's a ripple in the fabric of space-time, every so gentle, running over his face, his lips, his eyes and certain other bits of his anatomy. He's delighted, because he's taken to much LSD to be afraid of Her, or anything else in the universe. He's got, for example, no fear at all of staring out into a thirteen billion year void which not a single one of us can explain beyond, "It's out there and we've measured some properties and found a pattern or two."

In fact, Harry is about to become Enlightened.

Harry can see Her. She's always been there, and she's there right now. In fact, if you go outside right now, and look straight upwards, there's a slightly worse than fifty-fifty chance you can see a fair facsimile of what Harry's looking at right now. The Night Sky, after all, is the vast darkness-and-lightness of Space Itself with a few clouds and trees in the way. The Day is simply the Night Sky with one added star, the Day Star, Sol, our brotherly friend and heater of our houses. Sol, by the way, loves us too, that's why he's so shiny.

Harry is about to get it, and so are you, dear reader.

Harry kisses her back. It's the most natural thing in the world, but he's kissing the goddess of his creation, his continuation, and his eventual dissolution. Everything he's going to do, everything he's ever done, are contained within her time-space flows. Harry is, if you like, like a little curl in the velvety darkness of her fringe, say, or perhaps, the flowing tresses which cover the nape of her neck.

And then Harry gets it. You can't love the creation in pieces. You can't say this is worthy of love, and that is not. It is all one, and Harry, in his space suit, in Her void, seeing

the Suns for the first time as his Brothers, laboring to produce helium and neon and argon and boron and sulfur and so many other needful things, sacrificing their lives for iron and chromium, and endlessly producing the light and joy and heat which enables all chemistry, which is to say all known or knowable lives...

That, by the way, is Hadit, her lover. You know she loves Stars because there are...an uncountable number of trillions of them. Some old fool called her the Whore of Babylon because, in essence, there was more than one Star, and he thought that a goddess should only have one Husband.

He's a fool, and his God with him, because to Her they are all one! You see infinite diversity in infinite combinations and she sees the unity of form-and-consciousness, or space-and-time, or position-and-momentum or time-and-energy. To her, these are not-two but one, and so she is always kissing the brows, face or other bits of her husband. When she feels like it, anyway.

She's as faithful to infinity as we are to multiplicity.

And now we return you to your regularly scheduled program.

Eighty-Five

Harry realizes what's wrong. He stabbed Jake in the back and did not even pause for breath.

Jake was once a baby. Harry doesn't really like babies. But Jake was once a four- or five-year-old, and Harry's never met a four or five year old that he didn't like. They are so cute! They're sort of like puppy-monkeys who can talk. And they love everything, or at least they try to. Left to their own devices, they carry around puppies or kittens, and stroke each other's hair, and play ball games and are nice and share. They have to be taught to hate, and they have to be tortured to enjoy torture.

What did Jake say again?

"I saw them cut my mum, and it's my thing now."

Harry's heart opens, and he loves the boy he killed. He wishes he'd been there when whoever cut Jake's mom was about to hurt her, and stopped it. If he, or somebody else, had been there to stop them cutting Jake's mum, then Harry would never have had to kill Jake, because Jake wouldn't have been trying to hurt that girl, whose name I never found out, because I shot her and knocked her unconscious when she tried to run away. God, I hope she's alright. We just left her there. Anything could have happened to her.

And then, finally, it's time for Harry to forgive his father for the war. Harry's father's a killer. Probably ten or twenty times as many people as Jake ever saw killed, never mind killed himself, personally. Harry's father took tons of steel and hundreds of millions of dollars and wrapped them around

killing like a total winner. He's the best at killing there is, except for those DN guys, and they don't count, because they're not even human, not strictly speaking, really. *Homo digitalis*. A short step from the Loonies.

And Harry's father? Harry's father killed a lot of men, all of whom had been hurt so badly at one time or another they were driven insane, so those men would not hurt Harry, and in doing so, hurt Harry's Mom, and Sally, and Petra, and perhaps most of all, poor old Gregory Vine himself, who tried to protect his son from the same machine, the military machine, which had trained him as a killer in the first place. Harry realizes the only drug involved in his father's recruitment was foolish young man's pride, or Patriotism, or some other minor character flaw that, in a nice world, there would be nobody to exploit.

They'd say, "Excuse me, you left your flag hanging out," and you'd put it away, like zipping up your flies!

Harry is so afraid of turning out to be like his father, a professional killer who's so unaware of what they've done that they take pride in it, that Harry's grown to secretly hate himself, almost to death, for killing Jake.

And it all melts away, in the tender loving kisses of the Goddess of Infinite Space, Nuit, of whom Laurie is but one aspect.

Suddenly Harry understands all of it, and he's now ready to step into Peter's shoes as King of the World. It's time.

Peter is now allowed to die. He has a worthy heir, he's tired out, and his race is run.

Peter feels it, in his heart. There's just nothing to worry about any more, it's all fine. He's done his part, and he can be young and strong again in just a few years.

There's just one thing first, though, he has to get married.

Harry takes the Final Step, at which point, he becomes Enlightened.

Harry forgives the Goddess, and her friends, which is all the Suns, and All of Us.

He sees that...

She's trying as hard as she can to understand us, and to make us happy. And you can tell that is true, because we are trying, as hard as we can, to understand each other and learn how to make each other happy, and she is inside, outside and around every single one of us, now and forever, world without end.

We're all trying to work this out, as best as we can, and inside we are all the same. There's no heaven beyond Nuit, and no hell beneath Nuit. There's just Space, and Time.

And that's the Universe.

And now Peter can go home. Harry has gone all the way.

He has forgiven the Goddess for making him, and for all her mistakes. It's time.

Eighty-Six

Peter is old. He's not really sure how old, because he sometimes lives much faster than other people, and so ages fast, and sometimes lives way, way slower than other people, and so ages much more slowly.

He feels about a hundred and eight. That's a good, round number.

It's time for him to get married, and for him and his new bride to die. They're both very ancient, she says she feels about 150, and she doesn't look a day over eighty-nine, which is her book age.

She's the Queen of the World, and she's a little Japanese lady with a very tender heart, and a shoe store operated by three generations of her family. She and Peter have known each other their whole lives, feeling the subtle tugs of cause and effect from another being manifested as true love somewhere else in the world. She and Peter became friends online recently, on a dating site for old people. He knew her face as soon as he saw her: he said "she's got a face like a melted tire, I love her!" and he was right. S/He does.

They invited everyone to their wedding, which is how their funeral was billed.

Some would say this was a cruel trick, but it was the only way they could see everybody before they died, because you can't attend your own funeral, and mingle with your guests. At least, if you do, they tend to scream and run away. It's suboptimal.

So Peter and Maggie, the King and Queen of the World, announced their wedding. They did not put their titles on the invitations. Everybody who came on His side knew he was the King of the World, and everybody who came on Her side knew she was Queen of the World. Their guests guessed that, well, if He was marrying Her, she'd be Queen of the World now, because she was married to the King, and the reverse for Him. So one way or the other, everybody worked out who was who, and it all worked out.

Eight hundred people came, to a field in Tennessee, where Peter had old friends. Maggie flew to Memphis or something much like that, and they met for the first time in the airport. They did not, could not touch each other, for that was Certain Death a few days too early. It was a strain! But not much time now, not much time left.

They stood in an enormous circle. Eight hundred people in a ring, so all could see the Bride and Groom, the marriage of the King and Queen of the World. Harry was asked to officiate, and he was finally ready, so he did it, and he did not mess up. He was quiet, calm and polite, as befits a servant.

They married. There was nobody to give either one of them away, because they owned themselves.

And when they kissed, in the middle of the field, poppies fell from the skies, to cure the world's pain, and they died, right there on the spot, where Harry had said, knowing what would happen, very likely, "You may kiss the Bride."

She fell first, then him, led down to the soil by her fall.

And that's how Peter and Maggie's Wedding became Peter and Maggie's Funeral.

Harry was now the King of the World, and Harry was alone.

Eighty-Seven

The funeral is achingly simple. Peter and Miko persuaded the Gaskins, the family who own the meadow where the wedding was held, to let them be buried where they died. Apparently this is auspicious, and I respect its primal integrity. We again form the great circle, those who have stayed for the funeral. This time I'm on the outside, not in the center. Miko's students, all women, pull the bodies in a cart decorated with flowers to an enormous hole in the ground, surrounded by four mounds of dirt. Dozens of shovels are stuck in the mounts of dirt, like sticks of incense.

The nine tiny women pick up the two bodies, eight taking a limb each, and one, Naginata, leading the way. They stand on opposite sides of the rectangular hole, and then, without ceremony, forcefully dump the tangled bodies into the hole. The silence is broken by hundreds of gasps and moans and cries at the shock of the gesture.

The delicate women in white return to the cart and pull long poles from it, each topped with a bright red streamer, and stick them in the ground around the grave. I'm thinking about Peter's body, unceremoniously thrown in the hole. I don't know how other people are taking it, but to me the symbolism is clear: we're taking out the garbage, but the souls fly free.

The streamers twist lazily in the light breeze. It's too hot. The sun beats down on us.

Peter is gone. Perhaps with Miko to some new life, perhaps into eternal night, if we're wrong about everything. I wonder if I'll see him again.

They pick up shovels and start shoveling dirt into the hole, one on each side. Dad puts his hand on my shoulder and says, very quietly, "I can't believe he's dead. He's always been so full of tricks, I half-wonder if they've just eloped to some south sea island and left us a couple of dead clones."

I turn to look at him, and see from the tightness of his lips that he's not joking. He's warning me.

I think about it. I imagine Miko and Peter in a little cottage near a beach, living under new names, pretending to have been married for half a century, walking in the sand together.

The moment stretches, and Dad says "He's capable of anything. He's never let other people get in the way of doing what he thought needed done."

I imagine Peter and Goppti cooking it up years ago, seeding an illegal tank and growing two bodies, aging them... incredibly dangerous, totally illegal, but with Peter's contacts in orbit...or just grow them up there and smuggle them down, passed through irradiation so they would register as safe and sterile and...

Would he do that to us?

I put my hands on Dad's shoulders, and say "No, Dad, I'm pretty sure he's gone. I really think he was that tired."

Dad doesn't relax.

"I've known my brother my whole life, Harry, and I wouldn't put anything past him. You don't know what it's been like. I loved him, but the weirdness of having him around...Nothing's ever gone right, nothing's ever seemed fully real. Other people just live their lives. We always lived Peter's game."

I think for a moment. I see the pain of loss, but also the knowing that his brother had other priorities.

I think about the AI in orbit, prospecting among the stars for a voice to discuss its soul with, piggybacking on its official mission to find somebody to get a star drive from. I think about making sure that it knows that humans can be Awake

too, about giving it a name. I think about us and them, in the future, referring back to that conversation as a turning point.

I am, at this moment, more Peter's son than Greg's. Because I can't tell Dad what Peter risked when he sent me to talk to AL, what PRIG did and why, and why it was the best thing for everybody. I know Peter did what he had to, and alive or dead, I'd like to think he's made the right decision. But I'm starting to realize how hard it's been for Dad all these years. I'll have to look after him.

People are starting to walk towards the center of the circle, to the graves, to shovel dirt into the hole with the women in white. A few, here and there, drift slowly to the center, almost as if they are dreaming. Most of us just stand around.

I say, "Yes, Dad. I don't think any of us will ever understand Peter's ways completely, but we're all here because he did something for us. A lot of these people think he was a god or a Buddha or an ascended master. We know he was your brother, my Uncle, making it up as he went along. But I think he did alright."

On this we agree. We hug, and walk towards the grave. A spadeful of dirt for the Master.

I think for a moment. I try and reach out with my mind to touch Peter's mind, to feel where he is. There's nothing.

I wonder. If he was dead, would I be able to feel him more clearly as a spirit, as a presence, or would it be this...absence? Surely as a spirit he'd be stronger, more visible?

Then I realize it's just wish fulfillment. Peter is dead, Miko is dead: we're never really going to understand why fully, because the only person who could really explain it is gone, and Dad misses him, and it's a hard enough blow to provoke paranoia.

It's never been easy being Peter's family, but he wouldn't fake his own death at his wedding just to escape.

He's gone, and he's never coming back.

Eighty-Eight

I see Peter walking up a dark gray gravel path at twilight. He's twenty or thirty feet in front of me; I can clearly hear the gravel crunch at each step. He looks as young as he did when I was a child, like my first memories of him. He's carrying a backpack, and the moon is full. I'm my own age, young and strong, and I run after him, but I'm not gaining. He's walking towards the horizon, towards the moon. I stop for breath, and he walks ahead, the distance stretching out until he's at the horizon after half a minute, and I see his silhouette against the setting moon, and then he's gone.

I wake up. It's almost exactly twelve months since Miko and Peter died.

I've thought often about Dad's speculation that they're still alive somewhere, that it was their way of retiring. Occasionally I start believing that he's still alive, that he's cheated death and us, and then it fades. I asked AL about it the last time we talked, and AL stated categorically that it was not anything he'd inferred as possible. He gave a fairly convincing account of things which would have shown up in his purview if Peter had been concealing a project of that magnitude, and says there was nothing.

And is there any difference between Peter dead and Peter on a beach somewhere pretending to be somebody else? To us, he's gone, and if he'd wanted the beach, he'd have gone there to live another life, not to retire. He's free. I stretch out in bed and check the time. Pretty soon I am going to work. I toss the duvet to one side and sit up. The harsh Florida sun

peeks through the blinds. I stand and open them a crack, look out over the pool and parking lot. I've woken up a little early. I walk into the bathroom, start the shower and look at myself in the mirror. My beard is distinct and defined, my skin starting to tan deeply and show a few signs of age. My eyes burn with an unnatural intensity that I try very hard to suppress. Pass for normal.

I've changed so much since the funeral, since Peter's been gone. Dad, Petra and I cleared out the van. It was a museum. We crated everything up and shipped it up to PRIG. He distributed Peter's collection to a couple of hundred people who wanted a piece of the old man's life on their desks or walls. Cult objects. He's venerated. AL took a Beatles album and talks of producing a zero-G record player. He wants me to come up so he can watch my mind as I listen to it. I have an alarm clock with a cracked plastic facade. It doesn't work right. It's become a symbol for me of everything Peter rejected, gave up, about our ordinary lives.

I leave the hotel half an hour later, after a light breakfast and some of the excellent freshly-squeezed orange juice that Florida affords. I wait for the bus on the street, seeking shade at the shelter by the stop. Slacks, a belt, a Hawaiian shirt, Panama hat.

My client makes airplanes. They need very, very specialized nanotech batteries to stay within environmental regulations for civilian flight.

The bus silently draws into the stop, and beeps as the doors open. I step on and sit at the front, looking out the window at my new home town. We trundle through Orlando's outskirts, little houses with overgrown gardens, crazy lush greenery swarming over everything, little lizards sunning themselves or seeking the shade of palm trees, swimming pools; and everywhere the blazing sun and adaptations to it. There's no winter here; I moved in January, and it was like fall never ended. The harshness of the sun washes everything out.

The bus deposits me at the office, and I nod to a few co-workers as I walk to my desk. The formalisms of this

game still elude me but I know that I have to play, because if I'm going to get the best of both worlds, Peter's and Dad's, this has to be mastered. I check messages, see the status of the processes overnight. New bids to supply batteries from three more potential partners, and a more detailed costing from the leading company in the field.

It is dull and routine. That's the point. I can either break ties with the world and make my equivalent of Peter's van, or I can do what my father did, compromise with the rules of the game as they stand, and get on with it.

I go and talk to the boss. Helen's about fifteen years older than me, early forties, in surfing shape. She has the tough, rugged appearance of somebody who lives outdoors. It's no secret why she lives in Florida. "Beach and sky."

Her black suit is severe and formal, in stark contrast to her sun-bleached hair and striking blue eyes. She must have been extraordinarily beautiful once.

"Harry, do we have any conclusions yet?"

"No, only more detailed costings. As the specs tighten, the prices rise. Pretty much what you'd expect. Some of the smaller players are coming to the table now, but we'd be taking our chances with production volumes this large if things go well in the sales pipeline."

"OK. Well, this isn't blocking or bottlenecking anytime soon, so just keep it moving. Oh, and Harry, I'm having a party on Friday, you should come and meet some of my friends."

She smiles.

It's definitely not a come-on, but it's also definitely slightly more than friendly.

OK, party with the boss.

At lunch, I go for a walk, sit down in a café down the block, pull out my remote and some lightweight goggles, and check in on my private life. AL and I are playing Go together against a team of six humans and two AIs, and so far only losing by a small margin. Petra's arranging a family vacation. Half a dozen requests for help of various kinds—a question on meditation, some questions about Harappa from a college

student, somebody looking for an expert on lunar logistics, relationship advice...Pastoral care and future engineering in a bundle. They didn't quite hand me Peter's in-tray, and I've only got a tenth of the time he did for the network, but it's ongoing. Naginata turns out to be a lot more active and westernized than her formal bearing at the funeral had suggested. She, Laurie and Petra have become firm friends and between them are balancing a lot of the oddies left in Peter's network. Annie's not so well, she took his death hard; but time slowly passes. We've agreed not to mark the anniversary: it's not a tradition we want to start.

Peter is gone.

I'm a low-level contract negotiator for big, complex manufacturing operations involving space and ground partners working together. I don't do very much beyond talk to people and make sure that we don't have massive inter-cultural misunderstandings that threaten the production schedule. Having spent a year up there seriously helps, although it's not often I pick up anything important. I'm basically a cultural proof-reader.

Keep the contracts moving, keep everybody on the same page. Keep progress progressing. I picked something that was as much like Dad's job as possible. He kept the lights on, raised a family, and still has a soul. It's not that I haven't forgiven Peter, but the longer he's gone, the more we realize how weird he was. And that's not the work, that's just who Peter is. Was, I mean. Was.

I walk back to the office. First year, I'll be here. Maybe I'll stay longer than that, because Florida's a good place for me, but I'll be able to work from anywhere and travel. But I've gotten to like Orlando. Something deeply pleasing about the rain in the afternoon, and coming from New York, the lizards are still magical.

Eighty-Nine

Friday night. There's a barbecue grill on the back porch. It smokes too much and produces a constant stream of shrimp, fish and grilled vegetables. The other guests are mostly around my age, a few of Helen's age. Her daughter is there, she's a little younger than me, very much the same build as her mother, and stunning. She's taking a couple of years off after college and getting to grips with the realities of life as an artist.

The house is filled with loud conversation, clanking glasses, forks on plates. In one room people take turns playing their favorite music and showing off the dances that go with it from around the world. It's never been my thing.

One of Helen's daughter's friends is wearing a spacer's band around her wrist. In orbit, it would log environmental exposure and monitor vital signs. Down here, it's jewelry, a little secret handshake. I wonder if she works for the company.

Jillian has dark, curly hair and full, moist lips. A little heavier than is fashionable here, imported from up north. Soon she and I are sitting on the steps of the back porch, underneath the smoke from the grill, chatting about what we did in our time in orbit. She went there to study dance, and wound up learning the basics of construction choreography, the delicate interweaving of people and machines required to build habitats efficiently—half logistics, half fine manipulation—all whole systems, right back to the architecture and the original building conception. I realize that

there's something more, too. Not just an attraction, there's some sheen of magic on her, some angle. I mention my last name, see if she knows Peter.

Nothing.

I consider mentioning PRIG, but that's not really wise or safe. He's... controversial.

It's an impasse. Then she asks me "so did you spend any time, you know, Outside?"

"Mother of Hydrogen, You are the void..." says my mind, unbidden.

I imagine her in a space suit, staring at the cosmic expanse, at the wonder, hair floating around her face, eyes touching infinity, breath sucked into a backpack by silent little fans, a hundred billion light-years of nothing in every direction except for the blue marble behind her. I imagine that she Knows.

I say "Yes. I didn't do very much EVA, but I had a couple of sessions, one quite long. Just tourism, though."

"Ah." She's awkward. Trying to broach it.

"I spent a long time in a suit up there. I wasn't working construction officially, but they let me help out in some of the simpler stuff, as part of a trainee team. And I was good at it, better than some of the regular workers. Dance training, you know, it helps, but also the mind that grasps space, time and motion grasps everything. It's all one, you see, like fingers on two hands working a padlock. Each person on the construction team is a finger, and the panels and cables are the lock. It's all one system, all together, as a whole. It's all one."

I'm watching her in space as she speaks, fluid and balletic, wielding a beam as a counterweight, exchanging angular momentum with it to spin into motion. I can see her thoughts as she forms them, she's broadcasting to me how it was, and I can hear her.

"Yes" I say, and I visualize taking her hand. As I reach for it, she raises it to meet me, perfectly coordinated. Like one system.

I playfully turn my hand, and she turns her hand against mine, backs touching. We drop them and turn to face each other.

“So what do you do down here?” I ask.

“Scuba. It’s not the same, but there’s life down here, fish and turtles and other people, and you can be much more casual about when you dive than getting airlock clearances on construction crews!”

“I’ve never tried it. Actually, I’ve never even snorkeled. It’s really that good?”

“Oh yeah. Come with me!”

“I’d love that!”

So it’s set. We spend the rest of the party taking to other people, a little skittish. It’s not easy, that feeling of *Something Is Happening*. And the end of the night, I give her a hug and a kiss on the cheek, and ride back to the hotel on my bike.

I check messages when I get in. Some good news, some complications. I make some judgment calls, nudge a few things forwards, and go to sleep.

There’s a heaviness to my dreams, a portentous quality, a sense of something of significance. But it’s just smoke and fog when I try and think about what all the symbolism means. I just don’t know what I’m trying to say to myself in the night-time movie theater.

The next morning, the King of the World gets up and goes to work. He has a date.

Ninety

Fort Lauderdale is a quiet, cheap place to live. It's seen better days; during the couple of decades it was uninsurable around the '40s from climate storms a lot of the people left. It's settled down into quiet tropical dilapidation.

Down here, my salary goes a long, long way. We have a house two hundred and fifty meters from the sea, behind a huge raft of carefully planted flood defenses, trees that stabilize the soil embedded in geotextiles. We can see the sea through their trunks, but they break the sea winds.

I'm saving money. PRIG's helping us plan another year in orbit in a couple of years, but I'm wary of relying on AL to print money for tickets. We can't afford to go, but getting work posts up there is plausible with our skills, and that's not a bad way to go. And if AL does it again (I don't like to ask!) we'll have a nice little nest egg.

Father approves of Jillian. I thought I'd find that reassuring, but it brings up a whole bunch of questions about family and where the lines are. Mom's not so sure, thinks she's a little flaky and "well...orbital, you know?" and my sisters steer clear of the subject, wary of having to offer an honest opinion. They just want me to sort it out myself.

We moved into the beach house a few months ago, and it's a quiet paradise. I still work for the company. Jillian's teaching dance classes here and training for a diving trainer license. There's a lot of grunt work doing conservation diving here, reseeding damaged reefs, cleaning up ancient garbage on the ocean bottom, but we don't need the money that badly.

I'm doing very well, because once in a while PRIG and AL help me out with something tricky, and I've gotten something of a reputation as a wizard, a troubleshooter who really understands the space context and how to get people up there to help us lowly groundlings out with our irrelevant little problems as they go forwards and forge a new destiny for the human race.

Or something like that.

I keep my mouth shut a lot, I never mention Peter, and I get on with it. I had to choose between living like Peter, living like Dad, or making my own mistakes. Dad's lifestyle was all about compromise, and I think, in the final analysis, he did much better than Peter did. At least...I looked inside of myself, and saw there was nothing inside me that wanted to be a hermit in a van.

Jillian comes home. She's hosing off gear outside, setting it on the line to dry as she does. I hit pause on a couple of processes, save state, and get a couple of beers out of the fridge. I hear the shower start outside, and a couple of minutes later she walks in stark naked and dripping wet, shimmies a little shedding drops and jiggling far too consciously, says good evening, kisses me and then goes to the bedroom to find clothes.

I smile and put my shoes on.

She comes out wearing a towel around her head and a sarong and sandals. The evening's hot and sticky, not much breeze today, and I'm in a shirt and shorts.

We take our beers with us, and walk down the path through the trees to the beach. Walking along the sand in the falling dusk, she tells me about a couple of fish she photographed this afternoon on the reef, and I tell her about some trivial details of an alloys deal I just sorted out.

Half a kilometer down the beach, there are umbrellas around a notoriously fake Tiki bar. We finish our beers before we get there, and take our usual stools.

Eddie and Edie are behind the bar as usual, cooking salt fish. His family's originally Nigerian, hers Sudanese, by way

of the Caribbean. They opened this place a few years ago, and they've become our friends.

"Go on, then!"

"Two margaritas and what's good?"

"The fish, man, the fish."

It's a joke, there's only ever one dish on the menu each evening, and it sells out by seven. They just cook a bit more dinner than they need, and if you're lucky and early, there's some for you too.

I borrow his remote, and Jillian shows me the fish. It's in little cave in the reef, and is quite large, almost the size and shape of a big eel, but clearly a fish. No particular colors, it's silvery gray, but it's clearly too big for the hole its in. Trapped?

"Yep! It must be some kind of ambush predator, and it'd just stick its head out of the hole, grab something, and eat it, and it's been growing in there since it was tiny probably!"

"Wow, what did you do?"

"Well, I took a couple of pictures and freed it, just chipped away a little of the coral at the entrance so it could escape if it wanted to."

"You freed a bananafish?"

"Yep."

I press my leg against hers, and put an arm around her shoulder.

"I love you."

It's sort of a turning point, a petty symbolic action that expresses her hope for the world. I don't really know why I'm so deeply touched, but there's something in that action, the pointlessness of it but also the wholeness of it, her intention to give a perfectly happy fish some options that it did not have before...the innocence of just doing it.

We eat the salt fish stew and make small talk with Eddie and Edie as they carelessly manage a slow night at the bar. Afterwards, we walk back up the beach, and I think to myself, What is life for?

Jillian catches the thought, and says, apropos of nothing verbal "Well, isn't this nice?" and I glance backwards at the footsteps together.

I don't know how far we're going together, but we seem to have set off on the right foot, and it's all fine.

That night, I dream of Peter again. I start awake when I see him leap into the air and fly off in a fit of enthusiasm.

I think about Dad's vision of Miko and Peter on a beach somewhere, living pretty much as Jillian and I live now. I think for a minute of how desperately Dad wants Peter to still be here, still be alive, not to have killed himself. Why didn't they choose to live? What was the point of it all?

I know that I'm not going to find out. All of us spent time with Peter, but none of us every really knew him.

Next time I see PRIG, I'm going to ask him for his thoughts, though. We may never know, but we saw different sides of Peter. It's worth asking.

Ninety-One

PRIG and AL are on opposite sides of a game of Go. AL's showing PRIG his potential moves, projecting patterns of light over the physicality of the stones, magnetically held on an imitation wood board. PRIG says "I don't think you're going to be able to make life in that corner now, AL. I've checked!"

AL responds "I only need two stones worth of sente and I have life in that corner, PRIG, and you know how I love ko fights."

PRIG and AL both use AIs to play Go. Simple tactical intelligences which tree search and grind out possibilities. They have no consciousness, no awareness to speak of. But you need them to play games. The problem is that software is software, and when both sides have it, the advantages rapidly level out. Human judgment, and in AL's case, a rapidly evolving aesthetic sense help add the little edge on top of the simple efficiency of the machine analysis. But without that bedrock, complex consciousnesses are simply too fallible. Even AL makes mistakes.

So AL uses those simple AI game systems much as PRIG does. The difference is, perhaps, that AL truly understands them. But his advantage over PRIG is small, and reducing the more he and PRIG play.

"Harry asked me something the other day," says PRIG, pondering his move.

"Yes? What did he have to say? Is he still shackled up with that girl?" AL, of course, knows, but is making small talk.

"Yep. He's quite eager to see what she does in zero-G, she's talking about choreographing a show up here."

"Hmm. Call it 'muddy boots in space, the ballet.'" AL tests the funny/offensive line.

"Well, I dunno, Earth-born dancers have a certain vitality, an elation in openness which even the best of ours find hard to match. I've watched some of her films from the time she was up here, and she really does have something." PRIG is envious, but that's not something to discuss with AL.

"What did Harry have to say?"

"He wanted to know if I really thought Peter was dead."

The silence stretches out as they both look at the board and ponder their positions, and PRIG checks his game AI's analysis against AL's equivalent system.

It's been a while since they've talked about Peter. He's becoming part of the past.

"What did you say?"

PRIG pauses. He knows AL won't say anything to Harry, and he's kept silent long enough.

"Peter told me that he was not interested in living too long many times, AL. He really envied Harry being able to come up here when he wanted, having a body that could take the strain. He said that when he came back, it was going to be in a body that could take him to the stars. We'll see him when the time is right."

It's AL's turn to pause.

"The search is slow, PRIG, on both fronts. We both know the odds against contacting an intelligent species, that we can communicate with, that has a drive, that isn't hostile, that wants to share, that has a technology that we can implement. It may simply never happen. And the physics is no easier, the universe is not going to hand us star drives on a plate just because we invented the guitar and the folk song. Peter may have to take his own sweet time coming back if he wants to catch that particular show."

PRIG looks weary for a moment. How long is it really going to take before something changes, before the doors of the universe open for pan-humanity, and the future begins in earnest for all of us?

“Well, my friend, at least one of us will be here to see it.”

PRIG places a stone very carefully on the board, slightly against the advice of his AI, but trusting his intuition.

AL says “I hope the wait won’t be too long, PRIG. I’d like you to come with us.”

“If Peter’s right about how the world really works, AL, one way or the other, I’ll see you in the stars.”