

Radiance

Carter Scholz

CARTER SCHOLZ HAS NOT PUBLISHED FICTION IN A GOOD MANY YEARS; HIS RETURN IS CAUSE FOR CELEBRATION.

THE COLD WAR PRODUCED ANY NUMBER OF CULTURAL WONDERS, OR DISTORTIONS, DEPENDING ON YOUR POINT OF VIEW. (FROM MY OWN POINT OF VIEW, BOTH WONDERS AND DISTORTIONS.) THE PRESSURES PLACED ON NATIONS, CULTURES, INDIVIDUALS, HAVE BEEN HORRENDOUS. WITH THE BIRTH OF THE NUCLEAR AGE, PHYSICS KNEW SIN; CHEMISTRY HAS KNOWN IT AT LEAST SINCE HIGH EXPLOSIVES AND POISON GAS IN WORLD WAR I.

AND YET . . . THERE HAS NOT BEEN A WORLD WAR SINCE 1945. HOW WILL HISTORY JUDGE THE COLD WARRIORS? PERHAPS MORE IMPORTANT, HOW WILL THEY JUDGE THEMSELVES?

1.

QUINE APPROACHED THE Labs on a road that led nowhere else. The morning light was thick, corpuscular. Behind the razorwire of the perimeter fence, cranes and water towers and incinerator stacks rose above the fortress city's sprawl of buildings. Construction vehicles moved on the roads. Beyond, grassland stretched to hillsides yellow from drought and spotted with dark stands of live oak.

Soon he saw the protesters blocking the gate. Cars in both lanes were stopped. Blue lights and red lights flickered atop patrol cars on the road's shoulders. Blackclad police formed a line between the protesters and the gate. Over chanting, rhythmic but unintelligible, rang a bullhorn's clipped commands, and the protesters fell back from the roadway to the shoulders, the rhythm of their chant stumbling. A few remained kneeling before the gate. Three police holstered their batons and moved respectfully among them, like acolytes among devout, helping them one by one to their feet and leading them within the gates to a waiting bus. The sequence of blockade, arrest, and release was by now ritual. The arrested chatted with their captors.

As the cars edged forward Quine saw once again the darkhaired young woman in the crowd and once again felt the hollowing of his heart. Her resemblance to Kate, any reminder of Kate, still lanced him.

Two cars ahead, Leo Hight's red convertible sounded its horn as Hight leaned out to heckle—Get a life! The woman flinched and Quine's eyes locked on Hight's head, the bald spot, the wedge of features visible in the rearview mirror, the broad nose and dark glasses. Past the gate Hight's car sped into a right turn to the administration building while Quine drove on to the second checkpoint, then through a desert of broken rock, buried mines, and motion sensors on metal stalks like unliving plants. Past this moat he stopped at a third checkpoint, then parked in the shade of a concrete building with its blank walls and horizontal slits of embrasured windows, nervously thumbing the car radio—traffic and weather together, while he watched two younger scientists cross the lot and enter the building. Then he stilled the car and went in.

In his office one high horizontal window framed a blank oblong of sky. On the walls, left by the prior occupant and by Quine untouched, hung seismographs of bomb tests, the branched coils of particle decay, a geological map, electron micrographs of molecular etchings, a fractal mountainscape, all overlaid by memos, monthly construction maps, field test schedules, Everyone Needs To Know About Classification, cartoons, Technology Is What Sets Man Apart, and nearby a whiteboard thick with equations in four colors so long unwiped that Quine's one pass with a wet rag had left the symbols down one edge ghosted but not eradicated, and a second desk, loose papers cascaded across its surface, the computer monitor topped by a seamsplit cardboard carton BERINGER GREY RIESLING and buttressed by books, manuals, folders, xeroxes, Autoregressive Modeling, Rings Fields and Groups, Leonardo da Vinci Notebooks, Numerical Solution of Differential Equations, Selling Yourself and Your Ideas! and under the desk banker's boxes DESTROY AFTER, and D NULL in black marker. Devon Null, the prior occupant, was "on indefinite leave." But when Quine had moved in, Hight had insisted that he leave Null's half of the office untouched, either against Null's return, or, as Quine was coming to believe, as a monument to disappearance.

Quine checked his computer mail. Most of the messages were notices, chaffing, power plays, trivia.

A memorial service will be held Nov. 1 for Al Hazen who died Oct. 27 following a lengthy illness. He was 51. Hazen worked with the Weapons Test Group at Site 600. Donations in his memory may be made to the American Cancer Society.

One message could not be ignored:

Date: Thu 31 Oct 12:10 EST

From: Leo Highet <sforza@milano>

To: Philip Quine <quine@styx>

Subject: Radiance

Cc: dietz@styx, szabo@styx, kihara@dis, huygens@aries, lb@dioce

Gentlemen:

As you know, the Beltway boys are coming and it is CRUCIAL that they go home awed. I want confidence, energy and style. There are unanswered questions and we will take hits on those. Meeting at noon today to brainstorm our approach, bldg 101, rm 210.

Highet

"To apply and direct this vast new potential of destructive energy excited the inventive genius of Leonardo as had few other enterprises."

More galling than the message was Highet's new computer log-in *sforza* and his closing quote. This inspirational conceit, that they were all Renaissance *maestri* under the gentle patronage of Prince Leo the High, had come ironically from Quine, who was reading about da Vinci's eighteen years as military engineer under Ludovico Sforza, Duke of Milan. Leonardo had written, "I hate war, as all rational men hate it, but there seems no escape from its bestial madness." Not while men of genius bend their talents to it, Quine had added. Here was Highet's response.

Highet. What a piece of work. Builder and destroyer of his own legend. A fecund theorist but a distracted experimenter, an indifferent administrator but a champion politician. Most Lab scientists considered themselves above the funding process, but Highet tracked it as carefully as any experiment. From the start of his career he had traveled often to the capital, made himself known and available to congressmen and their staffs. In reward for such attentions he was at a young age appointed technical representative to a disarmament conference. His conduct was impeccable until one afternoon, goaded by the other side's mendacious presentation and by his own ungovernable need to occupy the center of every situation, he let slip classified data.

Highet made allies sooner than friends, and enemies sooner than either. His allies were silent while his enemies leapt to break him. But Highet made the first of the hairsbreadth escapes on which his legend was built. A paper published a year before, cosigned by the President's science advisor, had exposed the same secret. The hearings were dropped and Highet was exiled to an underfunded oubliette of the Labs housed in temporary trailers. J Section.

Anyone else would have languished there. But Highet built by inches a power base, using his charisma to attract the brightest, most driven graduate students he could find, forming in the meantime new political alliances. When Congress at last funded Radiance, all the necessary talent was in J Section, and fiercely loyal to Highet. Soon he was associate director.

Radiance's charter was to develop energy weapons of all types, but Highet's hope and pet was the Superbright: an orbiting battle station of hairthin rods webbed round a nuclear bomb. The bomb's fireball would excite the rods, focusing its energy into beams that would flash out to strike down enemy missiles, all in the microsecond before the station consumed itself.

So far the beams flashed out only in theory. The theory, originated by Null, seemed to Quine sound, but the more he studied the computer model, the less he understood why Null's last test had produced even the ghost of a beam. No subsequent tests had shown it. Yet the farther tests fell behind expectations, the more strident became Highet's public claims. Warren Slater, in charge of testing, at last resigned in protest. His letter of resignation was classified and squelched. Bernd Dietz had taken interim charge of testing, and to Quine had fallen the task of finding in disappointing test data any optimism about the promised results.

With the showpiece of his career vulnerable, Highet had grown more reckless than ever. He began showing up at high profile, high tech conferences and seminars, on neural nets, genetic programming, nanotechnology, virtual reality, cold fusion, artificial life, making no discriminations between the cutting edge, the speculative, and the snake oil, as if the force of his character could remake physical law. He spoke in banquet halls at Red Lion Inns, he passed out abstracts, offprints, videotapes, he painted futures brighter and more definite than the present, with himself and his visions at the center of them, inviting the wise and the bold to sit with him in the prosperity and rectitude of that inner circle, outside which was darkness, barbarism, and chaos.

And many have made a trade of delusions and false miracles, deceiving the stupid multitude. Again the voice. Quine recognized the line from Leonardo's *Notebooks*. In the mind's shadows were countless voices, dead, living, unborn. Since working on Radiance he had dreamed them. Now they irrupted into his waking life.

On his second computer, secure in steel shielding, waited Quine's simulation of the rods. Abstract figures gyred in bright colors on the screen. The bland satisfactions of programming. The self-contained machine worlds. It was near to pornography, gaudy and without nuance. Any half-bright notion could be simulated, the simulation tweaked to success, and the success conjured as proof for funding. Realization was, as Highet might

put it, a “materials” problem, an exercise left to minions. Bend your backs, men, to prove this golden turd of an idea.

The display glitched and broke into the debugger. Lines of code filled the screen, void qelem, malloc (xarray), atof (nptr), an arcane pidgin half-way to madness. He ceased to see the words, his eye grasping instead the pixels, the shards of contained light the characters comprised.

What is light? The great mystery. Surfaces boil with quantum fire. How comes this dumb swarming to write beauty, alarm, or desolation on our souls? Eyes are the questing front of the brain, and channel to the heart. The eye may not, as Archytas thought, emit illuminating rays, but our modern understanding is no surer.

Mind’s eye and heart’s channel presented him now Kate’s russet hair, full mouth and cheeks, dimpled chin, dark eyes framed by wire glasses. Like a key those features fit his heart. Her flexed shoulder blades under a leotard’s scooped back. In a yoga class they’d met. Flirting, lunch, a few dates. She was twenty-three, he thirty-four. Hence his reticence, and paradoxically his faith that the years between them were his to reclaim at will. Her attention augured it. But when at last he bared his need for joy and hope, so long put by, it came out a bitter plea. Save me. Who wouldn’t flee from that? She regarded him kindly. Oh, Philip, the moment’s passed. It just didn’t happen for us. There’s someone else.

That the moment could pass. That he had let it. Had not seen it passing. Almost two years since and still it pained. His hand sought his carotid artery. Sixteen in ten seconds: ninety-six. Everything now cause for alarm: gas pains, headaches, shortness of breath, specks in his vision. The blue pills with their excised triangle. Not at work. Certainly not with a meeting.

The morning was gone to no end. Since failing with Kate he seemed to fail at everything, and he saw in all his life only patterns of failure and emptiness.

Quine avoided that part of the building where Highet’s young theorists worked, X Section, or, as the older men called it, the Playpen. But today his customary exit was blocked by a tour group of weary adults and bored children in facepaint, their guide saying, —tiny robots that actually repair human cells, as he swerved past a sign WARNING TOUR IN PROGRESS NON-CLASSIFIED CONVERSATION ONLY to the swell of the Brahms Requiem in full clash with The Butthole Surfers and a rapid din of simulated combat followed by the admiring exclamation, —Studly! Big win! and laughter fading as he passed an open room in which three refrigerators stood flanked floor to ceiling by case upon case of soda, and veered into a stairwell clattering down metal steps to a metal door held open by a wastebasket and silent

despite EMERGENCY EXIT ALARM WILL SOUND and emerged onto a loading dock between brown Dumpsters NOT FOR DISPOSAL OF HAZARDOUS WASTE stepping down onto a paved path then jumping back to dodge a white electric cart DAIHATSU jouncing onto a debris of torn asphalt and treadmarked dirt past chainlink CREDNE CONSTRUCTION and three blue PORT-O-LET stalls to vanish behind three glossy cylindrical tanks COMPOSIT PLASTEEL CONTAINMENT DO NOT INSTALL WITHOUT READING PLASTEEL KIT B INSTRUCTIONS, on past temporary trailers holding his mouth and nose against the stench of bright green flux oozing from an open pipe into gray earth, until he regained the main road and passed the checkpoint, showing his badge, to enter Building 101, passing through the lobby in which for the edification of visitors and the inspiration of employees were displayed models of bombs, lasers, satellites, boosters, and photos of the celebrated Nobelists who'd devised them, and on to the conference room where all but Hight had arrived.

—He was one of these, shall I say, Marxist radical types. He was so radical his mother cut him out of the family money. Hello, Philip. We're waiting for Leo as usual. So he's in Prague now selling laptop computers to the Czechs. Ah, the man himself.

—Who's this you're talking about, sounds like he's figured out that free markets are diplomacy by other means. Everyone, this is Jef Thorpe, postdoc from the University of Utah, he's here to look us over. Jef worked with Fish and Himmelhoch on cold fusion, and I just want to say don't believe everything you read in *Nature*, something's happening there, someday we'll look into it ourselves. Jef, Aron Kihara, our new press officer, takes the heat for my excesses. Bernd Dietz, materials and research. Frank Szabo, systems integration. Phil Quine, our X-ray focusing guru. Philip, Jef's done interesting work in your area, you should talk to him. All present? Let's do it.

Hight seated the young man opposite Quine, jeans, dark jacket over T-shirt, black hair, high color, a small gold stud through his left nostril, his presence a breach of protocol and probably security, though the others knew better than to say so.

—You all see the news last night? About the protest? We won. We won because we got to go last. First the protesters, out on the street, wind noise, harsh lighting, then our rebuttal from our respectable office. They put us last because we provided closure. So that's our model for the presentation: beginning, middle, end. Begin with our successes, footage of tests. Middle: video simulation, highlighting potential problems. By defining the problems we control the questions. End with entirely new approaches and spinoffs. Aron's running the show, but I may break in at any point.

—Leo, can we skip the last part, the science fiction?

—No, Bernd. Past, present, future. Closure. Without this you leave people ready to ask questions.

—We're avoiding questions?

—Not if they're intelligent and informed but we have a few critics and wise guys on this panel and I'd like to keep it simple.

—Leo, I have more respect for the intelligence of Senators. Congressmen are not always so bright but

—Bernd, it's simple courtesy. We inform them at a level that's neither condescending nor technical, we assure them their money is being well spent, show them how, say thanks so much.

—Salesmanship.

—Grow up, Bernd, a couple times a year I ask you to do this. Is the money well spent? Yes or no.

—Yes, yes.

—I'd ah, feel better if we could discuss the middle part in detail, there are just some questions that I'm not comfortable to address without ah, just a little more input. For example the focusing data . . .

—Aron, only Slater has questioned that data, and he's gone. Discredited. Focus is now Philip's baby.

—So, ah, focus is our main problem?

—Yes, it's one, said Quine. —Focus, brightness . . .

—But we're within an order of magnitude?

—I don't see any quantitative agreement with theory. The tests have shown a few bright spots. That's all I'm willing to commit to.

—That's all you've committed to for what is it ten months now Philip?

—I don't see any fundamentals. I'm beginning to wonder

—Are you pulling a Slater on me, Philip? Because I want to tell you something, all of you. Some people in the lower echelons are making Slater out to be some kind of hero. To me this man was a menace to every one of us because he didn't care about winning. He didn't know what he wanted out of life and wouldn't have been able to get it if he had known. I have no respect for parasites like that.

—Leo, Null had a brilliant notion and we should pursue it, but that's all it is so far, a notion. We

—No one's questioned Null's theory, no one, not even critics.

—Sure but it's a long way from there to even a prototype

—We have supporting test data

—which may or may not mean qualitative agreement may or may not, but never quantitative, we have no understand

—well you're the one with the models Philip lo these many

—and you're the one who said this was a long term project, your words, long term, now suddenly

—oh sure, and if we all had seven lives

—now there's a little pressure it's

—what I'm hearing

—it's suddenly urgent

—what I'm hearing from you Philip is that we need more shots. Convey that necessity to our guests when they're here, think you can do that?

—I won't pretend there's focus

—You're not going to give me an inch are you?

—Not on the basis of spotty data I can't interpret.

—I tell you what. There's an eighty kiloton shot next Saturday. That's your baby, Bernd? Philip, piggyback it. Get yourself some better data.

—In what, a week? Design and fabricate apparatus in a week?

—Nine days. Jef can help you if he sticks around.

—Now hold on

—Get off the pot. Let's move to Frank's contribution. You've all read it?

—Leo

—We're moving on.

There was a brief silence in which papers rustled.

—Nothing new here, said Dietz.

—That's its strength. We've taken heat on pre-production technologies. This is a simple, viable off-the-shelf option, an element of the overall system. It's an easy sell. Contractors are lining up.

—It's also good show-and-tell, said Szabo. We can point to a card cage, this is the guidance system a year ago, then hold up a wafer, here it is today. Tangible progress.

Dietz continued to study the paper. —These are Baldur anti-satellite missiles in a smaller package.

—Close enough.

—These were shelved over ten years ago as a violation of the ASAT treaty.

—That toilet paper? Let that worry us we might as well pack it in.

—These are not by any stretch of the imagination directed energy weapons. You want to put, what does it say, five thousand of these in orbit . . .

—We're pursuing many options, Bernd. These would be one layer of an overall shield. It's a long way to deployment. Oh and we get something else totally for free with Frank's idea. Always think dual use. Put a warhead on these guys they're earth penetrators, aim them downward get a thousand g

impact, three k p s terminal velocity, earth-coupled shock waves destroy hardened shelters. We have a friend in the Pentagon who's hard for that and the Beltway boys know it.

—Wait just, you mean, this, these ah interceptors are for the presentation? But it's, we need to address the existing problems, that's what they're coming for, we can't feed them something totally new! And with this Slater thing

—Aron, trust me, it's the best possible thing to do. As far as Slater goes, he's history, a blip, not even an incident. This visit was scheduled long before he had his snit. Sure we'll get closer scrutiny than we would in the average dog-and-pony but call it an opportunity. Remember NORAD's well-publicized false alarms and screwups, they got a billion-dollar facelift out of it. You up to speed now?

—Well yes, I mean, no not on the interceptors but . . .

—Just put Frank's paper in the kit, I'll step in. Oh, and make sure everyone gets a souvenir.

—A, I'm sorry?

—A souvenir. What are you giving the kids for family day today?

—Ah, some laser-etched aluminum disks . . .

—Good. Run off half a dozen make it a dozen more etched with the Radiance logo, can you do that? And glossies of the new artist's renderings.

Hight was out the door before anyone else had left their seat. Thorpe, abandoned, stood but did not move quickly enough to follow the older man out. As the seated men studied him incuriously he blushed and exited.

The others then rose. Szabo went out singing under his breath, —It's a long way, to deployment, it's a long way, I know. In the meantime, we have employment, it's the stick that makes us go . . .

At the doorway Dietz said to Quine, —Outrageous that he should bring a boy into that meeting and criticize you this way. Easy for him to make promises, but when the promises are not so easy to deliver we suffer for them.

—I don't think the boy knew what he was getting into.

—Tell me what you want added to this test as soon as possible. He has put our asses on the line, both of us.

—I'll send you e-mail.

—Souvenirs! He gives senators souvenirs.

Quine had come to the Labs at Réti's invitation, Réti, the legend, intimate of Einstein, Heisenberg, Schrödinger, founder of the Labs. Impossible to refuse. Réti had for one semester graced Quine's university with his presence, where he'd sat on Quine's doctoral committee. Quine must have made an impression, for two years later Réti called him. I hear you are working

hard on some good ideas. How would you like unlimited resources for this work? Come for the summer, work on what you will.

Quine and Sorokin, a fellow postdoc, had isolated the emission of a single photon from a calcium source in order to determine whether a lone quantum displayed wave-particle complementarity. They'd refined their approach for two years, paring it to essentials, designing an experiment they had a hope of realizing with the school's meager resources. Elegance born of need. In one month at the Labs Quine designed and built a detector acute enough. The experiment came off on the first try. Both tunneling and anticoincidence were evident. They had touched the central mystery. Even a single photon is both particle and wave.

Quine stayed; after that there was never a question of it. Not till much later did he guess that he'd been played. That Réti had waited two years before approaching him for a reason. That by then his work was ripe for plucking, and the Lab's resources had little to do with its fruition apart from giving them the juice of it.

His paper brought him a celebrity almost grace. Unlimited time to think. No assigned duties. And the mysteries ceased to open to him. Idle, he took on a Lab problem, quantum optics of X-ray mirrors. He welcomed the work, as though it paid some tithe of the mind to the practical. And it was interesting science, but finally it was, as the pioneers had with exact irony called their first bomb, a "gadget." A solution that laid bare first principles was useless if it couldn't kill missiles. So his mirrors never passed a design review, but he was left alone to fiddle with quantum optics for telescopes and such. Then Radiance geared up, and his modeling software proved flexible enough to accommodate the next idea: the bombpumped Superbright. Opportunistic as a virus, the Labs exploited any evident skill. And so he was out of quantum optics and into weapons modeling. He became busy. Still he kept silent faith with the mysteries. He would return to them when the pressures of the moment were past. Programming took only the surface of his mind; its capital he held in reserve. But Quine could feign reserve, even to himself, while reserving nothing, and he came at last to understand that he did well at programming precisely because he brought his all to it. Nothing was left over.

When he left the building the sun was low. The air was warm, and as he started the car the radio blurted —record temp, before he silenced it.

Through the gate traffic slowed. Demonstrators in costume paraded in the road. Quine edged forward through skeletons and spooks with signs and props, TECHNOLOGIES OF DEATH, a longrobed mantis-headed figure towering on stilts above the crowd, tambourines jangling, EL DÍA DE LOS MUERTOS, and lab security herding the crowd off the road. As he cleared the

crowd a klaxon blared. The mantis swayed, tugging at robes snagged on the perimeter razorwire as the entrance gates slid shut, alarm lights strobing. On the inner perimeter road security vehicles appeared racing. Then he saw standing by his passenger window the woman who resembled Kate. She wore black spandex bicycle pants and a blue chambray shirt. She was staring at the gate. Quine hesitated, then rolled down the window.

—You want a ride out of here? They're going to start arresting people.

She looked at him, then back at the gate. On the main road Quine saw a flurry of approaching lights. City police.

—I can't wait.

Whoops blasts squeals cut the crowd noise. She saw the vehicles approaching and with something like annoyance got into Quine's car. Quine sped away shutting his window against the shriek of the passing vehicles.

—I'm Philip.

—Lynn. Did you see what happened?

When he looked at her all resemblance to Kate fell away. Same body type, same round features, but hair almost black with just a russet tinge, cropped close to the neck. No glasses. Dark penetrating eyes. Tanned calves darkly downed, lithe as a huntress's. No key turned in his heart, just a faint echo of loss.

—The one on stilts, his costume caught on the fence. It must have set off the alarm.

—Were you there for the demo?

—No. I work there.

His ID was still clipped to his jacket. She had been looking at it, and now she smiled slightly.

—What do you work on?

He turned onto a road parallel to the freeway where earthmovers were parked in debris-filled lots between emporia of sporting goods, fast food, auto parts, videotapes, computers, discount carpets. Sun flashed through the struts of a half-finished retaining wall.

—Defensive weapons. Where can I take you?

—You mean Radiance. Do you believe in it?

And those in the anterooms of Hell demur, saying, I do not approve of what goes on inside.

—It's what I do.

—Do you know what Einstein said? That you can't simultaneously prepare for war and prevent it?

—Where can I take you.

—Drop me at the corner of Mariposa.

—We didn't hear about the evening protest. The organizers usually let us know.

—Maybe they're tired of playing your game.

—It's not my game.

A green sign with white letters MARIPOSA hung over the intersection. Quine pulled to the curb by a bus stop bench placarded FAST DIVORCE BANKRUPTCY. She turned to him with sudden vehemence.

—But isn't it a waste now that the cold war

—Look, and hearing annoyance in his voice he immediately stanch ed it, —even if I, it's classified and I work, I only work on a small part of it, I don't even know . . .

—These demonstrations won't stop, you know. Until you do. You don't know how angry people are.

—Then I'll probably see you again out there, he said.

—You will.

She unbuckled her seatbelt. Suddenly he wanted to know her.

—Would you have lunch with me some day?

She looked at him incredulously. —Lunch? With you? But why?

—Because I'd like to talk to you.

—Do we have anything to say to each other?

—Maybe not. But if even you and I can't talk, what hope . . .

—You're the enemy. Her eyes fixed on him.

—Oh well if you feel that way

—I do!

—Then there's nothing, squeal of brakes obscuring his words as a bus pulled to the curb ahead of him. She was out the door before he felt the protest of his heart. So even now he had not relinquished some forlorn hope of starting over.

When he reached home Nan's car was in the lot. Most Tuesday nights she spent here at Quine's. He went to her place Friday nights and some weekends. But he'd worked late Tuesday, so they'd shifted it to tonight. He'd forgotten.

Nan worked in another section of the Labs, handling personnel files. He had met her after failing with Kate. He had never told her about that. She was so unlike Kate. Her features were sharp and fine, her skin pale, her straight auburn hair just starting to show gray, her slight body always dressed with a style that in its impeccability read as a brave front.

—Lo, she called as he entered, —In the kitchen. I picked up some tortellini at Il Fornaio and a salad, is that okay?

—Fine.

—Some bread in the oven, can you get that?

She chattered about her day, a seniority conflict in her department. Quine's patience wore. When, setting the plates down, she bent to kiss his neck, he stiffened and pulled away.

—What's wrong?

—Hight's going mad again. A Congressional visit's coming up, it should be routine, but he acts like the program's at stake.

—Is it?

—First he drops Null's work in my lap, then today he starts pimping some lunatic idea of Szabo's, and assigns me a postdoc like, like some kind of chaperone . . . and the protesters.

—What about them?

—They're getting on my nerves.

—Have you made any progress?

—No I haven't made any progress. There's no progress to be made!

—Please don't snap at me, Philip.

—I can't even discuss it, you don't have the clearance.

She carried dishes into the kitchen without speaking.

—Look, I have an insane deadline. I won't be able to see you for a week or so.

—We're seeing Ginny and Bill on Sunday, I thought.

—I can't. I'm sorry I just can't.

She sighed and left the kitchen. In the living room the television came on. When after a moment he entered the room he heard her in the bedroom speaking on the telephone. Remote control in hand he viewed a cool panoptic tumble of war famine catastrophe enormity larded with a fantastic plenty of goods caressed by smiling tanned models, to pause on the logotype of Martin Marietta, —a proud supporter for twenty-five years of science programming on public television, his impulse to switch again frozen by the worn, imposing face of Horatiu Réti, saying, —There is now a cult of the beautiful theory. But how beautiful is reality? These so-called beautiful theories, these elegant mathematics are not verified by experiment. Experiment shows us a mess of a universe with over a hundred basic particles and three irreconcilable forces. We would like to unify them all, just as we would like to smooth over all the political differences in the world. But experience shows, in physics and in politics, that this is not always possible.

Abruptly the screen blanked then cleared to the involute radiance of the bomb. Sun's heart. Cosmic ground. Siva and Devi coupling. A thin roar issued from the set and the waspish voice rode over it, —The duty of science is to pursue knowledge even if it leads to the unbeautiful. Or to the evil. How else learn about evil?

Nan returned to sit beside him. —Isn't that Réti?

The camera returned to the physicist facing an interviewer. Quine remembered. Though emeritus director, Réti was rarely at the Labs; the office he kept there served him solely as a clubroom or a set. Six months ago a film

crew had come to the Labs. He had heard Réti shouting behind the closed door.

—Watch, this is what Highet calls the liberal bias of the media, said Quine as the camera went to the interviewer.

—Many of your colleagues turned away from weapons design for ethical reasons. Some of them, your schoolmates, your collaborators, have won Nobel Prizes. Do you ever feel that your work with weapons has cost you credibility or respect within the scientific community? Has it compromised you as a scientist?

—Never.

—You're closely connected to Radiance. What about recent charges that test results have been faked?

—This is a lie. First, I am not closely connected . . .

—You've lobbied extensively for the system in Washington.

—I am no lobbyist! I am a private citizen with some scientific expertise, and when I am asked to testify about technical matters I do so . . .

—But for over forty years you've been an advocate of nuclear weapons, your authority and influence are well known.

—You listen to me. It is an imperfect world, a dangerous world, even an evil world. All ends, even the best, are reached by impure means. Reason is supposed to be the hallmark of science, but no one is swayed by reason. A theory, an idea, does not make its own way. It was Einstein who said merit alone is very little good; it must be backed by tact and knowledge of the world. I know of many cases, maybe the data does not quite agree with your theory, no, the carpers will question, your case is clearer if you discard *this* set of data, if you report only *these* results. And who are these frauds? Ptolemy. Galileo. Newton. Bernoulli, Mendel, Millikan. What matters in the long run is not your scruples, but whether you have driven your knowledge home!

A man has no wealth nor power but his knowledge, Réti had once said to Quine. But now he said that if power did not lead, knowledge could not follow. Quine saw behind the fury in Réti's eyes a bright and open wound: more illustrious for his influence than his work, Réti had failed at everything but success. And Quine's life, he suddenly saw, was bent to Réti's influence. Quine stood up, ignoring —Philip? what is it? and went to the bathroom. He clutched the sides of the sink, heart racing. In the cabinet he found the pill bottle.

The spirit is radiant, yet there are two principles of radiance: that of light, and that of fire. Fire comes to the use of those who go not the way of light. And the difference is, that fire must consume its object.

Quine swallowed the pills and his nausea subsided as he returned and

sat, to Réti's angry voice, —So I have no Nobel Prize, that accolade of *pure* science. But Alfred Nobel would understand me well. Yes, I have the ear of presidents. And history will be my judge, not you.

—What is it? What's the matter?

Quine turned to Nan, her face in the phosphor light bleak as a rock outcrop. He reached to touch her neck. Unsmiling she leaned against his hand. His fingers cupped her nape and he drew her mouth to his.

In the bedroom they undressed on opposite sides of the bed. The television droned on. Between her legs he felt the string of a tampon, and as he touched it she bent double and enclosed him in her mouth. Above the activities of their bodies his spirit hovered sadly regarding the terrain of his life. Lightly his hands cradled her head. He began to pump semen. Deep inside him a talon drove home and brought forth, impaled, his soul, writhing. A minute later he was awash in sleep. Waiting at a counter to pick up xeroxes. Quick tap at his shoulder. Kate. She smiled, her eyes upon him, and he knew it was a dream, and he was happy, and he slept.

2.

The morning sky, pallid with haze, conveyed yet enough sun to cast through his high window a faint rhombus which crept along the wall toward the doorway relentless as a horologe. Quine gazed at it half hearing the radio, —ildfires in three counties, when his phone rang.

—Quine.

—Is this Philip?

—Yes, who's this.

—Lynn. From the demo yesterday?

—Oh yes. How did you . . .

—I behaved badly. I'd like to apologize. Are you free for coffee?

—Well, not this morning, I . . .

—Later this afternoon?

—Well I

—I can get off work at four. Do you know the Café Desaparecidos? In the central mall. I work near there, I don't have a car.

—Sure I, okay, I'll see you there about four.

As he hung up Jef Thorpe knocked on his open door. Black jacket, blue shirt, jeans. A faint pock where yesterday the nose stud had been.

—Come in.

—I guess we'll be working together.

—You're staying.

—Never a question of that. Listen, that meeting yesterday, I didn't belong there, I'm sorry if . . .

—Not your fault. As you see, Dr. Highet has his way of doing things.

—Yeah. Before we start I want to tell you, the single-photon experiment you did with Sorokin was really elegant. I was surprised to find you here, I thought you'd be somewhere more theoretical.

—I thought everyone had forgotten that experiment by now.

—Oh no. It was very sweet work.

—The detector was critical. We worked on it for two years and couldn't get the resolution we needed. We got it only after I came here, they could mill the beryllium to micrometer tolerances.

—You didn't follow it up.

Sorokin had said, you don't leave an infant like this to fend for itself. But Sorokin had always been inflexible. He had refused even to visit the Labs during the experiment.

—Sorokin thought I was wrong to come here. He said it would be a black hole. He may have been right. Of course things look different from inside.

—Black hole, yeah, I've thought of that. But you know where I come from. That limits my options in the straight academic world.

—You don't have any qualms about defense work?

—What's this, a background check?

—No, I just, you might want to consider your position while you can. I came in neutral about defense work, and before long I was in the thick of it. It's especially easy to slip into it from nuclear science.

—I'll keep that in mind. I'm kind of apolitical.

—Let me show you what I have, turning to the computer which glowed with:

Date: Fri 1 Nov 09:05

From: Leo Highet <sforza@milano>

To: Philip Quine <quine@styx>

Subject: Upcoming J Section Tests

11/4 23:00 PDT, Building 328, Codename "Stelarc," groundbased laser guide star, R. Grosseteste, sup.

11/9 18:00 PDT, Site 600, Codename "Taliesin," 80 kiloton, B. Dietz & P. Quine, sup.

"Mechanics are the Paradise of mathematical science, because here we come to the fruits of mathematics." LdV

—Looks like we're real, said Thorpe.

—You're lucky. It was years before I was directly associated with a shot.

—Is that luck?

—It's a bit of prestige. A merit badge.

Quine cleared the screen and brought up the Radiance test data.

—You see. Intense brightness here, and here. Very erratic pattern. Agrees with the theory to a point, but when we increase power, we don't get the expected increase in beam, we get less in fact. We've talked about trying different metals in the rods, we've used gold till now, but mercury . . .

—Yeah, elements seventy-two through ninety-five would be good to try but with our time constraints I checked with Fabrication, they have gold rods ready to go, maybe we should stick with those and put our efforts into sensor configuration, keep it simple, don't you think?

—Sounds reasonable.

Thorpe continued to stare at the screen. —Could this be an annulus? This pattern I mean, could the sensors be picking up an imperfect focus, the edge of a ring? If we move them in . . .

—I've tried, no luck.

—Can I look at your focusing code?

—Yes, sure, all the files are in this directory.

—That's great. Mind if I work here? pointing to Null's desk.

—Ah, sure. Sure, go ahead. I'm going for lunch and maybe a swim. I'll see you later.

We read of the beaver that when it is pursued, knowing that it is for the medicinal virtue of its testicles and not being able to escape, it stops; and it bites off its testicles with its sharp teeth and leaves them to its enemies.

Gaunt, saturnine, Bran Nolan in a corner of the cafeteria looked up unsmiling from scattered papers to raise a hand in greeting.

—How's our new boyo Kihara?

—Well enough. Weren't you in line for that position?

—It's my Tourette's syndrome. Terrible liability in a press officer, you never know what he might blurt out in public.

—Seems you should have been asked.

—Do you know, I'm happier, if that's the word I want, where I am. Kihara is a little lamb, a kid. The last man, Vessell, didn't outlast Slater. And we're not through with all that, no indeed.

—Getting some work done? Quine indicated the papers.

—“The Labs have a longstanding commitment to developing new methods and technologies to protect the environment,” the most effective of which to date has been the press release. Do you know we have a toxics mitigation program now. Seems some chemical seeped into the ground water under a vineyard off the north boundary. Vines died, soil went gray,

the whole field stinks like sepsis. I'm writing an upbeat report about it. And yourself? How's the death ray coming?

—We can maim small insects at a meter. The new concept is interceptors. Small flying rocks.

—Do you know, da Vinci invented shrapnel. He'd have been right at home here with all these advanced minds.

—Yes, that's Highet's conceit.

—Throwing rocks at things. We should be proud, thinking about these old impulses in such an advanced way. Years ago Réti had some hare-brained flying rock scheme, these things never die, just get recyc

—Bran, Bran, Bran. What must I do to get you to use a font other than Courier? Nolan pulled back from the sheaf of papers brandished in one plump hand beneath his nose.

—Bob, how's the gout? I don't like this business of tarting up manuscripts. You get enchanted by the beauty of it all. You start to think you're writing the Book of Kells.

—A few attractive fonts, tastefully applied, can spice up a presentation so. A little humanitas, you know. Why else, Bran, did we get you that powerful and costly workstation?

—Jeez, Bob, I don't know, why did you? I'm still figuring out the type balls on my Selectric.

The sheaf of papers fell fanning from their clip onto the table. Shaking his head and chuckling grimly, Bob withdrew.

—Humanitas, yes, that's what we need, isn't it, Highet with his Renaissance, and Aldus Manutius there, need a few more particle men who've read the Tao Te Ching, couple more managers who've studied Sun Tzu, lend these binary views a little tone, dress up the winners and losers, the Elect and the Preterite, the screwers and the screwed, each man in his station. Keep your distance from the Preterite, can't have just anyone winning, because if you let the rabble win, if they can rise, you can surely fall.

Nolan folded back pages, —Listen to this lovely bit, “the support of this tight-knit community,” support is it now? I'd have said the goading, the ambition, the *Schadenfreude*, that's what gets the work done. Look around you, these are people without lives, the wife walked out six months ago with the kid, they're eating Campbell's soup cold out of the can, they haven't got a clean shirt, but after a few months of eighteen-hour days they've got *data* that everyone wants to see. They *win big*.

—Bran, you keep working here.

—What should I do then, write novels? Or maybe journalism, that's it, *investigative* journalism. Have you met the journalist from Cambridge? Right over there with his tape recorder, name's Andrew Steradian. He's

researching the belief systems of those who work on weapons of mass destruction, I think was his phrase. Quite the charmer. He's published one book on scientific fraud, and a paper highly critical of what he calls the defense establishment. You probably don't watch TV but there was an antinuclear program on PBS last night, Steradian was in it abusing Réti.

—Does Highet know all this?

—Highet invited him.

Quine headed for the door, passing as he did Andrew Steradian, holding a small microphone before a J Section technician, saying, —you're so goldang busy every day you just put off thinking about it, though in Quine's view pressure was a tool well used to put off thinking.

Black cottonwoods around the pool thrive despite the drought. Catkins littered the water. A jet moved in the sky, stitching a contrail across the thin lace of cloud drifting eastward through which a hot sun struggled to assert itself. Quine sat on a towel on the grassy verge and watched a portly bearded swimsuited man enter through the gate, barrel chest glossed with sunbleached hair, and behind him a woman in a white halter top and shorts, the heads of three men turning to follow. The pool was crowded this Friday afternoon; unlike Quine, most worked a five-day week, most would depart hence into a forgetfulness. In the shallows of the pool two young girls splashed. One opened her mouth to show her companion a bright penny on her outstretched tongue. A young mother in a black maillot gripped a ladder to raise herself half from the pool and wave at her infant in a nearby stroller, glisten and shadow in the cords of her back, and Quine suffered a pang for a life now beyond his knowing: to be wed, with child, so young. On thermals a blackwinged bird, *Cathartes aura*, rocked and banked. Jet's thunder fell like muffled blows. The warmth and the sound of water churned by swimmers and the spray tossed up by their passing lulled Quine into a lethargy from which he woke with a start to consult his watch. On the pool's floor danced cusps of light.

When he parked at the town's central mall the high cloud had passed and the sky was pale blue overhead and scum brown near its horizons. Quine walked sweating between pastel columns under a pediment that alluded to no place or time through smoked glass doors into an atrium so chill and disjunct it might have been another planet. Outside methane and ammonia storms might blow. Shops, granite benches, low fountains, and climbing plants ringed a pool in which stood a steel sculpture of crippled symmetry, as if a Platonic solid had ruptured.

The cafe's high walls rose past exposed beams and ducts to the nacre of frosted skylights. Lynn sat at a glass table in a wireframe chair, face down-

cast at papers before her. In the moment before she looked up, Kate's face glowed before him. In this cafe they'd first talked. What do you do, Philip?

—Hoy es el día de los muertos, Lynn said in greeting, banishing Kate's image. Angularities all her own moved in her flesh; a small gap showed between her teeth as she smiled.

Quine seated himself and said gravely, —I should tell you I'm involved with someone.

—Jesus, I said I wanted to apologize, not start an affair.

—I, sorry I . . .

—And maybe pick your brain about Radiance.

—I'm sorry, what did you say? El día . . .

—The Day of the Dead. All Saints' Day. All this used to be Mexico, you know, they called it Aztlan. Once my law firm shuts you people down, we're going to reclaim all of Aztlan for the native peoples. Don't look that way, I'm joking, that's the kind of thing the far right says about us.

—You're a lawyer?

—Paralegal.

—What's that you're reading?

—Your press releases. She held a sheaf set in unadorned Courier font.

—God you people have fingers in a lot of pies. When I started my concern was the bombs, but now I find out about the supercomputers, the lasers, the genetics, the chemicals, it's a separate world in there, isn't it.

—You probably know more about it than I do.

—Your cover stories are so creative. Every one of. Oh, go ahead, order, she's waiting.

—Cappuccino. What you do mean, cover stories?

—I'll have an espresso, please. Every one of these quote benign technologies has a pretty easy-to-imagine military use. Laser X-ray lithography for etching microchips, uh huh, and here's one about kinder gentler CBW, "less virulent" tear gas for "crowd control," heavier specific gravity for controlled delivery, if this is the stuff you're public about one can only imagine the rest.

—You're wrong, there's a genuine effort to convert to peace

—Dual use, I know all about it. Genuine effort to blur the line is what it is, and it goes beyond the Labs, people in physics and comp sci departments across the country lining up at the same trough, the grants are there and if they don't take the money someone else will. What a waste of resources.

—It's more complicated. I won't defend it, but the people I work with, they're not cynical, not

—Oh, I know how people get caught up in their work. I have a friend there, not in Radiance, in another section. He's a Quaker, he calls it "being

in the world." I can respect that, at least he's thought about it. How did you get into it?

—I'm, well, a lapsed theorist. But I'm not typical . . .

Was he not? Réti, Highet, Dietz, Thorpe, all had failed in some subtle way that in such a place could be denied. But where was there not failure and denial?

—Do your people pay any attention at all to our demonstrations?

—In J Section? Not much.

—We seem to get to your boss, at least.

—You mean Highet?

—In his little red sports car. What about you? What did you think about yesterday's?

—It seemed, I don't know, festive, almost a costume party, I didn't realize at first it was Halloween . . .

—It was a ceremony. An exorcism.

—Oh come on, what, you mean we're possessed

—By arrogance if nothing else.

—That's absurd, you can't convince anyone with supersti

—It's no different from your rituals, your bomb tests, just as absurd and ritualistic, but really dangerous!

—Not my tests, and he remembered *Dietz, Quine, sup.* —I'm no good talking about this.

The set of her features, so poised and eager, softened and her voice lowered. —I don't mean to attack you. I'm sure you

—But I'm not sure! Because what if it is a waste, the billions and decades and lives and talents, then it's not just me, not just my mistake, but something wrong at the root . . .

—If it is a mistake, you can face it, call a stop.

—But there's never any stopping. It's almost as if these things we work on . . . they use us to get born. Could use anyone.

—I'm sorry Philip . . .

—No it's not your fault. I just, I need to get back. Her face was so concerned that he almost cried out with self-pity. He abruptly rose and walked away stolid with loathing of his own erratic heart, and of her for stirring it.

In the night he woke sweating with a pulse of ninety, reached for the pill-bottle next to the small box DREAMLIGHT Unlock Your Inner Potential and its plastic headset. The pills opened a plain of timelessness and haze in which it seemed a lost part of himself dwelled. All then was fine. As he lay gazing at the grainy darkness of the ceiling his fluency returned, wonderful problems enticed and yielded to his insight, wisdom depended from the sky

like fruit. As he began to drowse he roused himself to attach the headset like a blindfold around his temples. When he dreamed, a red strobe in the headset, sensing his eye movements, flickered and roused him enough to observe but not to wake.

The battle station shines in the void of space. Arms pivot as targets rise in swarms, bright points on the black hollow of a crescent Earth. They blur in a silver mist of chaff. Above the crescent distant stations ignite in globes of light and their beams lance out, targets crumpling, but swarm follows swarm, breaching the atmosphere, too many to destroy, and the dream begins again with different stations, Mylar skin of mirrors rippling, missiles coming on as earth-based beams strike up and the mirrors twitch to focus . . .

The world has changed, the enemy has collapsed into ruined republics. Yet despite this consummation of all the Labs has worked for, the work goes on unabated, the mood is spiritless, the shots in the desert continue, as though it is some ritual of penance, some black and endless propitiation of forces that by losing their fixed abode have gained in menace. Now effort must redouble to keep those forces from finding a new abode, from tenanting, aye, the Labs.

Vertigo of waking. Tearing of Velcro as the headset falls free. Wan dawn light. Stillness, faint whistle of tinnitus, first sounds of birdcall. And he realizes this dream is true. The enemy is gone. And the work does go on, and on.

3.

In the next days Lynn was not among the protesters. Their numbers had diminished to a small group in daily vigil by the main gate holding a drooping sheet painted *DIABOLIS EX MACHINA*. Quine in his machine slowed through the gate and stopped, valves in the engine ticking, for a backhoe lurching across the main road to a dirt track that wound behind a building, and closed his window against the dust billowing toward him as he went on past an air hammer chiseling a sidewalk to rubble, overtones of its chatter following him across the rock moat and into the building where, too late to retreat, he saw Thorpe seated at Null's computer tapping rapidly without letup at Quine's entrance.

—Morning, said Quine.

—Is it still? I've been here all night. Something there for you to read.

Atop Quine's stack of journals, a year's unread accumulation, colored slips in their pages flagging articles that at an earlier time would not have waited a day, was a xerox topped with a yellow sticker *SEEN THIS? Physical Review Letters 1954*. A joke? A dig at his age?

—I know it's old, said Thorpe. —But I think it applies. See, I started with an EE from a hick school, taught myself quantum mechanics by reading Dirac, things don't change that much. Lots of ideas have been left hanging. That's how I, I mean, stumbling in embarrassment at having carelessly touched as he thought Quine's sensitive point, —not to say, it's just, if you're a student like me, not well connected, not seeing the latest preprints and hearing all the gossip, you need another way up. This is my way, looking for old forgotten stuff to build on.

—So tell me about this.

—I came across it working for Fish and Himmelhoch, looking for a nuclear model to explain the cold fusion reaction. Okay I know, the current wisdom is, there's no reaction, it's bogus, or if anything is happening it's electrochemical, fine. But you can model the process in a nuclear way, the phenomenon's called superradiance. The equations are quite similar. Highet saw the connection.

—To this? Highet told you about Superbright?

—Very sharp guy.

—That's quite a breach of classification.

—He kind of hinted around, citing the open literature. Anyway it's moot, I'm cleared now. What do you think?

—I'll read it when I get a chance, dropping it back atop the stack of journals.

—But, I mean, we don't have much time. Should I pursue it?

—What have you been doing?

—Well, here, let me show you, I started modifying your code but I had a couple of quest

—You've changed my files?

—No no I made copies, all changes made to my copies and I was just wondering about a few things like here where you've got this array of reals here, what's that?

—That's the rod array, angles lengths diameters densities

—Okay, because see I was thinking if you make that something like ten to the minus ten here

—That's the thickness, we can't make rods that thin it's imposs

—But if we play what-if with these numbers . . .

—Wait what are you

—then the beam, oop that's a little extreme but you see what I

—But there's no, I mean sure, you can make the model do anything, but it has to correspond to reality!

—I'm just getting the feel of the system. But, oh here I wanted to know what this function does, this hyperbol

—Yes that's the response curve of the sensors we're using, it . . . look,

can this wait? and without pausing Quine was out of the office as from speakers overhead a pleasant female voice advised, —Attention all personnel. Starting at midnight, tiger teams will conduct exercises in this area using blank ammunition, and he turned into the restroom where at the far end, past a row of sinks and urinals opposite metal stalls, a gym bag hung on a hook with a towel and steam billowed forth in a pelting rush of noise and Quine, elbows braced on a basin, looked up sharply from the laving of his hands at a bass voice echoing against the hard tile, —*bist du ein Thor und rein*, to see in the mirror not his own eternally surprised features but fogged void, turning from the hiss of his faucet to glimpse through dispersing mist a hard white nude male body emerging to towel itself still singing, —*welch Wissen dir auch mag beschieden sein*.

In the cavernous building where Dietz supervised, Quine watched long metal tubes welded one by one to the great monsterc̄ in which the bomb, a quarter mile underground, would rest. From sensors at the ends of each tube hundreds of cables would run to the surface. Dietz displayed a blueprint of the cylinder.

—We are already welding. I cannot wait to know.

—Can you hold off a day or two? If I had any idea where to put the damn things I'd tell you if I had any idea even how to find what I'm looking for . . .

—All right, we can go ahead with other things for just a little while. Now the rod configuration . . .

—Unchanged. I'm not touching that.

—Make sure, please, that Highet knows all this. Sometimes he wanders through here and if things are not what he expects he is most unpleasant.

Outside Highet's office Quine, arm raised to knock, from within heard Highet's insistent rasp, —like Kammerer, you know, it's not who makes the mistake it's who takes the blame, and at Thorpe's voice barely audible, —sorry for the poor son of a bitch stuck in his position at his age, barely shows his face, and Highet, —never passed a design review, Quine's ears flared with heat, the door before him turning flat and insubstantial as he lowered his hand and proceeded down the hall unseeing, guided by a familiarity more the prisoner's than the adept's around a corner to a water fountain, studying a bulletin board and its overlapping notices O Section, programmer needed to model underground plumes, K Section, LASS expert needed, Z Section, multimedia guru sought, B Section, materials engineer, while two young men passed, one saying, —I have no special loyalty to OOP, and on to a further junction where a convex mirror above him presented an anamorphic view around the corner. There Nan emerged from a cross corridor with a wiry black-haired man in a blue knit shirt, his biceps

and forearms hard and tanned. The two spoke briefly. The man put a hand on Nan's neck and bent forward to kiss her mouth. Quine turned back the way he had come, slowing only when he found he had nearly circled the building. He backtracked to Highet's door and entered without knocking. Highet was alone.

—Get Thorpe out of my office.

—What's your problem now, Philip?

—He's so important give him his own space, I don't want him hanging around me.

—Thought you'd appreciate the company, thought he might be useful to you.

—What's that supposed to mean?

—Thorpe handles himself well, you could learn from him. Show some team spirit. Poor boy's feeling abandoned by you.

—I'll work with him, but I don't have to like him or share office space with him. It's bad enough Null's stuff is still there.

—Thorpe has his own space. You want him out, you tell him so. By the way, Réti's here for a visit, you might want to pay your respects. Instead of running around down in Fabrication with Dietz.

—Someone has to tend to those details.

—Let me tell you something, Philip, I'm a smart guy but to be brutally honest I'm a second-rate physicist. I have the ideas but not the persistence, I've known that for twenty years. But I have learned to position myself and to use other people to get what I want. Win win, you know, we help each other look good.

Voices approached in the corridor as Highet went on in a lower tone, —One path in the world is up. There's also a path down. What there isn't is standing still. Now you, friend, have been standing still for quite a little while. I'd say you need to make some career decisions soon, before they're made for you.

Flanked by two Lab factotums, Horatiu Réti came slowly, stamping his cane, into Highet's office. His eyes, azure behind thick lenses, peered without recognition as Quine greeted him.

—Ah, my young friend, how are you?

—You remember Philip Quine, Horatiu. That beautifully sweet photon detector he built for us.

—Of course, of course.

—So here we are, three generations of first-rate physics talent.

—Yes yes, the torch is passed.

—I really must be

—No, stay. Horatiu, Philip's going to get us the data we need to silence the critics.

—The critics, there is no need to mind them.

—From your eminence perhaps not, but I have to deal with these fools and dupes almost daily. Do you know what a senator, a United States senator, said to me the other day? He called this place a scientific brothel.

—I know the man you mean. Brothels I am sure he knows well, but of science he is ignorant.

—Well unfortunately this ignoramus chairs a committee that oversees our funding, so I have to deal with him.

—Speaking of influence, this left-wing journalist, I see him here again, why do you let him in? Six months ago he abused my trust with gutter tactics of the worst sort.

—You mean Steradian? He's a useful idiot. He's so cocksure I let him hear things I want to see in print, look here . . . Hight lifted from the desktop a folded newspaper, —“Radiance Research Forges Ahead,” see, this is solid gold. He's so excited when he hears something that may be classified, his critical sense shuts off. You can see him quiver like a puppy dog from the excitement.

—Keep him away from me, I want nothing to do with him. What is our testing status?

—We need more. As always. Classifying them has helped deflect criticism but we're still being nickel and dimed.

—What do you need?

—An additional three hundred million over the next year.

—I will talk to the President. This is for Superbright?

—Yes. We can definitely show quantitative agreement with theory. It's only a matter of time and money.

—What isn't?

—Excuse me, Leo about that agreement we're

—Philip will tell you how close we are. He and his new assistant have made tremendous headway, just tremendous.

—So? Tell me about this, my young friend.

—Well, I think it's premature to say so. There's a shot next Friday. We'll know better then.

—Philip's too modest, that's always been his problem.

—No, I just think we need a lot more

—More funding. Basically it's a matter of funding. In the long run we see coherent beams striking out a thousand miles and diverging no more than a meter. We see a single battle station downing every missile any enemy can launch.

—That is excellent, I can tell the Preside

—But

—Horatiu, we're also going ahead with your interceptors. As part of the overall system.

—Baldur?

—Smaller, faster, smarter, cheaper. Less than thirty billion to deploy. That's dirt cheap.

—Even twenty years ago I thought that this idea only needed the technology to catch up. It is good we have a history, a tradition, a culture here.

—Like Ulysses, we're never at a loss.

—Oh, is that so, never at a

—Philip

—unless we're trying to produce a thousand mile beam where no test has ever shown

—Philip

—Well how long do you think we can keep it up! this this

—As long as it takes.

—And you, Dr. Réti?

—My young friend, I am an optimist.

—Philip, I want a word. Excuse us Horatiu. One arm clutched Quine in tight embrace and steered them into the hallway, Highet saying in low controlled tones, —One day soon, very soon, I'll stop giving you second chances. Come up empty this time and you're through. Clear?

—Meaning what? You'll what?

—I don't know. I don't know but it will be terrible and final and I promise you'll never forget it. Highet raised his voice to hearty amiability,

—Good man! You let me know, and went back into his office.

With the darkening of the sky the life of the building went to X Section, the Playpen, where the younger men worked on schemes even more speculative than Superbright, and Quine returned for the thousandth time to theory with the sinking heart of a man returning to a loveless home. Entrapment. As if fine wire had threaded his drugged veins, and now, as feeling returned, any movement might tear him open. He fidgeted the radio on to, —fades to a reddish color as it enters the Earth's shad, and off as he saw again the tilt of Nan's head, the man's hand cupping her neck. The ridge of her collarbone, the warm pulse of the vein across it.

On Null's whiteboard deltas sigmas omegas integrals infinities in variegated ink still wove like fundamental forces their elegant pattern around a void. From the clutter on the desk he lifted CENTURY 21 LABS QUARTERLY. Changing world betokens larger role for science. Acceptable levels of social risk. Public does not fully understand. World free of threats too much to ask. Revolutionary new technique. Major improvement. Important to a variety of national goals. Unique multidisciplinary expertise. Two

young men, one poised to hurl something, caromed past his doorway. He shut the door on guffaws and —teach you some hydrodynamics!

Paper atop his stack, 1954, by Black. He turned to the citations, then read from the start, stopping often to reread with a doggedness that made shift for his halt sense, once so fine, of the rhythms of thought and confirmation, their probe and test and parry and clinch that now required his slow and remedial attention to be seized. As he read, his respect for Thorpe grew even as an emptiness opened within him. When he was finished he stared into space before reaching across the desk to snap off the lights.

The phone chattered. On the second ring he lifted it, holding silence to ear for a moment before speaking. In the darkness the computer screen, phosphors charged by the room's vanished light, was a dim fading square.

—Quine.

—Hi, it's Lynn. I'm hiking up Mount Ohlone with some friends tonight, want to come?

—Well . . .

—I know it's short notice.

—No I mean sure, why not.

—Good! Meet us at the park gate about nine. It's ten miles north on Crow Canyon Road.

In the hallway a length of surgical tubing, knotted at both ends, lay ruptured and limp in a film of water. As he left the building sprinklers came on in a silver mist and rainbows shimmered in the floodlit air. He drove out past parked vehicles and armed men in fatigues.

He was early. The sky was starry. Seldom was he this far from the valley's lights. Orion, Taurus, Canis Major. Eyes reaching into interstellar void. Where in this blackness is the seed of love? of meaning? Or is corruption inherent in Being itself, wrong at the root?

A car approached, lights snagging in the trees, then came around the last bend lightless and rolled to a stop.

—Mark, Jackie, this is Philip.

—Why're we whispering?

—Park's closed.

They went round the closed gate and past a building set back among trees. In a second-story window a dim line flickered, a fluorescent tube not on nor off, stuttering between states. Fifty yards farther they left the road for a broad path that rose winding under black oak, then bay. An owl called.

Ahead Jackie laughed and touched Mark's arm, not a lover's touch, but a gesture of intimacy with the world, the same hand caressing air and underbrush. They talked softly about people they knew, hes and shes darting in and out of audibility like moths in the dark. Next to him Lynn pulled at

a low branch. Leaves popped free and she crushed them under Quine's nose, carrying to him a strong waft of mint and resin.

—Sweet bay, she said, —is sacred to Apollo, but this is not European bay, *laurens*, it's California bay, *umbellularia*. Her tongue lingered on the liquids.

They climbed until they broke from the woods onto an open slope. A path through long dry grass led to another dark grove. The moon, not yet risen, rinsed palely the eastern sky. The valley to the south was filled with glittering points. At its verge was the floodlit terrain of the Labs.

—And this is *Artemisia tridentata*, Lynn said, inhaling as she broke from a sagebrush a twig of gray leaves. —Smell it. I wonder what god loves this.

—How do you know all this?

—This is where I grew up. This is the smell of my home. This is how I know I belong.

—Look! Jackie called, —a green star! Is that a planet? and finding the pale disk straight up in the Ram, a handbreadth from Mars near the Sisters, Quine knew it was no star, but the beam of a laser ten miles south stabbing sixty miles to the edge of space where sodium atoms glowed in its heat, and he said to Lynn, —not a planet, but some miracle of strange device, and she laughed before dropping the pungent twig and running to the next grove, and he ran after, the path dipping as seductively as the sweet hollow at the base of the spine, until he tripped and went sprawling, heart thudding, hackles alive. What was he outrunning? A presence, almost, was in the grove. He feared it though it was benign. It was not death, but it would change his life if he allowed it.

Three figures stood before him laughing. —You okay? and a flash of shame, not for his fall but for the falseness of his position before these children. The errors of his life were irrevocable; as yet theirs were not. He had wanted to borrow the grace of their youth, that was the shame. Mark held out his hand. Quine grasped it and was pulled to his feet and followed them out of the grove.

Jackie opened a backpack and brought out bread, cheese, fruit, a plastic bottle of water. On the grass they sat eating. The ridgeline was hard black against the sky and pieces of the rising moon glinted in the trees.

—You from around here, Philip?

—From the East. Isn't everyone? I've been here five years.

—Practically a native. What do you do?

—Computers. I write software for Taliesin Systems.

—Friend of mine worked for CodeWin, maybe you know him.

—It's a big industry.

—Getting bigger by the day, said Lynn dryly.

—Ah, look, look at the moon. It cleared the ridge, swollen, no goddess

remontant but an airless world already mapped, trodden, and projected for division into satrapies of mining, manufacturing, and defense, occupancy lapsed only until these scenarios could enrich their planners at a margin of return greater and more reliable than what current technology assured.

—We're contracting with an aerospace company, Quine went on, to control low-orbit balloons a couple of miles across, apparent size of the moon, sunlit, carrying messages.

—Messages?

—Commercial messages, logos. Advertising.

—But that's, Jackie began and Mark cut in, —Didn't I read about this, the Sierra Club's bringing suit . . .

—Maybe so, we're just the contractors, I don't really know, and Jackie glancing at Lynn seemed to lose interest, resuming with Mark in a low voice their conversation of hes and shes while Lynn walked away, obliging Quine to follow at a distance, leaving behind—she doesn't see you as a friend she sees you as more and that's scary, to overtake her on a knoll where she faced the valley lights with crossed arms.

—Philip, these are my friends. Don't lie to them.

—I was trying it on. That's a Lab phrase. You don't like me as a software mogul?

—You do this a lot? Jerk people around?

—No, it's . . . look it's just a bad habit. Defensive. Sometimes you have to, there, to advance your goals, lying's almost a game, see if the other guy's smart enough to catch it.

—And Mark wasn't smart enough for you. You take his good faith for foolishness.

—No, it's . . .

—I'm trying to understand you. You repay friendship with falsehood?

—It's . . . you don't know what's happening there, what I'm up against right now . . .

—Tell me, then.

—I can't.

—They really have their hooks in you.

—I know that.

—Can't you quit?

—And do what! Turn from the one place where my, my talents have meaning, from everything that defines me?

—What do you want, Philip?

—Want? I want five years back. Before them I was a scientist.

—They haven't robbed you of that.

—Yes, that's so, I gave myself over, and now I'm on the line for something I don't care about. That's the way, yes, you're going to get screwed

regardless, so you should make sure it's for something that matters to you . . .

—But you, I don't believe this, you don't engage with people, you stand off, you get angry and defensive when you think they don't approve, and then you think you're screwed?

—Lynn . . .

—I don't know what to say, I really don't. I understand if you're bitter, but not flaunting it, this almost pride in it . . .

—Pride! . . . I have an insoluble problem, data that's no good fraudulent predictions a Congressional visit next week a few days to vindicate what isn't, and I'm taking a walk in the moonlight because I don't know what to do! Not pride that's desperation . . .

—It's that bad? Face hidden in moonshadow, she stepped toward him. His need to be touched and take comfort welled up, but some stricture unknown yet dreadful held him still. After a moment's wait she stepped back.

They returned to where Jackie was packing the picnic, still talking to Mark, —so I'm going wait, stop, this is it, these are the boundaries and he's like, what did I do? She handed the pack to Lynn, —take this? and embraced Mark from behind, her whiteclad arms around his chest, straps of her shortlegged overalls a dark X on her back, bare calves duckwalking the pair down the slope.

In the lot Lynn said to Jackie, —Get a ride with you guys?

Quine called out, —Mark, just joking about the balloon.

Mark looked up, fumbling with his keys, smiling. —Oh yeah?

—Thanks for inviting me. He got in the car, opened the glovebox, found a tablet, felt the excised triangle, brushed lint from it, swallowed it dry.

In the apartment was a smell. It was like stale smoke and rotting food, edged with something fouler, like the metallic stench of the bright green flux from the open pipe. At first he thought it came from outside, where earlier they'd been roofing. But on the deck the air was fresh. He knelt to the carpet and smelled nothing. In the kitchen he bent to the drain and smelled nothing. From a bottle he squeezed a pearl of soap onto a sponge, ran hot water in the sink, scrubbed and rinsed it. He scrubbed the stove top. The ceiling fan was silted over by grease and spiderweb. He fetched a chair and reached to touch it. A black gobbet fell from it to the stove top. He fetched pliers and freed the nuts holding the shield, banging with the handle to break the dried paint around the rim. In both hands he bore the shield like a chalice to the sink.

In its concavities had pooled a glossy tar. He scrubbed it for minutes,

smutch washing slowly into the sink. Then he spooled off yards of paper toweling, wet and soaped it, and climbed the chair to wash over and again the sleeve of the fan, the blades, the hub. A viscous brown residue clung to the towels and his fingers. Farther into the recess, beyond his reach, was more tar.

Sweat soaked him. He went onto the deck. The moon was dim, its fullness lurid, as if behind smoke. He stared in wonder and fear until the knowledge that it was an eclipse broke upon him banishing fear and wonder alike.

When he went back the smell was waiting. He understood that from now on everything would smell like this. For a while he sat at the table with his eyes shut, then opened the newspaper for the memory of CARPETS CLEANED but it parted to 24 HRS OUTCALL DAWNA and LOVE TALK \$2/MIN and he stared bleakly at the sullen pout, circled forehead, hair as wild as if fresh risen from the sea, under a shiny black cloak linen garb pleated in most subtle fashion. His hand found the telephone, and after a distant chirrup a small insinuating voice flicked like a tongue in his ear, and he stepped sharply back from the uncradled receiver, switched off the lights, leaving the voice breathing unheeded into the darkness and the reddish moonlight pooled on the floor.

He showered. In the steam lust swelled in him like nausea. Joylessly he seized its nexus. Hot spray lashed him. Incoherent images and broken geometries flashed upon him. Runnels nudged moonwhite globs toward the drain. Depleted he toweled. On the sink were Nan's toothpaste, hairbrush, lipstick, mascara. On the toilet tank a travel kit of quilted cotton gaped, displaying diaphragm, jelly, tampons, vitamins, ibuprofen, hairpins, barrette, lens wetter, a glass jar of face cream. A towelend snagged the open zipper as Quine scrubbed dry his hair. Items hailed on the tiled floor. He dropped the towel, then swept his hand across the sink top. He grabbed the kit and hurled it. The jar flew out and smashed against the wall.

4.

Dry sycamore leaves scraped over pavement in a hot wind drawn west from distant desert by a stalled offshore low. Over the ridge east of town dust and the smell of manure from the farmlands and a haze of smoke blew fitfully into the valley. As the sun rose through layers of pollution Quine, driving to the back gate of the Labs so as to avoid the protesters, passed the dead vineyard by the north boundary. He pulled over, stilling the engine and the radio's—ty thousand acres ablaze.

The gate was closed but unlocked under a bright new sign bearing the biohazard trefoil and DANGER TOXICS MITIGATION PILOT SITE ALPHA KEEP

OUT. The drone of flies rose and fell like a turbine. Inside the gate the flies abated. A stubble of dry vines clung to irrigation uprights. Underfoot a chromegreen film glazed cracked gray silt. Bark from a withered vine sloughed like white ash on his fingers. Then from deep in the vineyard a warm moist flatus perfused the air. A stink like the chyme of a dying beast. He ran back to the car choking and drooling. At a roadside faucet he rinsed his mouth, his face, his hair, his hands, yet the foulness, as of corroded metal, lingered. What god loves this?

At Null's desk Thorpe worked.

—Bernd Dietz called. He has to know where to put the sensors. Today.

—I'm tempted to leave them where they were in the last shot.

—We can't do that, Hightet would

—That's why I'm tempted.

—Yeah, he can be a prick can't he.

—Not if you play by his rules. He always has a carrot handy.

—Well I have quite a few ideas but you need to look them over, tell me where they're out of line, you know we're really down to the wire here and

—Okay, let's assume Black's right . . .

—Oh then you've read

—Assume we're looking at quanta as localized particles guided by a physically real field . . .

—Hightet, you know he really grilled me on this stuff when he came out to Utah, put me through the wringer, made me prove every assumption, but after an hour I had him convinced, and I though he really respected . . .

—Typical Hightet slap and stroke.

—Now suppose we . . .

—You're good at this. And very fast.

—Commercial software you know, those eighteen hour days tone you right up.

—Don't touch that, we can't change the rod array, I've already told Dietz.

—Can we reorient it?

—Maybe. I'll check.

Under Thorpe's shaping the model gradually began to show correlation. After several hours one run produced an annulus. Then nothing for hours more. They ate dinner in the cafeteria, not speaking, then returned to work. Thorpe coded for a hour, then ran the model. The annulus. He rotated the rods; power jumped and the annulus closed to a point. They stared at the screen. Thorpe bit his thumb. —What do you think?

—It looks all right.

—It *looks* fantastic. It's a hundred times brighter than the last shot's data. But the model's tweaked to hell and gone.

—I don't see anything wrong.

—No . . . so we would put the sensors here . . . see, this is how I work. I'm not a theorist, I don't have your background, I need the machine, to immerse myself in the code, feel the system . . .

—Well, it's a remarkable job. I couldn't have done this. I've tried for months.

—But the thing is, at some level it's all just pushing numbers around. I don't know if the code is saying anything real.

—We'll know soon enough.

—Do you think something's wrong?

Quine shrugged. —Nothing I can see.

—You're not convinced.

—I don't have to be. It's what Highet wants, isn't it?

—Yeah but, that's not what you think I'm doing, is it?

—No . . .

—Because I would never do that.

—I'm sure you

—Since Fish and Himmelhoch I have to be very careful. They were crucified, just crucified, they're pariahs, their careers are finished. Anything to do with cold fusion is tainted, you may as well say you're working on perpetual motion. And I was on that team, I was in that lab.

—Perpetual motion, you could probably sell that to Highet. At least as a talking point.

—It's not funny to me. I had nothing to do with that debacle, just so we're clear on that.

—Sure. I understand.

—I'm sorry I'm touchy. Just tired. You've been generous, letting me work with your code and all, I really thought you'd stick me with the scut work but you've done it haven't you all the test details and let me do the interesting part. This could take me a long way and I won't forget it.

—Why don't you go home, get some sleep?

—Yeah, I'm whipped.

—Take tomorrow off. I'll tell Highet.

—No no, I'll be in. We have to make up a work order.

—I'll do it, don't worry about it.

—Are you staying longer?

—God no, what is it, midnight?

—Two.

—No, I'm leaving in five minutes. I'll write the work order tomorrow.

—Oh I meant to, here's something else for you to read . . . and, hesitating a moment, Thorpe placed a stapled xerox atop Quine's stack, held his gaze, and departed.

It was a new paper by Sorokin. At a prestigious school now. Tenured. Quine skimmed it as if reading news from a distant galaxy or a remote epoch. It solidified and extended the work they'd done together, the experiment that had separated them. It was clear that it was a field now and that Sorokin owned it. He stanchd the welling of envy and self-pity. Good for Sorokin.

But instead of going home Quine broke apart Thorpe's code and studied the changes closely. He gave the model a new set of energies: points clustered around the focus. Again, with different energies, the same focus emerged. Something was wrong, he could smell it; oh yes, his instinct was not yet dead.

Near dawn he found it. Along with the sensor positions, Thorpe had tweaked the sensor response function. Quite incidentally it now emphasized certain wavelengths, exactly as the beryllium sensors themselves did when struck by the bomb's radiation. No wonder it matched the test data so well. Now that he saw it, the flaw jumped out like a figure from an optical illusion. Glue in a house of cards. And down in a corner of Null's whiteboard, half erased, was it? yes, the same function, same tweak. It had been in the corner of Quine's eye for months. Wasted months. Wrong from the start. Error or fraud? No way to know. Maybe started as one, became the other. Sleep soon. Faint light outside. But wait. If you removed the tweak, if you stopped trying for a beam, chaff fell from the problem and the expressions said something else entirely.

A presence entered the room. Air gravid and light adance. Instead of the battle station there appeared to his mind's eye a congruent tide of radiance, all the universe's light at wavelengths and colors beyond mere vision, streaming in intricate brocade, weaving and mediating between matter and energy, wave and particle, the phenomenal and the noumenal. Here was the central mystery, laid open for his knowing, and at the very gate of revelation he knew he was unprepared to pass into this realm of light, and he drew back. The presence, like a roebuck in forest, startled and was gone.

Cold rage at aspirations dashed and traduced. In compensation, then, knowledge reborn as an instrument of power. Though mystery elude, information is sure. *Thus angels must feel, radiant with the certainty that flows from might.*

—Bernd, I need some sensors.

—For Taliesin.

—Yes.

—I have a work order already, this morning, from Thorpe.

—I need more.

—We do not have time to add

—Find the time. I want sensors on there made of something other than beryllium.

Dietz was silent. He began leafing through a logbook. —Do you know, try as we might we cannot keep traces of oxygen out of the beryllium. I have told Highet this. Long ago.

—Really.

—I have proposed hydrogen in the past.

—You have? Why haven't we tried it?

—“Don't mess with success.”

—I see. I'd like to try it.

—Does Highet know?

—I'll take responsibility.

—Without his approval I can do little.

—Bernd. This is what Slater thought, isn't it. That the beryllium sensors were giving false brightness. And Null knew it too, didn't he.

—I did not see Slater's report.

—Make some hydrogen for me. Cable them separately from the beryllium.

Dietz shut the book. —Send me a work order. I will have to send a copy to Highet.

Kihara came through the doors with a following of suited men. —Won't be a minute, gentlemen, don't let us disturb you, you can see here the precision engineering we're capable of, bang-up job of inventiveness, maximum return on investment, the answer to reversing the balance of trade deficit, innovative federally generated technology transfer to industry, improves the nation's economic competitiveness as we work deliberately and consciously to build partnerships, a new class of information with commercial value, very creative cooperative efforts, freedom to negotiate intellectual property rights, fees and royalties, cover the technological waterfront, take for instance these fine-grained superplastic steels, not to mention X-ray lithography . . . and Quine returned to his office rummaging through CENTURY 21, Rings Fields and Groups, Computer Addict Wholesale Microcenter, TeX Technical Reference, to come upon WORK ORDER Form 4439A Authorized Use Only, and sat for a minute holding a pen above it suddenly frozen at the sound of Thorpe's approaching voice, —you have to invoke the world control option from the command line, relaxing as the voice receded, pen moving to spell SECONDARY SENSOR ARRAY.

From Hight's open door he heard, —You want less pressure, try the Institute for Advanced Salaries, it's a fucking retirement village for the reality-impaired! and a lower voice unintelligible in response, then —I don't care, I want results! the lower voice growing sharper: —is cheap. My people have to make it happen, as the door opened and Dietz, pale and shaking, came out past Quine glancing at him without a word and stormed down the hall, Hight following to the door, calling out, —A beard without a mustache, does that make you an honest man? and to Quine, —You. I don't want to talk to you now. Send me e-mail.

—I think you'll want to hear this. We can show quantitative agreement.

Hight looked at him with loathing. —You want to change the sensors. The day before the shot.

—I want to try hydrogen.

—That's an incredibly bad idea, that's totally braindead, to introduce a new measurement technique at this stage. You have to calibrate, you have to

—If Slater's right, if the beryllium shows false brightness, it's only a matter of time until we know it. It might as well be now. Or do you want to spend fifty million on another shot?

—I'd love to. Who told you Slater said that?

—It's common knowledge. We'll have to address the issue eventually.

—Common knowledge. My ass.

—It might be wise to preempt questions about it. The shot's so close to the presentation, we can't be expected to have formal data that quickly. But we could say we're investigating. If we have to.

—You're sure about the quantitative agreement?

—The simulation's excellent. I won't take credit for it. Jef Thorpe did the work.

—Did he now. Well, we're a team. Good results show good management.

—I'd like Jef to give the presentation.

Hight's eyes fixed in calculation on Quine as the phone rang and Quine waited for the dismissive wave with which Hight ended audiences, but instead he spoke a moment, then covered the mouthpiece and said, —want to make some money Philip, Devon Null's taking on investors, and uncovering the mouthpiece, —yes, application's outside the envelope no problem there, keep me briefed, and in another moment hung up, leaning back and clasping his hands over his thinning crown, gazing at the ceiling.

—Well that's fine, that's very fine. Wonder if we could work up a little something. I could invite some key people to the ranch for the shot, some unnamed sources, goose the process a little, can we get Thorpe in on this?

—He's probably in my office.

—You may work out yet Philip, Highet gruded as one thick finger stabbed the phone. —Jef? Leo. Get your ass over here, rising to pace past framed and signed photos of three presidents, another of Réti and himself with the current president, artist's renderings of the Superbright and of a fusion-driven spaceship, cartoon of a mushroom cloud WHEN YOU CARE ENOUGH TO SEND THE VERY BEST, certificates from professional societies, a length of cable, a circuit board. He stopped at the window, gaze caught by something, and parted the vertical slats of the blind with his fingers, speaking softly, almost to himself.

—Do you know the darkness that's out there? Do you realize how tenuous this all is? Twenty thousand years of civilization, and only in the last five hundred has rationality begun to displace superstition. I tell you I would sup with the devil, I would court armageddon, not to lose that. When I think of those fucking tree huggers out there . . . and turning back to Quine, voice low and insistent, —Think the ills are in a system, think it's that simple, Réti with his anticommunism, your new girlfriend and her peacenik buddies, wonder why's she drawn to you?

Quine said nothing.

—Darkness and malady is in the human heart, Philip, you can't eradicate it, don't you know that? The enemy is the heart. And all you can do is propitiate the darkness there . . . as Thorpe arrived in black linen jacket, red T-shirt, nose stud, eyes eager, and Highet's demeanor switched to the cheerful, —Jef, my man. I want to wow the rubes when we go to the desert. We have a ranch out there with a data feed from the test site. What can you do that's portable and fantastic? I want flash that makes you reach for your checkbook.

—Hey, I've got an interface toolkit from my CodeWin days, I can throw something together overnight. Just tell me what kind of data I have to work with.

—I'll e-mail the details. Shot's tomorrow evening, you'll have to get a plane out by noon to set up. Not too much for you, is it?

—Demo or die, I know the drill, said Thorpe, grinning.

The evening wind whipped dust across the flat stretch of highway, slowing traffic and shuddering the shells of cars backed up across three lanes behind flashing lights at EXIT NLY CODOR IC S as Quine punched —illion in property loss, over to —noninjury accident being cleared at the Codornices Road exit not blocking lanes for you, drowned in a siren blaring up the shoulder OHLONE VALLEY RESCUE ECNALUBMA as Quine edged against horns and unheard curses into the exit lane and cut back on a commercial strip to loop up behind the central mall the reverse of whose colonnaded

and pedimented facade, raw concrete stained by long ago rains, caught with a sort of wounded dignity the sun's last rays as they lanced past Estancia Estates An Adult Community where Quine parked and for a moment held in his gaze a prospect of bungalows arrayed on lawns billiardgreen out to their surveyed boundary of dry pasture before ascending the walk and ringing the bell.

—Oh! Philip. Come in. I wasn't expecting you.

—Well it's Friday night, I thought

—Oh I'm glad you, but just, if you'd called I would have made dinner . . .

—I wasn't sure I was coming.

—Your work is done?

—There's a test. I fly out tomorrow afternoon. And there's a presentation Monday.

—Can you stay tonight? We can go out for . . . is something wrong?

—Can I ask who's the guy with the curly black hair and the good tan?

—The, what?

—I happened to see you both the other day. In a hallway. He was acting pretty proprietary.

—Proprie . . . Nan's face flushed.

—How long has this been going on?

—His name's Ben and he's a good friend, and it's been . . . we've been friends for years. Five years at least. Since before I knew you.

—You still see him?

The flush darkened, and her mild features contorted into an anger he'd never seen in her. —You mean, do I sleep with him? Yes, I have, once or twice since you and I have been together.

—Once or twice. You've lost count.

—Oh, Philip! Why are you, this is hateful!

—It hurts me, Nan.

Her face was a mask of plain misery. —We never—

—Never what, laid down rules? No, I didn't think we had to, I thought some things went without saying.

—Without saying what! that I'm yours alone when you don't give me anything, not even a word of love, for God's sake Philip I didn't turn to Ben for sex, just for, for kindness, to feel that I *mattered* to someone! A year, almost two years of my life Philip, I'm no longer a young woman, do you want to know when it was I saw Ben, when it was I went to him after you and I were together?

The coldness, the absolute coldness of the moment.

—You don't even care do you. When we met, at the Labor Day picnic two years ago, and I was so charmed by you, your intelligence, your mod-

esty, your reserve. Do you remember, there was a thunderstorm? I hadn't seen one since moving West. And you took me home, we were drenched, and I loaned you clothes. Oh Philip, it was over between Ben and me he was like a brother, I just wanted to, I don't know, say good-bye, tell someone close to me how happy I thought I'd be.

—And the second time?

—Yes, a year later, when you didn't come to dinner, didn't call, and I waited and waited so it was only an anniversary just a date on the calendar that's all but I called Ben and he came over to be with me, and he didn't, didn't even *want* . . . cut off by her sobs, jagged and piercing.

—But I, you knew I was in a meeting, you could have

—And you call him proprietary! When you come here and, and sulk for hours, barely acknowledge my existence, don't call for days on end, and then expect, how do you think that makes me feel . . . cut by sobs, —and you've never, never asked me what I want, how I feel, I would have told you about Ben if you'd asked if you'd shown any interest at all in my past. I don't think you know who I am!

Within him a stone fell and fell, soundlessly turning.

—Philip, talk to me! Don't turn off like this!

—I have nothing to say, and he was out the door, where streetlights had come on, knowing that his leaving was a catastrophe more final than anything gone before, a withdrawal he could never make right. Don't tell me, don't tell me we don't feed the emptiness in each other. Betrayal is an aether through which an energy moves.

5.

One hundred miles from Mesa Encantada, whose tracts of waste and infecund desert had been reclaimed for science as Site 600, was the Advanced Research Institute of the Eastern Sierra, a ranch at the edge of the Owens Valley, a black facility whose funding appeared in no budget. Deeded to the government by a conservative rancher, it served as a layover site for Lab personnel on their way to the desert. It nestled in the broad base of a canyon near a creek's loud runoff through lateral moraine. To the west the ground rose in the space of a few miles from six thousand feet to a twelve thousand foot crest of granite crags. Below, to the east, the highway lay like a ribbon dropped across the wrinkled valley floor, and a hundred miles farther across desert dotted with sage under a flotilla of thunderheads was Mesa Encantada.

Even before the Labs, Quine had seen *ARIES*. On his first trip west, while switching planes at Phoenix, he'd been paged and diverted to a single-engine craft bound for a Kern County airstrip, where a sheriff's four

by four awaited him. The first Radiance shot had just gone off and at the ranch they were celebrating. Quine met Highet there as he beat a twelve-year-old at chess, telling the boy, I'll trade a bishop for a knight anytime, I love knights, they leap barriers, they face eight ways at once.

A month after that he was at the Mesa. Rank smell of sage hovered in the predawn cool, immensities of desert air quivered to the horizon. They drove upcanyon with the sun rising behind them, the young initiates joking, group leaders and guards and observers in DoD hardhats silent and grim. Roadways of cables led from instrument trailers over desert pocked with the collapsed craters of previous tests to the distant borehole. Above it a red crane pointing straight up. The count reached zero. And the earth rippled. A wave rushed toward them and the ground shook as if a train were passing and passing and passing. When it stopped the air was a clear plasma of exaltation. To know that the binding forces of matter were yours to break, the wealth of nations yours to drive into such sublime force, this was a deep and secret sweetness known only to the few.

At the ranch now Thorpe was joking with some grad students from X Section. Others were there from J Section, and some stern faces he didn't know, military or intelligence, and Steradian alert as a corrupt deputy. Highet arrived in black Western shirt with red and white embroidery across the yoke, blue jeans, and tooled leather boots, carrying cases of soda, chanting in a false twang, —Twaace the sugar, twaace the caffeine . . . followed by a Western senator, cadaverous and grinning in white Stetson, and his young aide plump and groomed to a sheen, with the zealous black eyes of a pullet.

—Look at em, young, brilliant, confident, said the senator. —That's how I felt at their age. They own the world.

—The world? retorted Highet. —They own their genitals. The rest of them's mine, raising his voice to introduce, —Gentlemen, the right honorable Howard Bangeter, R-Utah . . .

The aide asked if physics had yet succeeded in finding in the traces of Creation the fingerprints of God, and Highet nodded, a slow smile spreading and his tonguetip darting as his hands rose to conjure, —Not God exactly . . . as Quine walked onto the deck where three barbecue grills sizzled, and a keg of Coors Lite sat amidst greasy paper plates bearing the ruins of meals, and the sun had long since chased the waning moon, itself pursuing Venus, behind the mountain wall. Although the sky retained day's blue a chill came down from the remote snowless peaks.

—This young man, Highet's voice carried out from within, won last year's Heinrich Hertz Fellowship in Physics, a prestigious award I happen to administer . . . and Quine stepped down from the deck, crossing dry grass to the creek's rockstrewn willowed bank where it trickled through

small pools and clumps of rotting leaves. Quine followed it up, breath laboring. He stopped at a large boulder long ago frostwedged and tumbled from a higher place, and sat. No residue of warmth. The western ridge was a great dark wave. In the east a glamour of rosetint clouds swept up from the horizon. The ranch was small below him. A wind came down the great wall of rock. Into this chaos he might ascend and be lost.

But he did not. He returned to the ranch, Thorpe's voice coming as he slid open the glass doors, —background, trucks on the highway, that sort of thing. Other side of the spool you can see some small temblors we had this afternoon. When the shot goes off we'll definitely see more than a wiggle. But the real action's on screen. At the site they're recording everything for later analysis but data's also piped to this workstation where autocorrelation software I wrote gives us an immediate window on what's happening. Red is intense energy, blue less intense. We're looking for a red ringlike structure.

Quine watched the stylus quiver as about him others conversed. Without warning the stylus jerked. The screen of the workstation came to life, numbers flowing down its right edge. Colors coalesced fitfully on screen. The senator and his aide leaned in enrapt. A minute passed. Blue and green surrounded a corona of yellow and a jagged red core flecked with white.

—We have brightness, Thorpe said. —A hundred times the last test. More. Maybe a thousand times.

—Three orders of magnitude improvement in six months, declared Hightet. —At this rate we'll have every enemy missile on Earth neutralized in a few years, and raising his tone with his glass, —To Team Radiance! Leonardos of the age. You people are the best in the world.

Grunts and howls of triumph went off like rockets.

—Do you all know what we've done? We've broken the back of Communism. And that's only so far.

More applause. The senator's aide leaned smiling to whisper in the senator's ear.

—Need now's a nice little war where we can demo this stuff. Feed some tinhorn tyrant some antiquated missiles and provoke him to use them.

A second wave of guests arrived, a dozen men in suits adorned with MAMMOTH CONVENTION CENTER NAME COMPANY and a few women packaged as brightly as new software, and Quine moved off through the manic younger men hopped up by caffeine and sugar and the shot.

—PDP downstairs running spacewar

—thought Malibu was bad but Acapulco's about three inch waves

—blasts wheat into stubble in a shock tube at mach ten, that's his study, eighty k a year

—maybe the moon's changed its orbit or

- translate the project into terms attractive to DARPA
- well Mazatlan then or Valparaiso
- think I'll propose rye
- dup rot swap drop
- corn smut
- know better than to say that in public with troops on the border
- shell game
- call it Virtual Wilderness
- I hear Sara squeezed it out
- boy or girl?
- people make money on it they're more likely to go along
- girl, I think that's what Mo said
- why leave home to get away
- he didn't go deep enough
- photo and topo database with fractal interpolation software to smooth the animation
- get ourselves into a quagmire like Viet
- substantive working relationship with at least six major US companies
- get USGS or Interior onboard
- hell why not go worldwide
- translate the project into terms attractive to DoE
- not this time, this is *Southwest Asia*
- get on your Nordic Track put on the goggles you're up in the Cordillera
- and somebody from the insurance company's selling records of who owns what where to thieves
- take out the infrastructure of the whole frigging country if we have to
- smells sounds good weather get up close to extinct animals
- everybody makes out, homeowner's paid off, insurance company raises rates, thieves fence the stuff, fence makes a profit
- ought to get the Basil Zaharoff memorial award
- as defined in paragraph R of section 11 of the Atomic Energy Act of 1954
- guy shot by on a bicycle, sliced the damn finger right off for the ring
- knowingly and with intent
- living things probably get wiped out in a pretty thorough fashion every few million years
- better than real
- so cool cause like the program's working but you don't know what it's doing so there's these emergent properties

- sophisticated encryption algorithms deserving of patent protection
- control the flow of information, do it by classification do it by misdirection principle's the same
- incorporating certain aspects of prior art such as multiplication
- translate the project into terms attractive to Disney
- object oriented
- get this straight, if I say nine times six is seventy-two I'm infringing?

—yes but when your story comes back it has your fingerprints on it then you know where it's been

—I have no special loyalty to DNA

—must have misjudged my audience

—value intellectual autonomy over anything

—fifty-four, no of course not but if you codify your knowledge that nine times six is sev, ah, fifty-four in any machine-executable formalism

—sometimes the envelope pushes back

—women at that high energy conference in Tsukuba

—held research positions at four universities published thirty papers before anybody realized

—won't impact the users of the algorithm, or affect the multiplication market, only the vendors of such algorithms

—kinbakubi kenkyu kai?

—lineal descendant of ibn-Musa al-Qarizmi that being the first publication

—no PhD not even a BA all his papers copied from obscure journals

—seme-e?

—Go for it, Bruno, do the meat thing.

Quine edged into a hallway and down a narrow flight of stairs as behind him music began pounding, catching as he turned a last glimpse of Thorpe, cheeks flushed, smiling at a circle of admirers the impartial smile of triumph.

Nature is more ready in her creating than time in his destroying, and so she has ordained that many animals shall be food for others.

He continued downstairs toward a light. In the cellar seven or eight young men from X Section were gathered around an old rackmounted minicomputer and a pool table.

—so he goes, learn to hassle people and lie with a straight face.

—Excuse me, I need to get back. Does anyone know the arrangements?

—Excellent advice, dude.

—Excuse

One glanced up.—There's pool cars outside somewhere.

Full dark. A dozen cars. E108637. DEPARTMENT OF ENERGY OFFICIAL

USE ONLY. Key in the column. The seat harness slid up and drew in over his chest and waist as a chime sounded and dash lights blinked red then glowed teal. The car swayed and bounced for a mile down the dirt road. There the highway stretched north and south into void, under stars like chips of ice. He could go anywhere. But time was a field that moved with him, inescapable, close as the blue light in the cabin. He drove for hours without stopping, radio for company, wash of noise, hollowness in his being. Mountains that a century ago killed emigrants with their rigors fell to his vehicle. Descending to the flats, he saw brushfires crawling brightly on far ridges like luminous protolife, like the fitful colors on Thorpe's screen from the bad sensors, and the fires fell away behind him and the farm cities loomed on the ancient seabed, their lights and capillary highways glowing with fervid intensity in the unnatural warmth persisting from this arid summer long past its term, its heat bonded to the earth like some toxin to a susceptible organ, and booming through the car's windows when he opened them was the smell of dust, manure, smoke, exhaust, chemicals, and he crossed the last ridge to arrive in his valley of a million souls, of all the places he might go, for all the freedom he had, here again.

In the dark apartment he stripped, trailing damp rank clothes to the bathroom. The mirror's sudden light showed him, before selfhood interposed its protective assurance, the face of a stranger, aging and vulnerable. The soft flesh of his body was without tone or color. Lowering his eyes from the harsh brightness he stood voiding for long seconds. A ribbon of urine twisted along the axis of its arc as it splashed into the bowl. Standing thus he blinked, faded, woke. The gates of sleep stood open and he was through them, uncleansed, as soon as he lay down.

On a moonless night at the edge of a forest there is the slap and sizzle of rainfall. A moist breeze springs up. Yet where he stands, in long grass, all is dry. Only in the forest is it raining. A figure in the forest shadows stands regarding him. It holds an offering of some kind, a gift. He does not move to take the gift, and shortly the figure recedes into the forest.

6.

Gathering before dawn the crowd set out for the main gate, to be met by police as unceasing arrivals swelled it further, until Lab workers began to show up in their vehicles and county and city police were called to divert traffic to the north gate against the columns of people still coming, and the south road was closed to vehicles and state police summoned, and still the spectacle slowed traffic to walking speed, so that Quine was late to Hight's office where Hight stared out his window at the south road.

—Those people out there will never understand. It could be so much

worse. On the other side, entire cities, entire regions have no civilian industry at all, it's all military. Here we cut our deals as needed but we still do real science. We bring in people like you. We roll back the darkness.

—There's a problem.

Highet turned. —What.

—The beryllium and hydrogen sensors were cabled separately. Thorpe's analysis at the ranch used only the beryllium. I looked at the hydrogen data yesterday. No brightness. No beam. Nothing there.

Nodding, Highet turned again to the window. —I see. The hydrogen sensors which I asked you not to use. You know, I almost stopped that work order, came that close. But I wanted to see what you had in mind.

—As supervisor it was my decision.

—On your head be it. Where's your quantitative agreement now?

—You saw at the ranch. The beryllium shows it. Spectrum peaks as predicted. But that's not a focused X-ray, that's oxygen in the beryllium glowing at just the right wavelength. It looks exactly like the new model's predictions for focus.

—And where did this new model come from?

—Thorpe's been modifying my code. I found a routine where just this set of frequencies is amplified. You'll find that my copies of the files haven't been modified for ten days.

Highet came from the window, pacing past the photos of presidents and artists' renderings, touching the length of cable.

—I see. Well, this is bad for him, you know. Especially after Fish and Himmelhoch. He has a history.

—I wouldn't call it intentional. The ideas he brought were good. I worked with him, I didn't see this, it could have happened to anyone.

—It doesn't matter. He has a history, voice sharpening, —quackery or carelessness, you think it matters? You think you can ever walk away from your history?

Quine said nothing.

—Now those hydrogen sensors, you piggybacked your own little test onto the piggyback, that was very cute. Did Thorpe know about that?

—You saw the work orders.

—He knew he was getting feed from the beryllium only?

—It was his demo.

—Yes, you saw to that. All right. We'll keep him on for a while. Then you'll write him a letter of recommendation. Down the road we'll issue a report on the false brightness. You'll be group leader on that. Highet's voice was tight with controlled fury. —You begin to interest me, Philip. I thought I knew what to expect from you.

—At least we caught this now.

—Oh no we haven't. We haven't caught a thing yet.

—I don't want to sound naive, you're not going to mention this at the presentation?

—Today? I think not. I think I will not at this time give the enemies of reason grounds sufficient to bury an entire body of knowledge and aspiration. Highet lifted from his desk a small device etched with a craft undreamed of even a decade before, raising it before him like a talisman, then replaced it and gazed at Quine implacably. —I believe not.

The telephone rang and Highet lifted it in midring, —No I can't see anyone right now, as Nolan came through the door bearing a red folder, acknowledging Quine with a minute change of expression.

—Very clean data from your shot, said Nolan.

—no damn it Senator Chase is coming in an hour

—Oh, you've seen it?

—We prepared the overheads. A match with theory unparalleled since Mendel's peas. Kid's a barn burner is he?

—what do you mean here now? We're not set up

—He'd like to be.

—damn it keep him down there

—You're taking him under your wing.

—fucking lantern-jawed hero of the people can just wait

—My political skills are legendary, Quine joked.

—don't care! Do whatever it takes! I'll call you when we're ready.

—I've noticed, Nolan said, turning to Highet as he put down the phone.

—have to do everyone's job, what's this?

—Overheads of the Taliesin data.

—Fine, just leave them. Bernd there you are find the rest of the team will you get them up here we have a little problem god damn senator from the liberal east arrived just a little ahead of schedule he's downsta, Aron where the hell have you been we've got a PR . . . Nolan!—

—Oh! I just, sorry, didn't see your foot

—Jeez sorry Aron let me help you up . . .

—Nolan will you get the hell

—my slides! here don't step on

—Nolan!

—just put these back in order, with the ah integrated twenty-four-bit color TGIF animations and music in standard MIDI files

—Aron

—little problem with the synthesizer all the instruments stuck on the cowbell patch so when we played the *Apocalypse Now* music, the Wagner Valk, rather intriguing actually but hardly

—Aron, will you

—then our Silicon Graphics machine couldn't read the TGIFs so we converted them to Video Postscript but somehow they came out black and white one inch square so

—Aron, will you please

—go low tech instead, keep it simple, four synchronized slide projectors overheads eight-track digital tape

—Aron, get up! Leave the, will you leave the slides on the floor. Go to the lobby. Keep Senator Chase busy down there.

—But I

—Go! and pacing to the window, parting the blind, —Fuck's this going to play like, must be a thousand of them in the road.

—The news said two thousand, said Dietz.

—They'll claim five. Supposed to keep these assholes away from the main gate put them up in the north corner, I want to know how this got out! glaring at Quine, —I want to know who's been talking to these people, who let them know Chase was coming today.

—Leo, it's symbolic. Today's Armistice Day, you know?

—Shit on that, it's to embarrass us. All for Chase. Man keeps calling me up about twenty kilos of plutonium gone missing, I keep telling him we don't stockpile plutonium here.

—But we do, Leo.

—Well, Bernd, Chase doesn't have the clearance to know that, and picking up the phone midring, —Yes? Damn it, Aron, just, look, take him to the downstairs conference room think you can do that? . . . no will you forget the fucking slides, thumbing the phone's button, —Where's Szabo? You all go down, I'm right behind you.

—Senator, glad you could make it. This all? Expecting more of your colleagues . . .

—Doctor Highet. These two gentlemen are from the General Accounting Office. You'll be seeing more of them.

—Why don't you all take a seat and we'll begin.

—There's just one thing I want to know, Doctor Highet. Is the Super-bright going to work?

—I believe our presentation will address any

—I don't want a presentation, I want a yes or no. At the present moment, judging from everything you have to date, is it a workable weapon, within the budget and timeframe we have?

—Beyond question. In fact we have new results that show

—A new Radiance test? When?

—I can't discuss that in open session.

—Then maybe you can discuss claims of exaggeration and fraud from Warren Slater.

—Those are lies. Slater sabotaged my teams repeatedly. He had reasons of his own to derail this program.

—Such as?

—I can't discuss that in open session.

—Slater's not the only critic. Some of your own people

—Those are not my people. Those are people who've made up their minds that certain technical problems are too hard to solve. They're wrong. They could be making a contribution, but instead they find fault.

—So why are you behind schedule?

—We're not.

—According to your own timetable

—Senator, we have brilliant, creative people together here doing important work. Leave them alone and they accomplish miracles. But if you put limits on them . . .

—You're not answering me. I didn't ask about miracles.

—I am answering you if you'll let me. You cannot nickel and dime a program like this in the research phase, not if you exp

—Research? I thought you were engineering phase.

—Very nearly.

—You sent the President a letter claiming engineering phase.

—I do not acknowledge that. If such a letter were to exist it would be top secret, and you lack the clearance to see it or the competence to evaluate it.

—Doctor Highet I'm getting tired of this, you have oversold this program to the tune of thirty bill

—Senator

—you have stonewalled, you have defied

—Senator

—gress, you have hidden behind classifica

—Senator, you're an asshole. You might even be a traitor.

—I will not take that from you, sir!

—You don't have a clue what's at stake here, one look at the masses out front you're ready to cave, sell out this nation's security its technological edge its, breaking off for the figure in the doorway who bowed his head in apology.

—Gentlemen, we have had a bomb threat. We need to clear the building.

—Good God.

—What the hell?

—Your peacenik constituency, Chase. Good work.

—I'm not through with you, Highet.

—Fine, I'm willing to sit right here play Russian roulette.

—Gentlemen please, the security forces will be coming through, you can move to Building 101.

Harsh urgent clipped static blurted in the hallway. Gallop of many feet approached.

—Clear this area!

Outside the building a security squad came running in a wedge, helmeted and visored, booted in horseskin, only the flesh of their hands visible holding batons at port arms. Leather creaking, heels clattering, radios jabbering, they divided the exiting crowd and Quine was swept the wrong way, out past an unmanned checkpoint before he broke clear onto a lawn where men in blue jumpsuits trailed strips of yellow CAUTION tape on two then three sides of him and he dashed through the diminishing gap as behind him shouts were raised. Between windowless walls a stair dropped him to where two burly men rounding a corner dealt him a blow with lumber they carried, —Jesus watch it! hurling him to his knees against a chain-link fence vibrating at the lip of a great pit. In this excavation five, seven, ten vehicles labored grinding and roaring in desperate intensity, beeping hollowly as they reversed or clanking furiously forward over a terrain of pale mud. Vast as it was it would not bury a millionth of the dead should the bombs created here detonate. Quine pulled free of the fence with a tearing of fabric and went down a walkway of plywood sheets, pausing before a trailer CREDNE CONSTRUCTION in whose doorway two T-shirted men eating lunch regarded him with dispassion as with a handkerchief he rubbed dirt and blood from his palms, temple, and knee visible through ripped pants, then down a long stair of raw wood stained with mud, glancing back at concentric terraces gouged from the hillside, *the city is built on two levels, lords and palaces above, common workers below*, and rounding a corner to where a stream of people hurried past guards at a checkpoint.

—Look I need to

—Move on, there's been a bomb threat.

—Yes but I'm in an important meeting I need to get back to

—This is a secured area.

—I'm cleared dammit! clapping his breast where no photo ID, but a torn flap of pocket, depended, —oh Christ, look my name's Philip Quine can't you call

—Keep moving! The guard pushed him back into the stream of people advancing slowly toward the main gate. He made his way through it and broke free, starting to jog on a rough track that led to the perimeter road, where he doubled back to approach the entry kiosk from its far side passing and passing close on his left the unending mass of protesters, just beyond a

row of trees and the perimeter fence, only to stop short of the entry road where cars were stalled by the leading edge of the crowd inside coursing around them like a stream around rocks, while bullhorns blared — personnel, do not exit by this gate repeat do not, and outside the gate protesters swirled in place like debris at a confluence of cataracts, held back by a skirmish line of county police. Quine stood sweating and panting until sirens turned him to face four cars slewing to a stop on the perimeter road and discharging blackvested Lab security forces one of whom leveled his club at Quine and cried, —You!

Quine ran for the kiosk. More Lab police had arrived inside, forming a line to divert Lab personnel from the gate, then quickly moving forward to the gate. Quine was suddenly between two police who linked arms to bar his passage.

—I belong inside. For a moment their visors, opaque, bronze, iridescent, mirrored twin Quines, elongated, battered, dismayed. Then he was seized and pushed through the gate into the street.

A helicopter swept overhead. He held his ears.

Let us now speak the truth as we know it. Say that the sun is round, and bright, and hot. The sun fires its acolytes, darkens their skins, elevates their wormridden souls, the sun rises in our birth and sets in our death, its writing is in the spots upon its face and in the spots it prints upon our skins. It is in us whether we labor under it or hide from it, it strikes through our souls, it ignites the light of our being, or limns the shadow of our denial.

In the crowd he saw Lynn, her dark head appearing and vanishing among others, lithe nape and shoulders bare and tanned below the cropped marge of hair, sun blazing on the straps and back of a white tank top.

Light is a wave and we are carried upon it, light is a particle to pierce us with revelation. Light is sun or moon, a heat that tempers or a gentleness that silvers with love.

He pushed toward her. At the end of its circuit the helicopter turned.

Here in the crowd are fools, innocents, knaves, here we are jostled, in hazard, we can do nothing but strive against currents, knowing how slight is our power to reach any shore we set out for.

He called her name and the call was lost in noise. The surge of the crowd pushed them together and she turned to him, eyes wide and surprised. It was not Lynn. Against their will they embraced. He clung to her until another push felled him. The cut on his knee opened and he bent to stanch it. When he rose she was gone and he was among figures wearing skulls of papier-mâché and skeletons painted on black tights. Tambourines jangled, clattered.

Say what you know, that love is lost. That light is lost. But see, loveless our

souls still blaze. Our sun has not gone out, for fire comes to those who go not the way of light. What's lost is well lost. See, we blaze and are not consumed.

Around him people tied kerchiefs across their faces. Overhead the helicopter roared. Its black belly glistened like a spider's thorax, then it rocked and moved off, vanishing behind a silver mist that fell onto the crowd as gently as the first rain of spring. Tears sprang to Quine's face and he dropped to his knees gasping and blinded, clinging to the nearest figure, saying over and over, —I belong inside, his voice unheard even by himself.