

Nancy Kress is the author of twenty-five novels, five collections of short stories, and three books about writing. Her fiction has won six Nebulas, two Hugos, a Sturgeon, and the John W. Campbell Memorial Award. Her most recent work is *Observer*, written with Dr. Robert Lanza. Subatomic particles have always both fascinated and baffled Nancy, and over the course of her forty-five-year writing career, quantum physics has only gotten weirder. Because quantum computers are already being developed, because what humans do can profoundly affect the Earth, and because there is always room in the world for yet more weirdness as well as the endless complications of family relationships, Nancy has combined all of these to examine . . .

QUANTUM GHOSTS

PART I

Nancy Kress

*"This City is what it is because our citizens are what they are."
—Plato*

PROLOGUE

The motorcade was late. Security, Robert Dayson thought. You couldn't have too much security, not since the bombings in Atlanta and Portland and Austin. Not with so many fringe groups so threatening about . . . everything. "The Unrest" the media were calling it, a term that seemed to Dayson unfortunately mild, as if country-wide seething dissatisfaction were no more than a bad night's sleep. No, you couldn't have too much security.

Still, he was freezing. Dayson huddled in his coat and blew on his hands—he'd forgotten gloves—behind the police cordon lining the street. Robocops moved among the human ones, holding the crowd in check. Dayson stamped his feet. Why was he even here? He was a New York State Capitol intern. He was Cabot Dayson's brother and the late vice-president's son. He could have watched Cabot launch his campaign

for United States senator from the comfort of the heated VIP area instead of in this milling, frost-chilled, angry crowd. Always anger now, everybody angry about something, so that Dayson's personal angst seemed puny, lost in the general and diverse American fury.

The motorcade came into view and drove slowly toward the New York State Capitol. Dayson lifted his eyes skyward. The building was beautiful, a two-hundred-year-old Renaissance palace among aging skyscrapers, January-bare trees, and foamcast homeless shanties. Built in the nineteenth century of white granite and Westchester marble, the Capitol had soaring towers, Romanesque Revival arched windows, and light, airy columns. Inside, vaulted ceilings, graceful staircases, glowing murals. It was all well maintained; somehow this stingiest of the country's many stingy conservative governments, which had spent six years cutting nearly every other government program, had found the money to keep up the Capitol.

The motorcade crept forward.

The Capitol building exploded.

At first, Dayson couldn't make sense of what was happening. *Not possible*. But . . . one explosion after another, shattering sound, screams and yells, flying debris. . . . The left tower of the Capitol collapsed into rubble, sending up clouds of ash.

Then the right tower.

People ran, screaming. Ash filled the air. Inside Dayson's head, QUESNU shrieked. More explosions, some in surrounding city blocks. Christ—this was much more than had happened in Atlanta or Boise, this was a coordinated military-style attack . . . this was *war*.

Something else blew up, closer, and flames leapt through the ash to lick at the sky. From the fleeing crowd came cries of pain. Dayson finally moved, sprinting forward to find and aid the injured. But Cabot was already there, evading security, carrying a woman to safety, his cashmere coat and thick lustrous hair streaked with ash and blood. Bodyguards clutched at him, and then droncams found him. Amid the sickening chaos they all got the picture: the illustrious candidate risking his life, even brushing off security, to save a poor woman in a ragged jacket.

Dayson ran toward Cabot, but security, not recognizing him, shoved him away. He could only watch as Cabot tenderly laid the bleeding woman in the black car. American royalty turned American hero.

There would be no stopping Cabot now.

TWENTY-TWO YEARS LATER

1

“The apartment has a ghost,” the apartment-allotting guy said, looking at his shoes, not meeting Kenda's eyes. “I'm obligated to tell you that.”

Kenda O'Malley nodded. Of course the apartment had ghosts—she already knew that. Everybody knew that all apartments in Denker City had ghosts. That was why the government gave them out for free.

This one, two rooms on the fourth floor in a cement-block building with no elevator, came with a double bed with a stained, bare mattress, a table with four rickety chairs, galley kitchen, dingy bathroom. No climate control, and the August heat brought out the faint smell of mice. Caity looked around, scrunched her little face, and said uncertainly, “Kenda?”

"It will be all right, Caity. I promise."

"I want to go home. I . . . *what's that?*"

A ghost, wispy and white, materialized, drifted past, and vanished. Caity clutched Kenda's knees. Her little sister, Kenda suddenly realized, had never before seen a ghost. Kenda had, two years ago when she was sixteen. She and Leila had skipped school and taken the bus into Denker City, giggling and jeering, having one of the "fun adventures" that Leila always adored. . . .

She could not think about Leila now. Or ever.

Kenda knelt beside Caity. "It's a ghost, Caitlins. But it isn't scary. It's just . . . just . . ."

The apartment-alloting guy said suddenly, "Listen, miss, are you sure you don't have any other choice besides living here?"

It wasn't any of his business. Kenda stood and said coldly, "No. We'll take the apartment."

"Then there's a few things I'm legally obligated to tell you." He switched on a tiny recorder to a version of his voice: the monotone of somebody reading a script. "Any illegal activity in the dwelling is grounds for immediate eviction. The government reserves the right for authorized drones to enter and inspect the premises without warning, and if such a drone appears at your window, you are obligated to let it in. Your Dole card allows you access each week to the Dole Food Pantry, where you will be given food available up to the amount on your Dole card. If you lose your Dole card or it is stolen, you must go immediately to the Government Center at 45 First Street for a replacement.

"QUESNU will not work anywhere in Denker City, due to the close vicinity of the Joseph P. Denker Upload Center. Because of the UC, you or other residents new to the city may experience flicker vertigo, whether or not you are implanted for QUESNU. The symptoms of flicker vertigo are brief disorientation, nausea, rapid blinking, muscle rigidity. It will last only a few moments. The presence of Upload Center Electrical Leakage Phenomena, commonly called 'ghosts,' is not harmful in any way. The ability to see these ghosts varies enormously among individuals; you may never see any at all. However, whether you see them or not, it is my obligation to tell you that the geomagnetic disturbances caused by an Upload Center can slightly change electrical activity in the brain, which is why you see the ghosts. Also, some studies show a linkage between living in an upload city and brain cancer, although other studies dispute this. You are being told this so that you can make an informed decision about staying here."

An informed decision! Kenda almost laughed in his face, but that would have further upset Caity. There was no other decision she could make. Their mother had died six months ago, and the mysterious income source that had supported them had stopped with her death. Kenda had not been able to pay any bills on their previous apartment, which hadn't been great, but at least didn't have ghosts, and did have Leila living down the street. All of it gone, including Leila.

"Do you accept these terms and understand this information?"

"I do," Kenda said, and then she did laugh, an ugly sound that made Caity's head jerk up to stare at her. *I do* sounded to Kenda like the marriage ceremony, and her stupid teenage dream of someday marrying Leila.

"Good. Say your name clearly and put your thumbprint here . . . good. Here's your Dole card. Don't lose it." He switched off the recorder. "One thing more, miss. I said this apartment has 'a ghost.' There's more than one, of course, but every previous resident reported one particularly distinct ghost that hangs around here a lot. I just thought you should know."

"Is that why the apartment is empty? You said this is the only empty one in this whole bunch of buildings."

"That's why. Nobody's ever been hurt by any ghost, of course, but it spooks some people. Here are your keys—Dole locks don't use thumbprints."

After he left, Kenda turned back to Caity. "We're going to take the bus back now, Caitlins, and bring back as much of our stuff as we can carry. We'll make two more bus trips, okay?"

"Okay," Caity said unhappily. She was watching a ghost drift by, a faint wisp before it dissolved in the bedroom doorway.

Kenda, hot and sweaty, stood at the open bedroom window. Across the street a skinny, patchy-furred cat perched on the edge of an overflowing garbage can and rooted around in the contents. A ghost drifted through the cat. Three small boys, whooping and shouting, played some game in the street with a ball and a cardboard box. Leaning out, she could see two bars, a dingy holoplay palace that probably had tech ten years out of date, a 3-D print shop, and two homeless guys stretched out on the sidewalk against a crumbling wall covered with obscene graffiti. One car parked nearby—only one!—and it wasn't even self-drive.

On the bed, Caity moaned in a restless nap, turned over, and snored softly. What was she experiencing? Was it different from Kenda's brief experience of what the government guy had called "flicker vertigo"? Maybe. Caity, unlike Kenda, was implanted. Their mother had saved carefully the first twelve years of Kenda's life. Then she had an "accidental" pregnancy by, presumably, the man she'd been dating, whom Kenda hadn't liked and who had promptly vanished. Eileen O'Malley was Catholic. She'd had the baby and spent all her savings on an implant for Caity, now that the price had fallen so much. Kenda, twelve, had not been consulted, but wouldn't have objected if she had been. They both hoped an implant would give Caity, whom Kenda loved from the moment she saw her, a better chance in life.

Not that the hope had come to much so far.

Kenda didn't want to think about her mother, dead for six months of cancer. Or think about Leila. Or about where Kenda lived now, or what she might have to do if it turned out that she and Caity couldn't survive here.

She leaned out the window and craned her neck to the left. From the fourth floor, she could see the big gray rectangle of the Joseph P. Denker Upload Center, a flat-roofed building surrounded by some sort of shimmering field. In there were "quantum computers" that held the brain patterns of people who'd been uploaded. Most of them, Kenda had heard, had not been implanted—they were born way before QUESNU.

What was it like inside that big metal super-scientific box full of uploads of people who'd spent their whole fortunes to be there in a virtual world, leaving behind their sick or dying or really depressed or too ugly bodies? Did their world, whatever it was, seem just as real to them as hers did to her? No way to tell; nobody could communicate out of or into a UC, something to do with the UC shield. What was "life" like for them, those very rich people who wanted to live forever—and not here?

She heard gunfire. There were gangs in Denker City, criminals, crazy people. Q didn't work here, TV and computers and radio didn't work here, but guns did. Kenda moved away from the window.

2

It is starting. No way to tell anyone*.

No way to do anything at all.

What have I done?

State Senator Robert Dayson finished using the urinal in the lavatory of the very ugly Temporary Capitol Building, zipped, and accessed QUESNU. He was alone in the lavatory, which didn't matter because interactions with the global-spanning Quantum Entangled Spacetime Net Unity took place entirely inside the human skull. Still, he'd rather not be observed on Q just now, especially by his political opponents, fifteen minutes before the most important legislative bill of his life would be introduced.

QUESNU on, he subvocalized.

QUESNU on, said the voice in his head that he'd known since he could talk.

You have non-priority messages from Hailey Dayson and Claire Lambert.

Hailey, Dayson's difficult daughter, would be dutifully sending her weekly, non-informative message from college. Claire, his ex-wife, would be complaining about something, probably Hailey. The messages could wait a few hours until after the legislature's vote. *View New York State senate chamber.*

The image appeared in his head; the chamber was barely half full. The clerk shuffled papers. Senators chatted or read or sat motionless with the look that Dayson had seen a hundred, a thousand times before on people he knew, on strangers at restaurants, people in offices, people on the street: the half-present, half-distracted look of someone more absorbed in QUESNU than in tangible reality.

The lieutenant governor, looking grumpy, sat ready to preside, since the majority leader was currently under indictment. This was also true of three other senators and five assemblymen. The New York state legislature had one of the country's longest records in both corruption and delay. Its delegates had been unable to vote "yea" on signing the Declaration of Independence in July 1776 because they had been unable to obtain any instructions from Albany.

Well, at least he'd escaped one last attempt by Nate Canfield to dissuade Dayson from presenting his bill.

The door opened and Nate strode in. "Robert, don't do it."

"Nate—"

"It can't further your political position in any way, and it hasn't any chance of helping anybody else since it won't pass."

Nate was right, of course; he was always right. Dayson's bill to end imports of cheap overseas implants would tank, and it would dent his career. Dent, but not destroy, which Nate also knew. It was Nate who'd called Dayson's potential run for governor "practically bulletproof." Robert was, after all, son to a former vice-president and brother to Cabot Dayson, slain hero, political martyr.

QUESNU off "Nate—"

"Soon you'll announce your candidacy for governor. This is the wrong time, the wrong bill, the wrong reasons."

"The reason is that data shows these new imports are dangerous to children. A CDC report shows a significantly high correlation between children under seven and brain cancer if those children live within twenty-five miles of a UC and—"

"The FDA approved the new implants. The data you're referring to is disputed. And these overseas implants cost one-quarter of the ones made here, allowing parents to give their kids the advantages your class enjoys with *your* QUESNU implant."

This was more bluntness than Nate, who had come to politics from working-class parents, usually dumped on Dayson. Dayson said, "The FDA rushed testing and approval for reasons you already know." Corruption at the top, pressure from a laissez-faire government in love with the free market, pressure from public groups convinced that implants gave the rich an inestimable advantage. Which, to be fair, they did.

"Bob, don't introduce this bill."

When Nate called him "Bob," it was a deliberate reminder that Nate had known him as a callow teenage intern, that Nate had far more experience with politics, and that Dayson was not Cabot. Nate had been Cabot's chief of staff and now was Dayson's, for the simple reason that Nate was the most effective political operative that Dayson had ever seen, even though Nate was too old to have been implanted. Implants had to be put in children's skulls before they were six months old.

At least Nate had called him "Bob" and not "Bobby."

"I have to go," Dayson said. "They'll call the vote in just a few minutes. Nate, my first duty is to my constituents. These new implants were manufactured on the cheap, imported the second the patent ran out, and stuck in babies' heads with who-knows-what long-term consequences. They're not like the implants that people have lived with for the past four decades."

It was not in Nate's nature to give up. "One more thing to consider. People will say—journalists as well as your political rivals—that you're trying to keep implants from the middle class in order to maintain the dominance of the rich. A lot of people will believe that. People who vote, which those whose children live within twenty miles of a UC do not."

Dayson stared at him. This was the other side of Nate. Loyal, hard-working, non-corruptible, but with a certain coldness at his heart. Dayson said quietly, "I have to go now."

Nate said, "Cabot would have known better than to do this, Bobby."

Only the obvious pain in Nate's words, on his face, saved Dayson from giving a harsh retort. Cabot had died five years ago in a hail of bullets from a deranged assassin, and Nate still mourned. As did Dayson. It made a bond that Dayson could not break.

He strode into the Senate chamber, spoke the same points he'd just made in the men's room, and watched his bill defeated fifty-nine to four.

As he left the chamber, an aide rushed up to him. Aides were always rushing up to him since, unlike most people, Dayson did not leave QUESNU on all the time. The young woman said, "Sir, Dr. Malter called and wants you to call him back. He says it's really urgent."

Dayson frowned. Sam Malter never thought anything was urgent. Dayson thanked the aide and subvocalized. *QUESNU on.*

QUESNU on. You have a private, priority one message from Dr. Samuel Malter, Rensselaer Polytechnic Institute.

Recite message.

Reciting. "Robert, come here as soon as you can. Something has happened that could change everything." End of message.

Dayson frowned. Completely unlike Sam. Change what "everything"? How? But Sam never indulged in hyperbole. There was no one Dayson respected more.

Order my helio for immediate rooftop takeoff. Tell Nate Canfield to reschedule whatever I have scheduled for this afternoon.

*Done. * QUESNU subvocalized, and in the single word Dayson heard a completely unintended note of finality.

4

"Kenda, make them go away!"

Kenda sat on a rickety chair and pulled Caity onto her lap. "They can't hurt you, you know. They're not real."

“Yes, they are,” Caity said. “I see them. They’re right here. And that one looks so sad!”

“Sad?” All Kenda could see was a wisp of mist, appearing and disappearing like those subatomic particles she’d learned about in science class. “You can’t see any feelings on ghosts’ faces. They don’t *have* faces.”

“That one does.”

Kenda didn’t argue. Caity had been like this the entire month they’d lived in Denker City, a month of alternating violence and boredom. Twice Kenda had been robbed of her groceries on the short walk between the government food pantry and their building. The second time she’d been pushed to the ground so hard that her arm wouldn’t stop bleeding until she went to the free clinic and waited two hours for a nurse to hastily disinfect and bandage it, Caity scared and sobbing the whole time.

At least Caity had made friends with Janelle Delgado, a little girl on the third floor. Mrs. Delgado—she insisted on the old-fashioned “Mrs.” as if it were somehow a badge of honor—was a hard forty with two kids, a resigned air, and three missing teeth. A lifetime of poverty had not blunted her compassion or generosity. Playing with Janelle in 3H distracted Caity from grief and ghosts.

“Caitlins, today is story day at the library.”

Caity’s face brightened until she said, “There are ghosts there, too. And it smells bad.”

“I know.”

It had been the smell of Denker City, even more than the ghosts and the danger, that had made Leila break up with Kenda. “*Oh Christ, Kenny, you can’t move there! Remember when we went that time, how awful it was?*”

“I have to.”

“No, you don’t. You told me your mother said—”

“Don’t, Leila. I mean it.”

“You do, do you. First you tell me only part of what she said to you when she was dying, even though you say you love me! And then you want me to visit you in that smelly place, with those creepy ghosts!”

“I didn’t say that. I can visit you here.”

“And what if you brought a ghost back here with you, by mistake? I couldn’t stand it!”

“You know that’s not possible. Ghosts don’t leave Upload Centers.”

“I don’t want to take the chance. You and I were fun, Kenda, but . . . not if you . . . no.”

And Kenda had seen the stubborn selfishness on Leila’s face, and felt the dark panic rising in her own chest and had understood that Leila was dumping her.

Don’t think about Leila. “Do you want to go to story hour or stay here?” At home—their previous and real home—Caity had been able to access Q and have it read stories to her whenever she wanted. Not here.

Caity chewed her bottom lip. Finally she said, “Story hour.”

“Good. Get your library books and your jacket, it’s colder today.”

But at the door, Caity paused. “He doesn’t want me to go.”

“Who?”

“The ghost. That one.” She pointed at a wisp drifting past, no different to Kenda than the others that appeared and disappeared several times a day. “Look how sad he is!”

“Caity, it’s not a ‘he’ and you can’t see any sadness on it. It isn’t sad. It’s just electrical leakage. Like . . . like lightning from the sky.”

“It’s not!” She stamped her foot, and Kenda’s patience snapped.

“If you don’t want to go to story hour, fine. Take off your jacket and mope here all day!”

"Don't yell at me!" Caity started to cry.

Oh, God, she'd fucked up again. She was terrible at taking care of a little kid. There wasn't anything she wouldn't do for her sister, but she was eighteen years old and their mother was dead and the money had stopped and Leila was a hole in her heart and . . .

No *and*. This was their life now. Kenda knelt and took Caity in her arms. "I'm sorry, Caitlins. I didn't mean to yell at you. Let's go to story hour, okay? It'll be fun. Maybe that librarian who reads so well will act out a story. And you'll get some new books!"

"Okay," Caity said. She hugged Kenda. "But that ghost is still sad. And scared."

Kenda didn't answer. The white wisp followed them as far as the door, where it writhed and vanished.

While Caity listened to a talented librarian who should have been a holo actress, Kenda stood patiently in line for her ten minutes at the ancient computer monitored by a watchful guard. She searched the internet for anything new about ghosts near Upload Centers and found nothing.

Of course, any new science might be only on QUESNU, which wasn't a computer or a program. Kenda had never understood that, although she did remember from school that QUESNU—the Quantum Entangled Spacetime Net Unity—was "woven into" the quantomagnetic fabric of spacetime itself. Squinting at the cloudy computer screen, she read that momentary disturbances in the field around a UC started little electrical currents in human brains, causing people to see so-called ghosts. Even those—

"Time's up," the guard said. "Move on."

"I still have one minute!"

—not implanted could see ghosts, since they didn't depend on QUESNU. However, newer imported implants, which New York State senator Robert Ethan Dayson seeks to ban, might—

Kenda froze. *Senator Dayson.*

"Time's up! Move!"

Kenda yielded her chair to the man behind her, just as children in the reading corner began to scream.

Kenda rushed over. Caity convulsed on the floor, her body spasming and her arms and legs shaking. She uttered strangled sounds: *Uh uh uh!* Kenda cried, "What happened?"

"I don't know!" the librarian said. "She just suddenly dropped and started having convulsions! Is she epileptic?"

"No!" Kenda knelt beside Caity and tried to hold her, but Caity flailed too wildly. After another thirty seconds, the spasming weakened. The smell of pee rose on the air. The little girl stilled, opened her eyes, closed them again.

"Caity! Caity!"

No response. A ring of adults and scared children began to jabber. The librarian said, "Take her to the free clinic. It's around the corner and three blocks over."

"I know where it is," a man said. "I'll carry her."

"I'll carry her," Kenda said. The man might be all right, but why take a chance? She scooped up Caity, who now seemed asleep, or unconscious. Kenda's heart pounded so fast that for a moment her vision blurred.

She raced to the clinic, a wooden storefront with graffiti-covered plywood over the windows. A boy was painting over the obscenities with thick white paint. Kenda pushed inside, yelling for a doctor. The first room, filled with people and a few ghosts, had nowhere free to sit. When a doctor in dirty blue scrubs appeared, people

called out to him: “Doctor!” “Ya taubib!” “Doc, over here!” “Aqui!” A few tried to clutch at his scrubs.

“This way,” he said, leading Kenda and Caity into a tiny room with three beds. Children lay unmoving on two of them. “What happened?”

Kenda told him. He questioned her, beginning with whether Caity had epilepsy or any history of seizures. Caity began to revive and he asked her simpler questions. She seemed confused and began to cry. The doctor finally said, “I’m going to have the nurse do an EKG, but the bottom line is that I don’t know why she had a seizure. If it happens again, have your parents bring her back and I’ll give you some anti-seizure medication, but it may not happen again.”

“That’s it? Aren’t you going to do a . . . a scan of something? What if she has some kind of brain thing?”

“Miss, I don’t have any scanning equipment. This clinic isn’t even government funded. If you have medical insurance” —his tone said he knew that she didn’t— “you can take her to an ER outside of Denker City. But there’s no free medical programs anymore, not even for children. However, 11 percent of people in the United States will have a seizure sometime in their life, and usually it’s only one. Take her home and tell your parents to watch her.”

“But—”

“I’m sorry.”

The nurse came in and spoke urgently to the doctor; he rushed out. The nurse turned to Kenda and said gently, “You need to leave now. I’m sorry. We need this bed.”

Caity slept all the way home; Kenda’s arms ached from carrying her. When Caity finally woke, she seemed normal, although very tired. She had no memory of what had happened, which scared Kenda. It also propelled her to the decision she’d been struggling with for seven months.

“I want to go home,” Caity sobbed.

“We can’t do that. But we can get out of Denker City.”

“How? You said nobody will help us!”

“Yes, somebody will.”

“Who?”

“Robert Dayson.”

“Who’s that? Why will he help?”

“Because,” Kenda said, and took a deep breath to smother fear in oxygen, “I can make him.”

5

I might hav* a conne*tion, no, a—
W*at is—

6

When Dayson’s helio landed at Rensselaer Polytechnic Institute in Troy, Sam Malter waited on the roof. Eccentric as always, Malter wore overalls with a white shirt, tie, and yarmulke, his prematurely gray hair blowing in the stiff breeze. They grinned at each other.

"Hey, Sammy Test Tubes."

"Hey, Robert the Nerdy Wasp."

Dayson and Malter had been unlikely friends at Yale, despite belonging to completely different social circles. Chess club had brought them together; genuine liking continued the friendship long after either of them had time for chess. They had been best man at each other's weddings, both of which had ended in heartache. Susan Malter had died four years ago, the same year as Dayson's divorce. Currently Malter held the RPI research chair for geomagnetism.

Dayson said, "Can we go inside? In case you haven't noticed, it's windy up here." Malter was impervious to atmospheric weather. Only space weather interested him: the varying conditions in the Earth's magnetosphere due to solar and terrestrial fluctuations.

Malter's lab was cluttered with machines Dayson could not identify. In the small, fantastically cluttered office—what was a stuffed hummingbird doing here?—he said, "Sam, what's so urgent?"

"This. No, don't try to read it, I know you can't. It's an isodynamic chart for the Missouri upload city. It uses algorithms to break down complex statistical reports of changes in the local magnetosphere over the last year. I'm sure you already know that shifts in geomagnetism can be caused by so many things: solar flares, tiny shifts in Earth's magnetic poles, changes in the Earth's core as caused by at least four—"

"Bottom line, Sam. Please."

Malter leaned forward and held Dayson's gaze. "Basically, the study separates variations in the local geomagnetic field attributable to a UC from those caused by solar activity. The field around the St. Louis UC is changing."

"Changing how?"

"Well, that's the point, isn't it? Geomagnetic fields are always subject to change. Even a large metallic object can do it, such as a submarine or hidden vehicle. The military takes great advantage of that. A pulsing field, which the shield around a UC is, has an exponentially larger impact. The shielding has to protect the UC against natural disturbances in Earth's own geomagnetic field, which is very complex and extends from halfway down the Earth's core outward to hundreds of thousands of miles into space. The two fields plus space weather all interact, which sometimes sets up feedback loops. If you also consider the way that both UCs and QUESNU are woven into the quantomagnetic field of spacetime, statistically speaking—"

"Not bottom-line enough, Sam. Cut to the chase."

"The Missouri UC is destabilizing the local geomagnetic field."

It took Dayson a moment to process this. "You mean destabilizing the field that you just said extends halfway down to the Earth's core and all the way out to space for hundreds of—"

"Depends on the location, and whether you're talking about the plasmosphere, the magnetosphere, or the magnetopause. That's where pressure from the—"

"Sam. Destabilizing how much? How do you know? And with what consequences?"

"All questions we don't have answers to yet. Earth's geodynamo still isn't fully understood, and computer models can only predict so much. There's a lot of noise in the data. But I think the shifts in the Missouri geomagnetic field are real."

"All right, then give me some likely consequences."

"Increased geomagnetic storms, like those caused by big solar flares. That affects the electrical grid, so more power outages. QUESNU acting wonky farther out than the usual twenty miles—that's one thing we have verified. Around the Missouri UC, Q now stutters—has brief interruptions while transmitting—as far as twenty-six miles out.

“Worst case scenario—and this is really unlikely, Robert, but you did ask—the strain on a UC becomes too much and it blows up.”

“My God!”

“And mine,” Malter said. “But that would need a really rare confluence of circumstances, so don’t worry about it.”

“Don’t—”

“There’s something else you should worry about, though. If QUESNU is stuttering—and that’s new, before now it either worked, or near UCs it didn’t—that means that the small alterations in your neural firing caused by accessing QUESNU—those tiny alterations are also affected. And no, before you ask, nobody knows with what consequences. But—worst-case scenario, again—it might mean that not only those new implants you’re railing against could be dangerous to the human brain, but *all* implants. Including the ones you and I have.”

“What are you saying? Exactly?”

“Oh for Pete’s sake, it’s a good thing you’re a politician and not a scientist. There is no ‘exactly’ to any of this. It’s brand new, possibly unreliable data, and no one including me is jumping to conclusions about it so we can face TV cameras with strong political statements.”

A moment of silence before Dayson said, “That’s not fair, Sam.”

Malter ran his hand through his unruly hair, strongly enough to knock off his yarmulke. He picked it up off the floor.

“I know it’s unfair. I’m sorry, Robert. But I want you to know that I’m considering having my implant removed.”

Dayson was stunned. “You can’t do that, Sam. You yourself just said that effects on normal implants is only a worst-case and unproven scenario. You *need* Q for your job. And about 15 percent of implant removals result in death. You must know that!”

“I do know it. I haven’t decided yet if I want to roll the dice with my brain through removing my implant or through keeping it.”

“But—”

“I don’t want to discuss this any more. But there is somebody I want you to talk to. Her name is Dr. Anna Foriss, she’s a researcher in bioelectromagnetism, and she’s heading a research project in Denker City. Before that, she did some outstanding work on eels.”

“Eels? You want me to go talk to an expert on eels?”

Malter smiled. “Electric eels can generate a field outside their bodies that delivers shocks of up to 860 volts. But that’s not what Anna is studying now. Go talk to her.”

On the way back to Albany, Nate Canfield phoned Dayson and left a voice message. “Senator, I went over the recording of your pre-bill speech to the Senate. Don’t say ‘dangerous and unknown potentials.’ If it’s unknown, then nobody knows yet if it’s dangerous, and if we know it’s dangerous, it’s not unknown.”

Good old Nate.

From the helio window, Dayson could just make out Denker City on the horizon. He couldn’t see the Joseph P. Denker Upload Center, the first UC to open its virtual doors, ten years ago. The enormous cost of UC research, testing, and construction had slowed all economic progress for two decades, as both private and public monies were diverted from all other science to these tombs for those buying immortality. The rapidity had been unprecedented. Five years from Denker’s brilliant equations until construction began; another five years until the first nearly dead person had been uploaded. Not even QUESNU had developed faster.

Rumor said that Denker himself was inside. However, not even a New York State senator had access to that information. Upload data was, or at least was supposed to

be, as well-guarded as Swiss bank account data. Too many potential lawsuits over which heirs owned or did not own the considerable assets of those who were neither alive nor dead. No communication was possible between whatever existed inside a UC and the outside world—something to do with collapsing the wave.

Dangerous and unknown. Implants, UCs, QUESNU, geomagnetic fields. Everything.

7

Hesitantly, Kenda entered the ugly lobby of the ugly government building. This was the right place, but she had no idea where to find any particular person. People dressed in expensive-looking business clothes strode past, along with small groups of tourists. An information bot rolled up to her.

“Welcome to the New York State Temporary Capitol! How may I help you?”

“I want to see a senator. Robert Dayson.”

“Do you have an appointment?”

“No. But he will see me. It’s very important.”

“I regret that senators do not see constituents without an appointment. Please tell me your name and a brief description of your business here and I’ll be glad to relay that information to the correct executive assistant.”

No way Kenda was going to explain her “business” to this machine. “No. I need to see the senator himself.”

“I regret that senators do not see constituents without an appointment. Please tell me your name and a brief description of your—”

“No. I need to see the senator now.” She could not come back a second time; the bus from Denker City had cost most of her credits, and although she’d been able to leave Caity with Janelle in 3H, who knew if Mrs. Delgado would babysit again?

“I regret that senators do not—”

“I need to see Senator Dayson! Right now!”

People turned to stare. A drone flew over and began filming. A human guard walked from the elevator to Kenda.

“Is there a problem here?”

“I need to see Senator Dayson on important personal business. Right away.”

His face hardened. “Make an appointment and then leave.”

“No! I—”

The guard took her arm, brought it behind her back, and began to move her toward the door. It didn’t hurt, but Kenda could not break free. People stopped staring and resumed walking, except for one young woman.

“Gerard, it’s all right. Please let her go.”

“I can’t. She don’t have—”

“I know, an appointment. And she’s making a fuss. But it’s all right, she’s with me.”

“With you?”

“Yes. I’m very sorry I didn’t alert the system that my appointment with Mr. Canfield would include another person. I forgot, and it’s caused you an inconvenience. She’s a classmate of mine at Barnard and we’re seeing Mr. Canfield together.”

The guard looked confused, then sulky. He released Kenda. “All right, Ms. Dayson.”

The girl took Kenda’s newly released arm and turned her toward the elevator. “Come on, Ava. Nate Canfield is waiting.”

Who was Nate Canfield? Who was Ava? Who was this girl, who didn’t look any older than Kenda?

Ms. Dayson. Oh, God, this was Robert Dayson's daughter.

The elevator was crowded. It wasn't until the girl led her off on the third floor that Kenda said, "What's going on? Are you—"

"Hailey Dayson. I don't know who you are, but I can guess what you are. You look like him, you know. Eyes, chin, mouth. Especially the eyes. That bright blue."

All her life Kenda had been praised for her eyes, her only beauty. But no one before now had connected those eyes with Cabot Dayson. Not even Kenda herself.

She looked at Hailey, five inches shorter than Kenda and far prettier. Her eyes were puffy. She'd been crying and had tried to hide it with inexpertly applied make-up. Her curly dark hair was cut short, framing her Black Iris earrings. Kenda had taken off her own earrings when Leila left her. Denker City was not her old suburb; there were still things you didn't advertise there.

Hailey said gently, "What's your name?"

"Kenda O'Malley. Who is Nate Canfield?"

"The man who controls the senator. Does Nate know you exist? Does the senator know?"

"No."

"Well, I'm sure you aren't the only one like you. Uncle Cabot got around."

Kenda scowled. Something about Hailey made her feel combative; she even knew what it was. It had been that way when she first noticed Leila, too, but this was different; Hailey Dayson was not going to be interested in anyone like Kenda. Besides, they were cousins.

She said, "How would you know if your uncle had . . . had other kids? I don't believe he told you."

"I don't know for sure. But I knew Cabot."

Kenda didn't know what Hailey meant and didn't ask. She said nothing, glaring at Hailey, who looked amused. "Come on, Kenda. You need to see Nate, and so do I. You can go first. All I need is to find out the campaign schedule. The senator is running for governor, you know, or will be next year. I suspect you need more than that."

Hailey led her to the outer room of an office, with an actual human secretary behind a desk. "I'm here to see Mr. Canfield, Paul. This is my friend, Kenda."

"Nice to see you again, Ms. Dayson." The man scanned Kenda's clothes and one eyebrow twitched. "Mr. Canfield is with someone, but it should only be a few moments. The coffee is fresh."

Kenda and Hailey sat in a corner on plush chairs. Hailey pulled out a small cube and pressed a button. At Kenda's gaze she said, "A mini-jammer. No one can hear or record what we say. Haven't you seen one before?"

"No."

"Will you tell me your story? Maybe I can help. Forgive me if I'm wrong, but I think you're a little out of your milieu and Nate is tricky, to say the least. You shouldn't trust him."

"Why should I trust you? I don't know you."

"No. But I got you this far, didn't I? Maybe I can get you as far as talking to the senator."

Kenda said nothing. Hailey said, "You can trust me," and laid a hand on her arm.

An electric jolt ran through Kenda. *A mini-jammer can't jam that.*

Finally she said, "Why do you call him 'the senator' instead of your father?"

Hailey took her arm away. "Kenda, do you know who your mother is?"

What kind of question was that? "Of course."

"And you also know who your father is. I don't know either. I was adopted and my adoptive parents chose to give me that information only last year. *Eighteen years* later. Now they won't tell me anything about my biological parents, and I need to know."

"Why?"

"Why do you need to make sure Cabot Dayson was your father? I was *lied to*. Were you?"

Was she? Kenda's mother had told her about Cabot Dayson only in the hospital, at the end. She'd also said that the mysterious money that supported them was Dayson money, sent every month with the condition that Eileen tell no one, ever. "Those are . . . are . . . powerful people and . . . don't risk . . ." But Kenda considered that Eileen had not lied about her parentage so much as protected her.

"Oh," Hailey said, watching Kenda's face. "You're not here to learn who you are. You're here to get paid off." She removed her hand from Kenda's arm.

Kenda's temper rose, tasting of bile. "I'm here because I'm desperate. My little sister and I are forced to live in Denker City because it's free. Have you ever lived there? Of course not. It's dangerous and ugly and my sister is terrified of the ghosts. I can't find a job that pays enough to afford babysitting. Yes, I'm here for money, but only the same amount that we used to get every month. I can manage on that. And you know what? All that is a better reason to be here than your fake crisis about being adopted. If 'the senator' and his wife were good to you and loved you and sent you to college and paid for that cashmere sweater you just let fall on the floor, then you've got nothing to complain about, should count yourself lucky, and should stop calling your father 'the senator' and shut up."

"Wow," Hailey said. "Just . . . wow."

Kenda would not apologize. She would not.

"Talk about self-righteous. I've got nothing on you, sweetcakes."

"Don't call me sweetcakes. And what do you want with your father's campaign schedule anyway, if you hate him so much?"

"I don't hate him. You don't do nuance very well, do you? I want the senator's campaign schedule so I can make clear to him that after his initial announcement, which I need the date of because I suppose I have to be present at that, I'm not doing any more campaigning."

"Why not?"

At the far end of the room a door opened and three people walked out, none of them looking happy. Hailey switched off the jammer. The secretary said, "You can go in now, Ms. Dayson."

Hailey said to Kenda, "Go."

The secretary said, "You told me—"

"Go," Hailey repeated. She walked over to the secretary and began speaking in a low voice. What was she telling him—everything Kenda had just told her? Well, if this was her only chance to get to Senator Dayson, she'd take it. She rushed through the door.

The man seated behind a big desk looked up. Something flickered on his face; if Kenda hadn't known better, she'd have called it fear. The look was gone in a moment. "Who are you? Where is Hailey?"

"In the waiting room. She said I should come in here first. I'm Kenda O'Malley."

He stood. "I don't know who you are, and I'm calling security."

"Senator Dayson knows who I am. I'm Cabot Dayson's daughter."

"Uh-huh. You're most likely an imposter, and not the first. Rich and successful men have an astonishing number of people claiming to be their children. I suppose you think you can extort money from Senator Dayson. Extortion is a crime, Ms. O'Malley. You could go to jail."

Jail? Kenda's vision blurred. But she pulled herself together. "It's not a crime if it's true. Senator Dayson was sending money to my mother, Eileen O'Malley, every month. She died seven months ago and the money stopped. My sister and I need it to live."

“So there’s a sister, too? And is she also Cabot Dayson’s daughter? Or are you going to claim that one is Robert Dayson’s kid?”

“No. She’s only five. Mr. Canfield, all I’m asking is the same amount of money my mother was getting before, so we can move out of Denker City.”

“That’s all you’re asking for now. What about later? Once extortion starts, it never stops. And I suppose that if you don’t get what you want, you’ll take to the press your so-called illegitimate parentage and the family’s supposed abandonment of you.”

Kenda would not do that, hadn’t even thought of it. It would hurt Senator Dayson’s campaign—wouldn’t it?—and Robert Dayson wasn’t the one who’d disowned her, his dead brother was.

Her hesitation must have shown on her face, because Mr. Canfield’s tone changed. He said soothingly, “I can’t judge if your claim is true or not, can I now, without evidence. Are you willing to take a DNA test?”

“Yes.”

“Good. It will take me a few weeks to arrange that—” why was he watching her so closely? “—and then I’ll have someone send you a QUESNU message where and when to go for the test. The—”

“I’m not implanted. And I couldn’t receive a QUESNU message in Denker City anyway.”

“No, of course not. I’ll send a courier. What’s your address?” After she’d told him, he added, “Analyzing those tests is complicated. It may be as much as a full month before we have conclusive results. You knew that, of course.”

No, she didn’t. She’d thought it would be quicker. But his intense gaze was disconcerting, so she said, “Yes.” She could manage another six weeks in Denker City, if it led to money enough to get her and Caity out.

“Good. Then go home and wait for my courier. And Ms. O’Malley, if you tell anyone about this, our deal is off. Do you understand?”

She’d already told Hailey. However, she nodded vigorously and Mr. Canfield seemed satisfied. He sat down behind his big fancy desk and began studying a holo-screen, clearly Kenda’s cue to leave.

In the waiting room, Hailey rose. Kenda moved close to her and said in a low voice, “Please don’t—”

“I won’t. You don’t have to worry.” In a louder voice she said, “And take this. It’s an idea I had for our project at Barnard. It fits so well that I actually defaced one of Mr. Canfield’s magazines. All in the name of education.” She thrust into Kenda’s hand a bundle of folded pages.

Kenda didn’t look at the pages until she was out of the building. Wrapped in them was a wad of money, along with a note scrawled in the margin: *You will need this. And I’m sorry.*

8

At the research center that Sam Malter had told Dayson to visit, the first thing he noticed was the security. Second was the dog. Third was the woman running the facility, Dr. Anna Foriss.

He had been driven into Denker City, since the entire city was a no-fly zone. On the hour drive from Albany, Dayson had QUESNU scan for any recent scientific articles on the Missouri UC or changes in the geomagnetic fields around any UC. There wasn’t much, and what there was proved so technical that Dayson couldn’t follow it. So much for a degree in political science.

The research facility, a two-story building very close to the UC, looked like a foreign embassy under siege. Electric fence, barred windows, armed guards, checkpoint entrance, armored cars inside the fence. The building still bore the sign PARKER HOTEL. Dayson guessed that the hotel had been built at the same time as the UC, meant for people who wanted to symbolically visit their uploaded dead. That was before anyone knew that the UC's field would deaden QUESNU, produce ghosts, and contribute to brain cancer. Before the upload cities became convenient dumps for society's unwanted people.

In the lobby, a dog rushed up to greet him, tail wagging. So—not part of the security system. It was a large dog of indeterminate breed with short, pale hair. Hadn't Dayson read that dogs did not flourish in Denker City? "Hey, boy, who are you? Are you part of the research project?"

"He is. He's Zeus, and you're Senator Dayson. Welcome. I'm Anna Foriss."

She was beautiful, with the kind of beauty that wasn't even trying. Her dark hair was pulled messily on top of her head; she wore jeans and an oversize cotton shirt; no make-up. Impossible to pin down her ethnicity—the golden-brown skin and hazel eyes argued a gorgeous mixture of Arab, Black, Jewish, Caucasian, Latina—pick two or more. Dayson was afraid his visceral reaction to her showed on his face, but if it did, she was too gracious to appear to notice.

He said, "Sam Malter sent me."

"Yes, I know. I'm glad he did because—I'm going to be frank here, Senator—our funding is due to run out, and I think this research is important. I hope you will, too."

"And Zeus here is part of it?" He bent to pet the dog, who licked his hand enthusiastically. A ghost drifted through Zeus's furry body.

"He is. We're studying bioelectromagnetism, although I'm not sure how much Sam told you."

"Nothing, really. I do know—or thought I knew—that there are no dogs in Denker City."

She smiled. "True, except for Zeus. Dogs are very sensitive to magnetic fields, as are many animals. Birds that migrate by sensing Earth's magnetic field sometimes just fall out of the sky over a UC. But there are wide variations among individual animals within a species, just as there are with humans. Zeus is the twenty-fifth dog we tested for ghost blindness."

"Ghost blindness? I didn't know there was such a thing."

"It's rare, an outlier on the bell curve of the ability to see ghosts. Can you see them? That one there, for instance?"

"Yes."

"Are you experiencing flicker vertigo, and does it rise to the level of nausea?"

"Yes, and no to the nausea." He had a faint headache and some muscle stiffness, both already disappearing.

"Then you're probably right in the middle of the bell curve. I want you to meet someone who isn't."

She led him to a room full of machinery. In the middle of the room a child, three or four years old, sat in a large padded chair, wires attached to his head, body, wrists. He licked a large lollipop, not at all concerned with the wires. A young woman who resembled him sat quietly in a corner, watching. Two young men monitored various screens.

"This is Rafael and his mother Rosita, plus our techs Fariq and Carl. Everybody, Senator Robert Dayson. Senator—"

"Call me Robert."

She smiled, and he caught what he'd been hoping for: the ineffable whiff of a bio-magnetism that had nothing to do with the Earth's core. She was attracted, too. Her manner, however, remained professional.

“Rafael is an outlier on the ghost-blindness scale, but in the opposite direction to Zeus. He’s a super-sensitive. He . . . watch.”

A faint ghost drifted through the wall and across the room. Rafael’s head jerked to follow it, he dropped the lollipop, and his small face scrunched up to cry. The techs’ screens burst into numbers and graphs. Rosita rushed to her son.

“It’s okay, Raffie. They can’t hurt you.”

“It’s crying! Make it go away!”

Anna said, “Put on counter-field.”

A tech did something and the ghost vanished. Rafael clung to his mother a moment and then cried harder, this time without the note of fear. “My candy all stuck!”

His mother pried the sticky lollipop off her son’s pants and handed it to him, less concerned with the goop on Rafael’s little jeans than with what she clearly wanted to say to Dayson.

“I brought Rafael here because I heard there was a doctor. I didn’t know Dr. Foriss isn’t . . . she don’t cure people. Rafael, it’s got worse in the last few months. He sees the ghosts, he says they’re crying, he says he hears them. Ghosts don’t make no noise. But Dr. Foriss says Rafael isn’t sick, and she needs him for her work, so we stay. It’s safe here.”

“Thank you, Rosita. Robert, just a moment, please.” She went over to Fariq and conferred with him in a low voice. When she returned, her eyes sparkled. Robert was instantly and ridiculously jealous. Fariq was handsome.

“Come with me to where we can talk. Rosita, you can take him back to your rooms now. Fariq, more later.”

In her office, Anna was again all business. “Rafael claims he can not only see ghosts clearly but hear them. This is the first time we’ve gotten measurable confirmation of that, in the form of activity in three separate auditory structures in the brain.”

Robert was stunned. “I thought ghosts were just electrical leakage, not . . . not entities capable of crying.”

“They’re not entities. Think of them more as very imperfect holographic projections, reflecting, however badly, the entities inside the UC.”

“But uploaded people aren’t entities, either—they’re programs who perceive themselves to be like . . . like conscious AI sims.”

“Supposedly, yes. But what do we really know? Nothing about the lives of those inside, if they can even be called ‘lives.’”

“So you think that Rafael is proof that uploaded people are crying? Are desperately unhappy?”

“Proof” isn’t that easy. This is confirmation that some uploads, number unknown, may have found a way to communicate some emotion, meaning unverifiable, through some means, mechanism unknown. No numbers to crunch, no statistics to check.”

“Not that most people would anyway,” Dayson said. “Did you know that research at Harvard shows that only 6 percent of people ever check statistics in politicians’ speeches on QUESNU?”

“Let me check that figure with Q,” she said, and he laughed.

“Anna, are there more Rafaels?”

“Two others that we’ve found. But one has mental difficulties and is also sure she visits the Andromeda galaxy every night on a donkey. The other was another child whose parents got him out of Denker City after just one session here. I don’t know how they financed their escape since they were desperately poor.”

Robbery, drug deals, other even less savory aspects of the flourishing criminal underground. He didn’t want to discuss any of that right now. “Where does Zeus fit into all this?”

"You saw him in the test room. He knows the ghost is there, but unlike most dogs, it doesn't send him into a frenzy. We've tested Zeus, too. He's not showing any responsiveness in his brain's auditory senses, but perhaps he will if the ghosts strengthen."

"Strengthen? Is that possible?"

"We don't know. But if they do, we'll measure the change. The basic fact is this: A strong magnetic field induces electrical currents in the brain by aligning hydrogen nuclei, which depolarizes neurons and so changes the pattern of neural activity. We can measure those changes very accurately. If ghosts change in any way, we might be able to know it by their effects on human brains. Provided, of course, that we don't lose our funding."

Was this why Sam had sent him here? Wily move, my old friend. "Q me the particulars of your funding, and I'll do what I can."

"Thank you. But I can't use QUESNU unless I leave Denker City, and I don't do that."

"Then write it all up, with back-up documentation, and I'll have a courier pick it up tomorrow."

"Thank you. I'm more grateful than I can say."

"I think this research is important. On another but related topic, you may have heard that I'm trying to get the newer, imported implants banned. There is research that says they're not safe, despite the FDA approval. In your research here with children, have you come across anything—anything at all—that indicates young kids, they'd have to be less than seven years old, have experienced mental issues of any type with newer implants? Kids whose parents got them these implants outside Denker City, but then were forced into living here due to bad economic or personal luck?"

"No, I haven't. But I'll watch for that."

"Thank you. Just one more thing before I take up any more of your time. Will you have dinner with me sometime, outside of Denker City?"

She looked startled, then hesitant, then determined. "No, I'm sorry."

Not even a flimsy excuse, just a flat refusal. Damn—he could usually tell when a woman was interested in him, an ability he'd shared with Cabot but exercised far less. Cabot had used it to sample women widely, Dayson to ward off the disappointment of being rejected by women who weren't attracted to him. Disappointment flooded him anyway, followed by embarrassment in the awkward silence. But then, with the compassionate directness that he immediately rated among her most admirable qualities, she put a hand on his arm.

"Robert, you don't want to be seen with me. I know you're going to run for governor—Sam told me. Journalists follow what you do. If I'm seen with you, they'll start digging into my past, and that wouldn't do you any good. It wouldn't do me good, either, with any future funding you might try to help me with. Please trust me on this. I'd love to have dinner with you under different circumstances, but these are the circumstances we've got."

He said bluntly, "What did you do?"

She smiled. "Well, I'm not an axe murderer, if that's what you're thinking."

"I wasn't. Anna, if you change your mind, let me know."

"I will."

She removed her hand, and his arm felt empty. *Don't be such a dumbass*, he told himself, but the aligning hydrogen nuclei that arranged his neural activity weren't listening.

As soon as his car left Denker City, QUESNU returned. A top-priority message from his ex-wife buzzed in his head and he opened it.

*Robert! Where *are* you? Hailey is missing!*

Missing? Robert's breath couldn't make it out of his throat.

Her roommate called me. Hailey left Barnard two weeks ago, and nobody has been able to contact her since! Where the fuck are you?

He messaged Claire that he was on his way home, then phoned Nate.

"Nate, I just got word from Claire that Hailey is missing. No one at Barnard has seen her for two weeks. Get a tech to track her movements thru QUESNU and alert the—"

"Hailey isn't missing," Nate said. "She's sitting right here in my office."

"She . . . what? Put her on the phone!"

"I think you better come here instead. She wants to talk to you and Claire both. Also, you and I need to confer. I don't want to insert myself into your personal life, but this also affects the campaign. We have a serious situation here."

9

A *onnect*on b ut I c n▶▶t—

I cOn't—

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10

When Dayson arrived at the apparently permanent Temporary Capital Building, Claire was already there. She had banished Nate from his own office—Dayson would like to have seen that—and sat facing Hailey, both with identical expressions of stubborn, mute fury. Clearly they had been waiting for Dayson before resuming the discussion that Dayson already wished were over.

He and Claire had married right after college. He'd been as much attracted to her confidence as to her beauty; Claire had seemed to know who she was and what she wanted. The divorce four years ago had not ended their subterranean conflicts that, like active volcanoes, could grumble quietly for years before a sudden eruption into magma and scorching heat. It was Claire who had ended the marriage: "I just don't know who you are anymore, Bob." Since Dayson seemed to himself the same as he'd always been, he'd come to the conclusion that Claire had never known who he was. Had she confused his public performance, which he'd worked hard to create for the political stage, with his private self? Or—a more disconcerting possibility—had she seen him mostly in the reflected glow from his father or brother? Dayson knew that Claire was not a social climber; she had her own fortune and status. Rather, from the honeymoon on she'd seemed to expect some quality in Dayson that he did not possess, some version of unshakeable masculine confidence, and her disappointment had slowly soured both the marriage and her. Hailey and Claire had fought all through Hailey's teenage years.

"Now that your father is here," she said to Hailey, "maybe you'll explain to both of us why you left Barnard two weeks ago without informing the college or your roommate. If Olivia hadn't called me because she was concerned about you, we still wouldn't know you'd left school!"

"I did inform Olivia," Hailey said, her whole body a mirror image of Claire's icy control. "I left her a note."

"Saying you'd be back in one week. Not two. She was afraid you'd been kidnapped or killed or something. If you were with someone—"

"I was not."

Dayson could feel the magma pressing upward. He said quietly, "Your mother is just concerned about you, as—"

"I can speak for myself, Bob!"

"—am I. Let's all sit down and discuss this. Hailey, will you tell us where you were?"

"I was in a quiet town."

Whatever Dayson had expected—a new girlfriend, a drugfest, a fast trip to Europe—it wasn't a quiet town. Those villages, scattered throughout the United States, existed under powerful jammers that blocked not only electromagnetic signals, but also QUESNU. Although not actually Q, which was still there—everywhere—since you couldn't block space-time. The jammers blocked some crucial element in implants so that the implanted could not access QUESNU. Quiet towns had no TV, radio, or phone coverage. Some had no internet, others permitted underground cable connection to a few central, communal computers.

The quiet towns differed enormously in character. Some were bare-bones idealistic communes built around a wide variety of beliefs, religious or political or environmental. Some were luxurious refuges from interruption for people who wanted to finish a painting or recover from plastic surgery or cure an addiction. Some were treatment facilities for various psychological problems. And some of the larger ones, Dayson suspected, were escapes for people who did not want to be found by relatives or business associates or perhaps even the law.

Claire, perched on the edge of her chair as if it were a precipice, said, "A quiet town? Why on Earth would you want to go to one of those grubby places?"

Hailey shot back, "And you know they're grubby *how*? Because you've had such extensive experience with them?"

Magma expanding. Dayson said, "Will you tell us why you went there? I'd really like to know, Hailey."

She hesitated—fight with her mother or answer an honest question honestly? Dayson had been counting on the latter. Hailey responded to honesty; it was both his best route to her and the reason she'd now rejected both her parents.

She leaned forward in her chair, talking directly to Dayson.

"I've watched myself at Barnard, I've watched other people, and I've done a lot of reading. If QUESNU is left on all the time, and most young people do, and, say, a complicated game with graphics is playing, then it's playing inside your brain. Even between moves, when you think you're not paying attention to it. Your pulvinar nuclei are affected—that's the brain area for sensory gating, that decides where various incoming signals should go and then sends them there. You get data overload. That means—and there are studies on this, lots of them—that you get an increase in distractibility, irritability, and impatience. With a decrease in focus and concentration."

"And you noticed this in yourself?"

"Yes. But—"

"Hailey," Claire said in a tone of forced conciliation, "your concentration hasn't slipped. Your grades are as good as ever."

Hailey ignored the interruption. "—the fact that QUESNU interferes with higher thinking is only the beginning. Your deeper brain doesn't know that your implant is 'normal.' The human brain evolved to deal with urgent incoming information with the fight-or-flight response, and now your deep brain thinks all this incoming information must be urgent or even dangerous, or why else would you be so keyed up trying to pay attention to it all? So all your biological stress reactions kick in. The brain

pumps out dopamine—that’s a neurotransmitter primed for action, and it also causes the high you get from drug addiction. Adrenaline flows, cortisol flows, you’re all hopped up to fight or run. It’s harder to sit still, concentrate, or maintain a proper balance of all the other brain chemicals.

“Also, just recently studies have shown larger than expected drops in production of two brain compounds that help stave off stress: brain-derived neurotrophic factor and nerve growth factor. Apparently the longer you have an implant, the less BDNF and NGF your body produces. Overall, implanted people show far more neural stress than those without.”

Dayson strained to follow all this. Hailey’s passionate tone scared him.

She continued, “With extreme sensory overload, you also get into rapid synaptic firing, which creates confusion. That leads to even poorer decision making than before. And to the production of even more stress hormones. And all this starts with *children*. Implants rewire their brains from infancy on. We have two generations of subtly distractible, hyperactive, brain-stressed people who think that’s the normal state.

“Sometimes the brain’s executive functions actually get hijacked, so that ordinary situations look black-and-white instead of shades of gray, and judgment can be impulsive to the point of idiocy. This all varies tremendously person to person, of course.”

“Of course,” Dayson said. He knew many idiots who weren’t implanted.

Claire said, “Well, I don’t believe any of it. I’m not more stressed or judgment-impaired than I ever was.”

“How would you know? You were implanted at three months old. And I doubt you keep Q on all the time. You first-generation implanted don’t. But the people I see at Barnard, the things I see in myself—I don’t want it. So I went to a quiet town to see what it was like to just to be by myself. Truly *be* myself.”

“And—” Dayson prompted.

“And it was good. It was right. It was honest. That’s why I want it permanently.”

Claire said, “So you’re saying you want to drop out of Barnard—a school you fought us to get into, let me remind you, when I wanted you to try for Harvard—and move permanently to a quiet town?”

“At a minimum.”

The back of Dayson’s neck went cold. He said, “What do you mean ‘at a minimum’?”

“I’m considering having my implant removed.”

The volcano blew. “Are you crazy, Hailey?” Claire almost shouted. “You can’t do that! Do you know how many advantages your implant gives you? The implanted get better jobs, make more money, enjoy more—how would you even make your living?”

This last was so ridiculous, given the fortune that Hailey would inherit from both parents, that she didn’t even respond to it. Her gaze stayed on Dayson, who tried to hold back his dark rising tide of panic. “Hailey, 15 percent of people who have implants, removed die during the procedure. Most hospitals won’t even perform it.”

“So it’s a choice between having my brain destroyed by keeping my implant or destroyed by removing it?”

Just what Sam Malter had said.

Claire said, “Don’t be so melodramatic. And don’t talk to me in that tone of voice!”

“Or else what?”

Dayson pleaded, “Don’t make your decision right away, Hailey. Live in a quiet town for a while more to see if you still like being cut off from QUESNU. Give it a year.”

Hailey turned on him. “Nothing ever changes, does it? She resorts to yelling and bullying, and you resort to any wishy-washy idea that will avoid making decisions.”

He was stung into silence. Was that the way his daughter saw him?

Was that the way he was?

"Hailey—"

"Senator, don't. Just *don't*. I could never count on you to stand up for me against her, not even about who my biological parents were."

"That again," Claire said. "Don't you ever let go of anything? And why aren't you more grateful that we adopted you? We gave you everything—"

"Except the truth."

Dayson, his voice thick, said, "We don't know the truth about your parentage. And since your birth mother never registered with any of the agencies that—"

"You knew that I was adopted, and you never told me until nearly a year ago. And I don't believe that you couldn't find her if you really tried. Or Nate Canfield could. He found out that the woman who shot Uncle Cabot didn't do it for political reasons the way everybody said but because he got her pregnant and abandoned her!"

Claire gasped and looked at Dayson.

He said quietly to Hailey, "How do you think you know that? You were thirteen when Cabot was assassinated."

"I overheard you and Nate talking. And don't tell me I don't remember accurately because I do. I remember everything, all the time. Nate got that woman's medical records suppressed, didn't he? Anything for the Dayson dynasty?"

Claire demanded, "Is this true, Bob?"

"I'm not going to discuss Cabot with either of you. It doesn't solve anything here and now."

"Still evading," Hailey said. "Still can't step up to the plate and swing that bat."

Only the pain in her voice, underlying her anger, kept Dayson silent. Her pain, and his. Nobody could cripple your heart like your own children.

Claire felt no such constraint. "You keep a respectful tongue in your head, young lady!"

"Or what? I'm not a child anymore. You can't control my choices."

"No? I can stop all disbursements to you from the family trust until you're twenty-five. Or your father can."

Both of them looked at Dayson.

Oh, Christ. An impossible choice—alienate Hailey, perhaps forever, by cutting off her income? Or make it possible for her to have her implant removed and risk dying during the operation?

"Hailey, promise me this: that you'll take time to consider this irreversible decision. You'll think it over very carefully and let us know what you decide."

"Okay."

Claire stood. Every inch of her vibrated with fury. "Our daughter is at least correct about one thing, Bob. You can't make hard decisions. Only postpone them as long as you think you can get away with it." She slammed the door on her way out.

Hailey rose, too. She said nothing else, but she bent over to kiss the top of Dayson's head as she left.

Dayson was alone, still feeling that little kiss tingle, before the door opened again. Oh, God, Nate. Never any escape from Nate.

"Senator, did that discussion concern something I should know about? Anything that might affect the campaign?"

"Hailey wants to have her implant removed."

Nate nodded, and his expression of intent watchfulness changed—for just a second—to relief before settling into conventional concern. "I'm sorry, Senator. That's hard."

"We're handling it," Dayson said, and wished the words were actually true.

Why relief? If that's what Dayson had actually seen—he wasn't sure. Of anything.

Caity had had a bad two weeks. “Make him stop!” she wailed every time her ghost appeared in the apartment. To Kenda, this ghost looked indistinguishable from all the others, a vague transient mist with no features that would indicate a “him.”

“Make him go away!”

“Caity, you know I can’t do that. Please stop crying. The ghost isn’t real, it’s just a bit of electricity that got loose.”

“He’s following me!”

This did seem to be true, but Kenda had no idea why. The only thing that helped was to get Caity out of the apartment, but Janelle had had the flu and the little girls couldn’t play together. The library was open only two days a week. The food pantry would only admit them if Kenda had credits left on her Dole card. It had rained for the entire last week, and gunfire had become more frequent; something was going on among rival gangs.

School had been a failure. The second day, two older girls beat up Caity in a hallway, and Kenda had not made Caity return. No school official had shown up at the apartment. Kenda was teaching Caity to read from library books, to do arithmetic using a pile of small stones, to write with the carefully rationed supplies brought from their former life. She was also rationing the money Hailey had given her, now safely hidden in the wall behind a light switch.

“Make him go away! He’s trying to talk to me!”

“Caitlins, ghosts can’t talk. Do you want me to read to you?”

“No!” She ran to the bed, pulled the blanket over her head, and sobbed.

The ghost disappeared. If that was even the same one. Were there more of them now, or did it just seem that way?

Fortunately, on the day of Kenda’s DNA test in Albany, Janelle was no longer contagious and Mrs. Delgado agreed to babysit. As Kenda entered their apartment, she was nearly knocked over by a teenage boy pushing past her. Mrs. Delgado yelled, “Shawn! Don’t you dare leave before I’m done talking to you!”

Shawn kept going and disappeared down the stairwell.

Mrs. Delgado looked like she hadn’t slept in days. She said to Kenda, almost pleading, “He’s a good boy. He *is*. He just made these new friends that . . . they . . . he . . . it’ll be okay. Hey, Caity.”

“Hey,” Caity said, clinging to Kenda’s hand. But then Janelle came out of the bedroom, carrying two cheap plastic puppies.

“Caity, look what I got! We can play with them!”

Mrs. Delgado said, “You two girls take your toys in the bedroom and play. She’ll be fine, Kenda, you just go about your errands and don’t worry.”

“Thanks,” Kenda said. “I appreciate it.”

The rain hadn’t stopped, nor improved the smell of Denker City, but Kenda was so glad to be leaving it for even an afternoon that she walked briskly to the bus stop. The buses were often late, but Kenda had left plenty of time to get to Albany.

She was surprised when she reached the address Mr. Canfield had given her: not a hospital or clinic, it was just an office in a big building. A nurse in scrubs drew a vial of blood and said, “You can go now.”

“That’s it? That’s all?”

“That’s all.”

So why was the test so hard to arrange? Maybe labs were backed up, or something.

On the way back to the bus stop, still trudging through rain, she passed a discount store with a toy section. Kenda bought two small stuffed dogs, cheap but softer and

more detailed than the plastic puppies Janelle had. At least you could tell what breed they were supposed to be: Scotties. Caity had always wanted a dog.

Kenda arrived home, drenched but happier than in weeks, and presented the stuffed animals to the girls, who squealed with joy. Caity said, "Mine is named Princess! What are you going to name yours?"

"Lulu," Janelle said.

"What a good name," Kenda said, and even Mrs. Delgado, whose eyes were red and puffy, smiled.

They climbed the stairs to the fourth floor, Caity chattering excitedly, and turned the corner. Against their door slumped a figure in a hooded rain poncho, pointing a gun at them.

Caity screamed. Kenda thrust Caity behind her and began walking backward toward the stairwell when the figure croaked, "Kenda . . . me . . . Hailey."

She dropped the gun and fainted.

Hailey's faint was brief. Kenda pushed back the rain hood and recoiled at the thick bandages swaddling Hailey's head. After Kenda got her into bed—she weighed so little—and had calmed Caity, Hailey croaked, "Water . . ." Kenda got her water, helped her drink, and sent Caity to the other room. She pulled a chair near the bed and waited. Her heart stuttered and wobbled.

"Hailey—can you talk?"

"A . . . little."

"What happened?"

"Op . . . ration. Implant . . . removed."

Hailey's implant had been removed? *Why?* Where? Was she going to die? Panic rose in Kenda, but Hailey had fallen abruptly asleep.

12

Dayson did not want Nate researching Anna Foriss. He asked an aide he trusted for both discretion and superior computer skills. Thomas Miedema, pleased to have been chosen, reported back to Dayson after only a few hours.

"The news reports are public, sir. I wrote up—by hand, as you requested—her bio. The big finding is that fifteen years ago Anna Caroline Foriss joined the fringe political-action group Bunker Hill Heritage. They're the ones that bombed the—"

"I remember," Dayson said. "But didn't that happen in—"

"Eleven years ago. Dr. Foriss resigned two years before that, which was when the group leadership changed and it turned from more-or-less normal politics to subversive activities. The FBI has a file on every member of the group and hers—"

"How did you discover that?"

The aide looked at a point somewhere above Dayson's head. "Not by any illegal means. I have a friend, sir, who can speed up Expanded Freedom of Information Act requests."

A useful friend to have. Twenty years ago, backlash to the Unrest had resulted in the EFIA, which had led to such a huge volume of unwieldy investigations, lawsuits, and reprisals by everybody against everybody else that the machinery of government had almost collapsed. That in turn had helped the national pivot toward an authoritarian regime. Abuses during the authoritarian years resulted in another backlash and current state of quasi-Libertarianism. Now the EFIA, although still law, coped with its avalanche of requests by delaying most of them for months or even years.

"Shall I continue, sir?"

"Yes, please."

“Ms. Foriss’s FBI folder has been classed as Inactive ever since she left Bunker Hill Heritage, but a letter affirming her former membership was sent to Yale when she applied for graduate work. The—”

“How did you find that out? Never mind, I don’t want to know.”

“Yes, sir. The university admitted her anyway, since she earned her Bachelor’s at Brown *magna cum laude*. She has no arrest record, has never married, lives alone, and has family in Wisconsin that consists of—”

“I don’t need to know about her family unless anyone is in prison for anything.”

“No, sir.”

“Thank you. I know I can rely on your complete discretion about this. You did a great job and I appreciate it.”

“Of course.” They smiled at each other; Dayson did not have to explain that at some future time “appreciation” would translate into some advantage to this intelligent, ambitious, terrifying young man.

Bunker Hill Heritage. Sensational and completely false media reports had linked the group to the young woman who’d assassinated Cabot and then died in a hail of State Trooper bullets. Dayson knew better, and now so did Hailey and Claire.

But he understood why Anna Foriss had warned him away from her. He could see the headlines now: “GUBERNATORIAL CANDIDATE DATING WOMAN LINKED TO BROTHER CABOT DAYSON’S MURDER!!” In 24-point type. Whole swaths of the public, possibly including the current governor whom Dayson would face in next year’s election, wouldn’t care that Anna Foriss was not and never had been a terrorist.

Dayson got up from his desk, looked out the window without noticing anything, circled the office twice, and sat down again. It had been four years since his divorce, and although he’d dated a few women, Anna Foriss was the first one for whom he’d felt such a strong attraction. Coupled with her intelligence (Dayson had not graduated *magna cum laude*, nor anything close), with the trust shown her by the mother of Anna’s little research subject in Denker City, and the decency that had led Anna to warn Dayson away, she was—

His phone signaled a priority call from Sam Malter, such a rare event that Dayson answered immediately.

“Sam? What’s wrong?”

“Quite a bit. First, I’m Q-ing you a secret law-enforcement video you need to view right now. Second—”

“Why would you have a secret law-enforcement video?”

“Because I do. Don’t question me, Bob. I consult and I have friends.”

Friends again. Dayson didn’t have those kinds of friends. He had Nate, who did have those kinds of friends.

“Second, I’m also Q-ing you an open letter about to be released by a new committee of scientists. You must read it. Geomagnetic fields are shifting around not only the Missouri UC, which I already told you about, but now the Virginia one, too.”

“How—”

“Read the letter. Third, I want to tell you that I’m going to have my implant removed.”

“Sam! You can’t!”

“I can and I will. Read the letter. I’ll call you after I recover from my surgery. Don’t contact me until then because I’m not going to argue with you about this. Till later, Robert the Nerdy Wasp.”

Sam cut the connection.

Dayson accessed QUESNU and found Sam’s video. He ran it, and it was white noise. He called back his young tech aide. “Sir?”

“Thomas, a contact of mine, Dr. Samuel Malter at RPI, just sent me a video on Q and it’s coming up just white noise. If I forward it to you, can you find out why?”

"That depends. If it's just a faulty recording or transmission, can't it just be resent?"

"No. Maybe. Not now, and I need to see it immediately. What if it's not just a faulty recording or transmission?"

"If the recording is on a public channel, I can trace its origins."

"It's not. It's secret." And what exactly had Sam meant by that? Dayson wished he'd asked. "It's law enforcement but not, I don't think, from a body cam or anything like that."

The aide looked directly at Dayson. "Senator, hacking Q is both illegal and theoretically impossible. It's not like the Internet."

Dayson looked directly back. "I know. 'Theoretically?'"

The aide didn't answer, which told Dayson the answer.

"Can you do it? Without being detected?"

Another long pause. Then, "Theoretically. I don't know. I've never tried."

Maybe true, maybe not. In Dayson's experience, young techies tried everything. He said, "It's vitally important. But I won't ask you to do anything that you—"

"I can try. But only if I have your word that if there's trouble, you'll take full responsibility. And that you'll remember I did this for you, sir. I trust you, but . . . well, I'd like your personal word."

The mixture of loyalty, naïvete, and opportunism staggered Dayson. He thought, not for the first time, that he himself was a much simpler person than he needed to be.

"You have my personal word. I'll forward you the video. I'm trusting you, too—not a word to anyone."

"Of course."

Alone again in his office, Dayson closed his eyes briefly. Nate would arrive in ten minutes to go over a long list of pressing items. Sam was on his way to have his implant removed. Thank God he had persuaded Hailey to take time before reaching a decision on hers. He opened the QUESNU document Sam had sent. This one opened easily.

The report was a manifesto from the new Committee of Scientists to Protect Us from Upload Centers. An unfortunate name, Dayson thought, irrelevantly—the acronym would be C-SPUUC. Somebody had a tin ear.

WE THE UNDERSIGNED, scientists representing many different fields including neurology, geology, physics, and cosmology, are united in warning the United States of a serious danger to our future. The country's six Upload Centers are negatively impacting local geomagnetic fields. In combination with QUESNU and possible solar activity, there may be severe damage to upload cities, to implanted brains close to the cities, and to the general power grid.

This conclusion has not been reached lightly. It is based on the coordination of diverse, observable, and measurable phenomena.

ONE: Local geomagnetic anomalies are increasing within roughly forty-mile radii of all six UCs. Computer models indicate the formation of feedback loops involving the geomagnetic field generated by the Earth and the intense local fields generated by the rapidly pulsing magnetic "shields" protecting the fragile quantum computers of the upload centers. These feedback loops, affecting such metrics as cycling and intensity, are as yet poorly understood, but the effect seems to be a destabilizing of the Earth's geomagnetic field through and around all six centers. See Appendix A.

TWO: Measured effects on QUESNU include delays in accessing, "blackouts" of .03 to .8 seconds, and (more rarely) "stuttering" of data in data-subvocalize mode. These effects have been observed, although with significant variations and no predictability, and documented within 30-mile radii of the experiment zones. See Appendix B.

THREE: Measured effects on human subjects within 20-mile radii of all six upload centers, the so-called "QUESNU blackout areas," include changing patterns of neural

activity from electrical currents induced in the brain, the expected result of a rapidly pulsing magnetic field. However, subjects with prolonged exposure, when tested over time, show increasing negative changes in distractibility, sensory gating, working memory capacity, and functional neural connectivity. Four specific brain regions show diminished volume. Subjects also show increases in all cellular and systemic measures of stress. All negative effects increase with continued exposure, and none appear reversible when subjects are removed from QUESNU blackout areas. See Appendix C.

FOUR: Subjects in two small studies also report increases in visual perception of “ghosts,” the trace images “leaked” from UCs through the quantum flux. The significance of this is unknown. See Appendix D.

FIVE: There has not been significant solar activity (flares, coronal mass ejections) for many years. Best data show that the previous, regularly recurring eleven-year cycle of solar inactivity may have ended. See Appendix E. However, solar activity is not predictable. In the past, large solar flares have disrupted radio communications, and power-grid overloads have caused fires or explosions in transmission stations. Given the novel elements of the current geomagnetic situation, there could be an increase of these, or possibly consequences even far more disastrous, but as yet unknown.

Given these measurable observations, we the undersigned urge Congress, the president, and the governors of the six states containing upload centers to de-activate them as soon as possible.

The petition was signed by a long list of scientists, some with names so prominent that Dayson recognized them immediately. Also among the signatories was Dr. Samuel Malter.

He sat stunned. *Deactivate the upload centers?* The petition was urging the second death of everyone uploaded, all those virtual brains already dead but existing in some sort of unknowable quantum-computer simulation.

Unthinkable.

Consequences even far more disastrous but as yet unknown. Also unthinkable.

Nate bustled into the office. “Senator, there are a number of routine campaign issues that I think we should settle before we tackle the Senate concerns or that research funding you want to push. Ready to get to work?”

13

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14

Kenda had no way to get Hailey Dayson to the free clinic. She sat by Hailey’s bed, Caity on her lap and too frightened to even pay attention to ghosts—at least that was good. When Hailey woke a few hours later, she was more coherent.

“Kenda.”

“I’m right here.”

“Thank you.” She felt her bandages and winced.

“Are you in pain?”

"No. Yes. Not bad. Who is this?"

Caity said, "I'm Caity. Are you going to die?"

Hailey smiled. "No. I'm going to be fine."

Caity climbed off Kenda's lap and stood by the bed. "Kenda said you had your implant taken out of your head. I don't want mine out!"

Hailey looked at Kenda, who said, "Her, but not me."

"How old are you, Caity?"

"Five and a half. How old are you?"

"Nineteen."

Caity moved closer. "I don't go to school. They were too mean there."

"Then you shouldn't go. Don't go where people are mean."

Caity nodded solemnly. A ghost drifted by, and the little girl suddenly shouted at it, "Go away! Don't bother me! I'm talking to Hailey!"

Hailey looked at Kenda, who nodded, although she didn't know what she was agreeing to. A sudden rap on the door made Hailey startle and then wince.

"Don't tell anyone I'm here!"

Don't tell who? Cautiously Kenda unlocked the door to Janelle and her mother. The little girl said, "Can Caity play?"

"Sure," Kenda said. "Can they play at your place, Mrs. Delgado? I could really use a nap."

"Yes, sure." Caity grabbed her stuffed dog. Kenda locked the door behind them.

"Hailey, what did you do? Why? Do you need a doctor? Why did you—"

"Why did I come here? Because I had to get out of the clinic to someplace I couldn't be traced. I'd made arrangements to go to a quiet town to recover, but the operation—something went wrong, my heart stopped, and they had to—don't look like that, Kenda. I'm fine now. I was just in worse shape than I expected to be and couldn't get to the quiet town, which is way the hell upstate. This was the only place I could think of to go."

So many feelings warred in Kenda that she tried to just ignore them all. "But why did you leave the clinic if you weren't recovered? They would know how to take care of you, and I don't know what to do!"

"You're doing it. Just let me rest. It won't be for long, because I have to—"

"You can stay as long as you need to. But who would trace you? And why? Hailey, did you . . . did you steal the money in your jacket? I'm sorry but I had to go through your things . . . you have a gun!"

"Of course I didn't steal anything." She smiled, and Kenda's heart turned over. "The gun is mine, legally purchased and licensed. The credits are mine. And I understand why you went through my things. You have Caity to think of. She's adorable."

Hailey might not think so when Caity started really wailing about her ghost. "Who don't you want to find you?"

"Nate Canfield."

Kenda blinked. Mr. Canfield? "Why not? And why was he looking for you?"

"He wasn't, but he will be now. Help me sit up."

"Should you do that? With your head?"

"I'm not going to sit on my head. Just help me . . . okay, that wasn't too bad. Maybe tomorrow I can get to the bank. Kenda, I know you don't understand. Nate Canfield knows I wanted my implant removed. I'm sure he knows, because he always knows everything. I wouldn't put it past him to have the senator's office bugged. I told the senator I would take time to make a decision about my implant, but I didn't say how much time. He and Claire were too mad at each other to register that, but you can bet that Nate did. Clinics report to the state health agency every time an implant is removed, and Nate will get that information. He doesn't want any negative attention

on the senator's family during the campaign. Having his daughter's implant removed will play in the media that Senator Dayson says the newest cheaper, imported implants are dangerous, but not the older, more expensive ones, but what is he keeping from us that led to his daughter's implant being removed, he's a hypocrite, it's corruption, blah blah blah."

"But your implant is out now. It can't go back in. So why does Mr. Canfield . . . wait. Your father thinks the newest implants are dangerous? How new? Is that why you asked Caity how old she is? She has one of those cheaper ones because that's what my mother could afford!"

"You're sharp, Kenda. Yes, that's why I asked."

"Why are they dangerous? What's going to happen to Caity?"

"Maybe nothing. The senator's evidence is statistical and not direct. He—" Hailey suddenly groaned. A second later she'd recovered herself, but pain etched itself on her face. "In my pack . . . a patch . . ."

Kenda found the patch and stuck it on Hailey's neck. "Don't talk any more now."

"Can't . . ." She closed her eyes. A few minutes later she was asleep again.

The rest of Hailey's story emerged after she woke. She had saved up money for the operation, but she needed more money now, to go to a quiet town to recover completely. Her next-quarter disbursement from the family trust would be deposited today. She had to access it right away, before Nate was notified by the bank, which she was sure he would be even though it was illegal. Nate would tell the senator, who would revoke Hailey's free access to her trust fund in order to force her to go home.

"I was planning to go to the bank before now, until my operation went wrong. The doctors told me to stay but I checked myself out. Only, after I left the clinic, I realized I was too weak to go to the bank or make it by train all the way to the quiet town. I had to find a cab willing to go into Denker City. They won't all go, and they won't send self-drives because they get stolen. So I came here because it was the only place I could think of where I can't be traced."

"How did you get my address?"

"I saw it written out on Nate's desk. You gave it to him, right?"

"Yes, but—"

"You don't know who you're dealing with, Kenda. It could be I've already lost my chance to withdraw my quarterly disbursement, but I'm hoping there's a lag before the bank tells Nate anything. I won't know until I get there. Tomorrow for sure."

Kenda doubted that Hailey was going anywhere tomorrow.

"You could have gone home—to your father or mother, I mean—after you recovered in the hospital. Explained it all to them. The implant can't be put back in."

"You don't understand. You don't know them. He wouldn't have stood up for me, he never does. And she's so spiteful whenever you cross her that . . . she's . . . we . . ."

Tears filled Hailey's eyes. Without thought, Kenda put her arms around her. Hailey was not as strong, as impenetrable, as Kenda had thought. Hailey had weak places in her, and, unlike Leila, she didn't deny her weaknesses. She *shared* them.

Kenda said, "You don't have to cope with your parents right now. I'm here."

Hailey didn't answer, but her poor bandaged head stayed resting against Hailey's chest.

The "statistical evidence" that Hailey gave her about the imported implants like Caity's was alarming: the more you contacted Q, the greater the chance of brain cancer. But there was nothing Kenda could do about it, and anyway in Denker City nobody could contact Q.

Kenda lay awake all that night on the nest of blankets she'd made on the floor for herself and Caity beside Hailey's bed. *Cancer*. Their mother had died of it, but before

that she'd gone without so much in order to give Caity, the daughter of an irresponsible bum, an advantage that Eileen had not been able to afford for Kenda, the daughter of a rich man.

It was all so fucking unfair.

"Make him stop!" Caity wailed as soon as amber morning light breached the window. "Make him stop talking to me!"

"Sssshhh! You'll wake Hailey!"

"I'm awake," Hailey said. "Patch . . . no, wait, not yet. Caity, make who go away?"

Caity pointed. "The ghost! Make him stop talking!"

Hailey said to Kenda, "She can hear him? I thought that was impossible?"

"It is impossible. She sees ghosts clearer than most people, I think—the government guy said some people do. But nobody can hear them. Caity has a good imagination. She says her stuffed dog talks to her, too."

"Oh. I want . . . oh my God, it hurts."

"I'll get another patch. Caity, please stop."

"I want to go downstairs to Janelle's! The ghost isn't there!"

"Not today, Caitlins." Mrs. Delgado had her own problems; when Kenda picked up Caity yesterday, Mrs. Delgado asked her if she'd seen her son. Shawn hadn't come home again. Kenda knew, but didn't say, which gangs held territory near their building. She sometimes heard the gunfire.

Hailey said, "Come here, Caity, and I'll tell you a story about a really brave little dog."

She did. But it was Hailey, Kenda thought, who was brave. She was in pain, but she told Caity the dog story without flinching, with animation, until it was clear she couldn't go on.

"I'll finish it after I sleep," Hailey said.

"Caity, we'll go to the food pantry now, okay?" Kenda had only a few credits left, but it would get Caity out of the apartment. She brought Hailey her patch and took Caity to buy rice and beans, the foods that would stretch the farthest now that she had Hailey to feed as well. Hailey wasn't eating much yet, but she would. Kenda wanted her to eat. She didn't want Hailey to leave.

Which Hailey would do, as soon as she was strong enough.

Hopeless.

Caity said, "Can I have a cookie? Just a very little one?"

"Yes." She was tired of denying Caity.

She was tired of denying herself.

15

Thomas Miedema, the young tech that Dayson had trusted to somehow find the video Sam had sent, had failed. "I'm sorry, sir, I tried everything I know, even those things that are borderline and . . . well. I couldn't find it. I'm really sorry."

The kid looked so wretched that Dayson, who wanted to feel his own disappointment, shoved it aside to smile reassuringly at Thomas. "I'm sure you did try. Don't worry about it. Some things don't . . . aren't . . ." Aren't what? Possible? Meant to be? The result of bad karma? He let the ill-born sentence die and settled for, "It's okay."

Thomas nodded, not looking reassured. "There's something else, sir. About my search. Q is acting wonky. Only once in a while, but still . . ."

"Wonky how?"

"It varies. Sometimes there's a few-seconds delay in its response. In verbal mode, it sometimes stutters, although it does produce whatever's asked for. The intervals

of malfunction don't follow any pattern—I ran all the sequence algorithms on the data. It can't . . . it can't do that! It's not the Internet! It's QUESNU, woven into the fabric of spacetime!"

Now Dayson saw that it wasn't the failure to find Sam's video that had shaken Thomas, but the faltering—however slightly—of QUESNU, the foundation of his generation's entire world.

Thomas blurted, "I don't know anything that can cause that!"

But Sam does. Dayson needed to talk to Sam, immediately. No, he couldn't—Sam was in the hospital having his implant removed. Well, tomorrow then, if Sam was up to it. He dismissed Thomas with more reassurances, which both knew were fake.

The C-SPUUC manifesto had mentioned Q malfunctions twenty-five miles out from a UC Albany was farther away than that.

QUESNU on. Messages.

A string of messages, all delivered smoothly. Of course, this was the easy layer of QUESNU—did Q have layers? Dayson, not a techie, didn't know the jargon. But Thomas would have dug much deeper into whatever the levels of QUESNU were called, however they were structured.

QUESNU off.

His phone rang. That meant someone not implanted or someone who knew that Dayson did not keep QUESNU on continuously. Not Nate, who was in his office next door. The phone said UNKNOWN NUMBER, but the location was Rensselaer Polytechnic.

"Hello, Robert Dayson speaking."

"Senator, this is Serena Lockhart, one of Dr. Malter's lab assistants." A young voice, nervous and thick with . . . tears? "I found your number in Dr. Malter's office and I thought you should know . . . I'm sorry to tell you that Dr. Malter died a few hours ago."

The words made no sense. "What?"

"He was having an operation to have his implant removed and he died on the table. He . . ." The young voice stopped.

Dayson managed to get out only, "Thank you for letting me know," before he clicked off and sat immobile.

Sam. Dead. Of an implant removal.

"Hey, Sammy Test Tubes."

"Hey, Robert the Nerdy Wasp."

From somewhere unsuspected he summoned enough composure to tell his secretaries—human, bot, and Q—to hold all calls and reschedule all meetings for the remainder of the day. Then he put his head on his desk and sobbed.

When he finally pulled himself together, it was after 6:00 and everyone had gone home. Except, probably, Nate. Sometimes Dayson doubted that Nate even had a home.

Nate knocked on the office door and came in without waiting for an invitation.

"Senator, I'm sorry to interrupt you, but this is important."

"To you everything is important," Dayson said, and immediately regretted his harsh tone. Grief, he'd read once, temporarily turned everybody into somebody else. If that were so, Dayson didn't want to be sarcastic to people who were loyal and devoted and competent and all the other qualities Nate undoubtedly possessed.

"I'm sorry, Nate. A friend died today."

"Dr. Samuel Malter. It's on the news. I'm sorry. But, Senator, this can't wait."

Dayson stopped himself from saying *To you, nothing can wait*. Christ, why couldn't he be like Cabot, who always knew exactly what to say?

A sudden memory flooded him.

Cabot and Bobby behind the house at Newport, on the lawn that stretches from the eighteen-room "cottage" to a clump of trees. Cabot, seventeen, holds his father's

nine-millimeter Glock. Bobby, eight, has Cabot's old BB gun. Below the trees, which are full of crows, stands a fox. It looks at them and they look back. Cabot raises the Glock, fires, and misses. The fox disappears.

Mother runs out of the house, seizes Cabot by the arm. "What are you doing?" Their father has been dead only two days and she wears all black. "Have you gone mad?"

Cabot begins to talk. He puts his arm around their mother and he talks. His blue eyes darken, sweet as blueberries, and he goes on talking. Bobby watches his mother's anger melt; he feels it melt, vivid as a snowflake dissolving on his tongue.

When Cabot is done talking, he leads his mother back to the house, his arm protectively around her waist. Bobby hears her say, "Cabot, honestly—you could charm the birds out of the trees!" Neither of them looks back at Bobby, still holding the BB gun. He knows that she, at least, has completely forgotten he is there. Again.

Her rear view is slender, lovely in her black silk dress. Cabot towers over her. Bobby watches them until they go inside.

You could charm the birds out of the trees.

He raises the gun and fires: pop pop pop. The crows caw loudly and take wing.

"There," Bobby says aloud, "they're out."

"Senator?" Nate said.

"I'm sorry. Are you sure this can't wait?"

"It's about Hailey."

Memories vanished, Sam Malter vanished, everything vanished but his daughter.

Nate said, "I've been monitoring hospitals and clinics that perform implant removals. They're required to report to both the state health agency and the CDC. Patients aren't identified by name, but age, race, and gender are all data collected, along with a few other variables. I'm almost certain that Hailey entered a clinic and had her implant removed. She—"

"Is she alive?" *No, no, no . . . not Sam and Hailey both—*

"Yes. There were complications from the operation, but she survived it and checked herself out against medical advice. I haven't been able to locate her since. But at least I can tell you that the clinic is reputable, with a good record of successful removals."

"What kind of complications?"

"I couldn't find that out. You won't be able to, either, Senator. Hailey is over eighteen, and there are medical privacy laws. The best thing is for you to cut off all access to her trust fund for the next quarter. She'll need to contact you for money, and the bank will notify me if—"

"Why would they notify you at all about my daughter's financial transactions?"

Nate ignored this. "—if she tries. Shall I cut off—"

"No. What's most important is to find her, *now*. She'll need money to go to a quiet town to recover, anywhere else could leave an electronic trail even without her implant. A pattern of cash receipts. Something. Christ, if she went to friends . . . no, she isn't going to do that. She knows I'll ask everyone. She's in a quiet town somewhere. Christ, why didn't she just come to me?"

Nate looked away, which told Robert how much pain must show on his own face. He grabbed control of himself.

"Search all the quiet towns in a hundred-mile radius. There can't be that many."

"No, but if she paid cash for a cab, such a search can't be done electronically. Plus, quiet towns are large and registration is private. The only ways are either to send teams of people inside as registrants and have them ask questions or to get a court order or police warrant."

"Get one or the other. Don't tell me you can't, I know better. I don't care what it costs."

"Yes, sir. But it will take time."

"I don't care how much fucking time it takes! Find her!" And then, a beat later, "I'm

sorry again, Nate. I'm just . . ." He intended to say "just distraught," a word far too mild. What came out instead was, ". . . I'm just not Cabot."

Nate shocked him by saying grimly, "Cabot messed up sometimes, too. By being too fucking charming," a statement so uncharacteristic that all Dayson could do was wait for whatever came next. Nothing did.

"Just find her, Nate. Find my daughter."

16

Com★ing ap♦◆t

No o★e he)✱s. M fal*, my fa★It, my m)st grievus fult

17

Caity was downstairs playing with Janelle when Hailey heaved herself out of bed. Kenda rushed to help, but Hailey pushed her away, wobbling slightly but righting herself. "No, I need to walk. I have to leave today. To go first to the bank and then the quiet town."

"Why? You can stay here."

Hailey sat back down on the edge of the bed, pushed herself up again, took a few steps. "I can't, Kenda. I need the quiet town's medical facilities. I want the post-op assessment of my cognitive functions done there, not in some hospital accessible to journalists. And conditions here aren't exactly sterile. If I get some sort of infection at the surgical site, I need a real hospital."

"I'm going with you to the bank. And the quiet town. I can ask Mrs. Delgado to watch Caity."

"No. There are security cams and dronecams everywhere outside Denker City. I'm not drawing you into this. And even though the senator is a weak puppet, I'm not putting him or you through *that* media shitstorm." She took a few steps without wobbling. A ghost drifted through her legs.

"But Hailey—"

"I'm going, Kenda. And there's something I need to discuss with you first."

Kenda's voice rose. "Well, there's something I want to discuss with you, too. Where do you get off thinking you can make decisions for me? *You* don't want this or that for me. *You* say I can't get you safely to the bank. I can make my own decisions, Hailey Dayson. I have ever since my mother died, and I've kept Caity and me alive and safe. Don't try to tell me what to do!"

Hailey looked first astonished, then apologetic. "You're right. I'm sorry. I assumed that . . . I'm sorry, Kenda. You're very unusual, you know. What is it you want to discuss with me? Is it okay if I walk while we're talking?"

Kenda didn't know what Hailey had been assuming, but she was still angry and her tone was harsher than she intended. "Walk if you want. What I want to know is why someone like you, who's lucky enough to have an implant with all that access to QUESNU, would remove it? My mother spent all her savings so Caity could have the advantages of the implanted, and you just throw it all away!"

Hailey had walked into the kitchen. She sat on one of the rickety chairs, took a few deep breaths, and rose again. "I know that's how it looks to you. But there's a lot of data on this. People who keep their implants on all the time, and 40 percent of people do, make more mistakes in, oh, anything they do."

"Everybody makes mistakes."

"They make a lot more when doing several things at once. If QUESNU is left on all the time, part of your brain is paying attention to that. Actually, more than one part. You get data overload, you're more easily distracted, more irritable and impatient. It's harder to focus and concentrate. You're hopped up on adrenaline and super-stressed. I know you've felt that in your life."

"I just felt it when you said you were leaving."

Hailey paused in her walking, looked at Kenda, held her gaze. It was Hailey who looked away first.

The moment stretched itself out. A ghost passed through the kitchen.

Finally Hailey said, "So that's why I risked my life to have my implant removed. So I can *have* my life." She walked back to the bedroom and sat on the edge of the bed. Kenda followed. Hailey still wore the clothes she'd arrived in, and now she bent over and pulled on her shoes. From her pack she pulled a big floppy hat and put it on over the bandages that Kenda, following Hailey's instructions, had changed.

Hailey's voice changed from scientific lecturer to . . . something else. Softer. "Now there's something I want to discuss. What happened when you saw Nate Canfield that day I first met you? You told him you knew that your mother's money came each month from the senator, right? And that you are Cabot's daughter. What did Nate do?"

"He arranged for me to have a DNA test in two weeks and to go back four weeks after that when the results came in so that we could arrange something."

Hailey's eyes grew so wide that they nearly popped. "Oh, the fucking bastard! The lying, fucking bastard!"

"What? He wanted to be sure I really am—"

"Kenda, he knows that already! DNA tests don't take weeks to arrange, not for Nate Canfield, and neither do results. Plus, Nate would have had you tested as soon as your mother went to him, or to Cabot, possibly even *in utero*. He was delaying, hoping you would go away. Or giving himself time to dig up any dirt on you or your mother that he could use to keep you quiet. But believe me: Nate Canfield already knows that you're Cabot Dayson's daughter. He's always known it."

Kenda's knees gave way. She sat on the bed next to Hailey, who took her hand.

Kenda said, "But he stopped the money from coming."

"The recipient was dead and she had sworn not to tell anyone about Cabot. No need to continue payments."

"But didn't he know I'd need it? I have Caity and—"

"You and Caity are not people to Nate Canfield. You're an annoying, possibly embarrassing mosquito he needs to swat. No, don't look like that. He wouldn't try anything violent—Nate isn't stupid."

"Does . . . do you think your father knows about me?"

Hailey frowned. "I honestly couldn't say. Listen, Kenda, I want you to promise you won't try to see Nate until I come back here from the quiet town."

It was a moment before Kenda could speak. "You're coming back?"

"Of course I am."

Her hand still rested on Kenda's. Kenda's other hand reached across her body and stroked the top of Hailey's wrist. Kenda couldn't look up, *could not*. But everything in her vibrated.

Hailey whispered, "I thought so, but I wasn't sure."

They sat that way until a ghost materialized between them, drifted off, vanished.

Hailey said, her voice thick, "That one did look sad. Or at least slouchy. Kenda, take this paper, it's my address in Peaceful, the quiet town. You can't send me email or even phone, but paper letters are okay. I don't know how long I'll be there because it depends on medical tests, but I will come back." She took away her hand, picked

up her pack, and walked, only slightly unsteady, to the door, hat brim pulled low. Kenda followed.

They said nothing more. But at the door, Hailey turned and kissed Kenda briefly on the lips. No more than a quick graze, nothing like the sweaty sex with Leila, but after Hailey had gone, Kenda could still feel the kiss, a sweet promise that lingered until all the rest of what Hailey had told her rushed back, and all she could feel was rage.

“Mrs. Delgado, can I ask you to keep Caity for the rest of the day? I wouldn’t ask but it’s really important.”

Both little girls had rushed to the door when Mrs. Delgado opened it, and they erupted into joy: “Yay! I’m staying here!” “You’re staying here!”

“I can’t today,” Mrs. Delgado said. “Shawn . . . he . . . I’m sorry. Will tomorrow morning be okay?”

“Yes, thank you.” It would have to be okay. Kenda would have to live with rage one more day.

Mr. Canfield had *known*. Had known she was Cabot Dayson’s daughter and had fucked around with her—a mosquito to swat away. Kenda had avoided promising Hailey that she wouldn’t go see Canfield. What if Hailey were weeks, months in her quiet town? Had Hailey, or Canfield, or anybody considered what Kenda would do for money once she’d used up what Hailey had given her? The government pantry would feed them, barely, but Caity was outgrowing her clothes, and winter was coming. . . .

No. It wasn’t about money. It was about Nate Canfield denying Kenda: denying her parentage, denying that she even existed. He was trying to erase her.

She dragged Caity, whining and protesting, upstairs. The moment they entered the apartment, Caity burst into tears. “He’s here! The ghost! Make him stop!”

Kenda didn’t see anything. Something in her snapped. “There’s not even a ghost here right now! Stop it, Caity, just stop it!”

Caity’s mouth fell open. She gazed at Kenda, then said, “I want Hailey! Where’s Hailey!”

“Hailey left. And you have to stop crying. You have to. Please.”

Caity wailed louder.

18

Hailey had not been found.

Nate had obtained a court order to search quiet towns around Albany. Hailey had registered at one, but hadn’t arrived or sent word that she wasn’t coming. She had left no electronic or paper trail anywhere. No one at Barnard had seen her. Claire blamed Dayson, loudly and often. The press had not yet caught onto the story, or Nate had suppressed it—Dayson didn’t know which and didn’t ask. He instructed the bank to notify him the moment Hailey accessed funds from her trust. So far, she hadn’t.

Dayson tried to carry out his usual list of urgent-do-now! tasks, but couldn’t concentrate. Was Hailey dead? In hiding? Where? *Why?* He hadn’t wanted her to have her implant removed, but once it had been, why hadn’t she come home to recuperate? Was she that afraid of him?

No. Hailey wasn’t afraid of anything. She just didn’t want to be with either of her parents.

He kept QUESNU on all the time, which gave him a headache. (Why? Just because he wasn’t used to it?) Without her implant, Hailey couldn’t contact him through Q, but maybe she would ask someone else to do so.

She didn’t.

"Senator," Nate said, "if you don't mind me saying so, you look very tired. You should get some rest at home."

The problem with this statement, as with most of Nate's personal pronouncements, was that there was no way to tell if it came from genuine affection or from political expediency: eye bags and sagging jowls made for a poor public image in someone about to announce a run for governor. Or maybe Nate was prompted by both affection and shrewdness. But after thirty-five years in politics, could even Nate himself tell what motivated him?

"Thanks. I will rest," Dayson said, and didn't.

But he was unable to concentrate on the issues that Nate brought to him. Next to Hailey's disappearance, none of them seemed to matter. After a few hours of this, Nate gave way to what passed in him for anger. "Senator, sometimes I wonder if you even want to become governor. You're not focusing on your duties."

"I'm sorry," Dayson said, and sounded indecisive even to himself.

One duty was inescapable: Thursday morning was Sam Malter's funeral.

The cemetery lay just outside Denker City, perhaps because the dead couldn't be disturbed by either high crime or cranky QUESNU. A full twenty minutes before his car approached for the brief graveside ceremony that Sam's will specified, Dayson checked his messages—maybe this time Hailey would have found someone to tell him where she was!—and was startled by QUESNU'S rapid deterioration.

C-c-call Senator Burnsssss.

Bill 65—long pause—7—pause—4 coming—garble garble—vote in t-t-twenty minutes.

*Bob, d-d-damn it, can't you *ever*—* The rest of Claire's message lost to nonsense syllables.

The non-denominational ceremony was thronged with friends, family, scientists, press. Dayson stared stonily ahead; he would not make a political show out of his feelings. Just before the rituals ended, Anna Foriss materialized out of the crowd and deftly pulled him away from the press and into his limo.

"Senator," she said gently, "tell the driver where to go, before you . . . before that pack of jackals mob the car."

He said, "Denker City. Anna, give it your research facility address."

"You don't have to take me home."

"I want to." Suddenly there was nothing he wanted more.

She said, "Well . . . there is something I want to show you. A video that Sam sent me just before . . ." Her voice faltered, recovered itself. ". . . just before he went into the hospital."

"A video? What video? He tried to send me a recording of some sort via QUESNU, but it was wiped and my tech couldn't locate it anywhere. What's on it?"

"I'd rather show you. Senator . . . here." She handed him a tissue.

Such a simple act of kindness: a tissue, accompanied by tactfully gazing out the window. Simple, but it nearly undid him.

She took his hand. "It's okay. We all loved him."

"It's not just Sam. It's . . . my daughter also had her implant removed and now no one can find her; I don't know if she's alive or dead. I can't . . . I tried . . . I'm not Cabot."

Had he really said that aloud? Christ, he was losing it. Dayson pulled his hand out of hers, straightened, and said stiffly, "I'm sorry. That was inexcusable. Please forgive me."

"Nothing to forgive. You're—"

"I'm fine."

She said bluntly, "You're not. You shouldn't be. What happened with your daughter? You can tell me."

He did. It all poured out, flowing from him to her serious, kind, non-judgmental

face. Somehow she was again holding his hand. When he finished, she didn't offer any platitudes about staying strong, any fake empathy about knowing how he felt, anything except a quiet, "I hope she's found. And no, don't think that you said anything you shouldn't have. Everybody needs to unburden themselves once in a while, and somehow I doubt you have a therapist. This is the research facility."

He recognized it from his previous visit: the enormous security around the repurposed hotel, even the flicker vertigo at being so near a UC: slight nausea, rapid eye blinking, muscle rigidity.

Anna's dog, instead of bounding joyfully toward them, approached warily, stopped halfway down the hall, sat on its haunches and howled.

"Was it something I said?" Dayson asked—a feeble enough joke, but she smiled.

"No. It's Zeus. The ghosts are intensifying, and Zeus is reacting."

Dayson scanned the hallway. He saw no more ghosts than last time, just a few wisps drifting by.

"You don't see them as more intense," Anna said. "Neither do I. But I have research subjects who do including a new subject, a child, who claims to hear them whispering. His auditory brain scans are inconclusive. But I'm going to have to send Zeus away soon. This is too hard on the poor dog. You've seen the newest data on the geophysical changes at all six UC centers around the country?"

"Yes. Although I don't claim to understand it."

"Neither does anyone else, not really. But the bottom line is that the UC shields are magnetic fields, the Earth is a magnetic field, fields affect each other, and the effects are deepening. Senator, are you all right?"

She was very observant. Well, she was a scientist. He said, "The flicker vertigo isn't going away like it did the last time I was here."

"It will, just not as quickly. We've all noticed that. The video is in my office."

She led the way. They passed harried people, open labs. Dayson said, "I have two questions I'd like to ask you."

"Shoot."

"I see the effects of whatever's deepening geomagnetically—" was that even a word? "—on Zeus, on QUESNU. But what about the people—or whatever they are, the uploads—inside the UCs? Are they experiencing effects, too?"

She stopped walking to face him. "Nobody's asked me that before. And nobody knows the answer. Remember, we don't even know if the uploads experience themselves as sims, or disembodied memories, or something we can't envision. Technological afterlife is just as closed to us mortals as the religious one has always been. But my guess is that since their whole geomagnetic environment is changing, then yes, they're affected. Some way or other."

Dayson tried to take this in. Could the sims/uploads/disembodied memories know what was happening to them? Was anything happening to them? Were they suffering? Could they suffer?

Anna said, "What was your second question?"

He was jerked back from the needs of uploads to his own. "Will you have dinner with me? Anna, I know about your past association with Bunker Hill Heritage—when you joined, when you left, and why. I don't care. It doesn't matter to me. You are the first person I've been able to really talk to in . . . in I don't know how long."

She hesitated, and he held his breath.

"Senator—Robert—you might not care about your future, but I do. I don't want to be the reason you lose your race for governor."

"I won't lose. I'm Cabot Dayson's brother," he said, and immediately knew it was the wrong thing to say. He'd meant it to come out as wryly jocular, or jocularly reassuring, or something. She wasn't taking it that way. For just a second, disappointment

flickered across her face. Then she said, no less friendly but slightly more distant, "I'd really like you to see this video."

He followed her into her office and stared at the wall monitor.

"This was shot in a pre-school in Troy, not too far from Sam's office at RPI. The school is private, but receives a small amount of government subsidy, and most of the children come from working class families who are making sacrifices to send their kids there. That's important. This is a class of four-year-olds during circle time."

Ten kids sat in a circle around a young woman reading a book aloud, something about a family of rabbits. All at once a masked person appeared just outside an open, barred window, unseen by the teacher, barely visible on the security camera. Nothing seemed to happen, but four of the ten children toppled over and began to convulse with seizures. The teacher screamed, jumped forward to help, and then seemed to have no idea what to do next. A guard rushed in from outside the room; the figure at the window had disappeared.

The children convulsed for perhaps forty-five seconds, then went still. The other six kids screamed, cried, clutched their teacher. Sirens sounded in the distance. The video ended.

"They aren't dead," Anna said, her voice thick. "All four kids are fine now. The seizures were electrical storms in their temporal lobes, similar to epilepsy. Sam was given the video by law enforcement, who has their cybersecurity division working on this. They needed Sam's scientific input. Obviously he wasn't supposed to send it to you, or me, but it impacts my research and your campaign."

"How?" Dayson said, completely bewildered. "What did I just see?"

"Here's what I know. None of the four children with induced seizures are epileptic. None had previous seizures of any kind. But all four have the new imported implants. What Sam thought was that the person at the window sent a program through QUESNU to those kids' implants. Then they sent a signal to trigger that program, something similar to what would happen if a susceptible person were subjected to the high intensity, short flashes of a strobe light, but much stronger in order to affect those not usually susceptible. Here's the kicker, Robert. The teacher is implanted and her QUESNU was on, but her implant is of course the older model. This ability to induce seizures only affects kids with the implants you're campaigning against. Sam thinks—thought—that this was a test."

"Christ. But what would the testers get out of it? Why would anyone want to temporarily render immobile a bunch of four-year-olds?"

"Because," Anna said, "it's too dangerous to have implants removed. And four-year-olds eventually grow up."

19

A *connect* on b ut I c@n't—
F@le corr⇒▶▶ptio—

20

As early in the morning as she dared, Kenda left Caity with Mrs. Delgado, who promised to take both little girls to story hour at the library. The bus to Albany didn't come, and Kenda stood in a hard rain to wait for the next one, which was late.

In Albany she had trouble finding a cab, which she paid for from the precious store of money Hailey had pressed on her. It was nearly 2:00 P.M. when she finally reached Senator Dayson's office, only to be told that he was gone for the day to a funeral.

"Then I want to see Mr. Canfield."

"He's not available."

"Then make him available. Tell him it's Kenda O'Malley and if he doesn't see me right now, I'm going to the press." She had no idea how to do that. Fury coursed through her like electricity.

The receptionist, looking startled, must have used Q or pressed a button or something, because an armed guard appeared just as the door to Nate Canfield's office opened. He said, "It's all right, Jorge."

He and Kenda regarded each other silently, she dripping water on the carpet, he with hands in the pockets of his expensive suit. Finally Canfield said, "Paul, please hold all calls. Come in, Ms. O'Malley."

Kenda ignored the offered chair. "You lied to me. DNA tests don't take two weeks to arrange and four weeks to get results from. Also, you already knew that I'm Cabot Dayson's daughter. You knew that from when I was born."

His expression sharpened. "Why do you think that I—"

"You knew my little sister and I are stuck in Denker City and you let us stay there all this time, even after I told you we have no money and barely enough to eat and Caity is scared all the time of the ghosts and—"

"Spare me your list of my alleged sins," Canfield said. "Just tell me what you want."

"I want to see Senator Dayson. To tell him he's my uncle."

"What makes you think he doesn't already know?"

"What?"

"I told him about you, Kenda. And he was very clear—he wants nothing to do with Cabot's bastard. However, neither does he want you shooting off your mouth to anyone. So I'm authorized to offer you a sum of money large enough to keep you and your sister much better than your mother was able to do, provided you never contact the press, the senator, or any member of his family. Ever. Because if you do, I can guarantee that you will regret it profoundly."

Kenda blinked. Was he lying about Senator Dayson? And did he mean that one of them, Canfield or Dayson, would hurt her if she told anyone who she was? For a moment she was afraid, but then she remembered Hailey saying that Nate was too smart to attract attention with any violence.

If she tried to see the senator and he really did reject her, she would end up with nothing. There would be no point in trying to ruin his political chances—which she wouldn't do anyway, despite her threat to the secretary. That might be what turned Canfield to violence. And Senator Dayson was Hailey's father. Adoptive father.

She said, "How much money?"

"Half a million dollars."

A huge sum—wasn't it? She had no experience with that kind of money. But surely it was enough to get Caity out of Denker City, rent a decent apartment somewhere near a good school, get childcare so she could work a job. Could make a life.

She tried to think. "I want all the money right now. In a bank account that I go with you to set up so I can see that my name is the only name on the account. At a real bank. Now. Today."

He eyed her silently. Trying to decide? He didn't seem to know about Hailey, about Hailey and Kenda. If there was a Hailey and Kenda.

She said, "And after the bank, I'll sign a paper saying I'll never be the one to tell the senator anything. Or the press. But we go to the bank right now."

He took paper from his desk, wrote, and tucked the single sheet into his jacket. Kenda accompanied him to the bank, signed a stream of documents, and watched carefully while a startled bank officer made the arrangements to open an account and transfer half a million dollars from a "holding company"—she didn't know what that was but the bank woman acted like it was legal—to a new account for Kenda Eileen O'Malley. When the woman discovered Kenda was not implanted and did not trust the Internet, she gave Kenda a plastic bag for her new papers, credit card, and checkbook.

"If you wish to discuss investment options, Ms. O'Malley, we can make an appointment to do that."

"No, thank you," Kenda said; she didn't want to look any more ignorant than she already did. In the lobby she read the paper Canfield had written. It said just what they'd discussed. She signed it.

Just outside the bank, she hailed a cab with a human driver and gave the driver her address in Denker City. Not an unreliable bus; it was already dark and she'd left Caity too long with Mrs. Delgado.

As the cab sped through the rain, Kenda tried to calm herself. A half million dollars. She and Caity would leave Denker City tomorrow. No more ghosts, no more violence, no more fear. No, they couldn't leave tomorrow—how could Hailey find them? Yes, they could leave, she would send a paper letter to Hailey in her quiet town. Kenda could do that. With half a million dollars, she could do anything.

She rushed up the stairs to 3H. The door to Mrs. Delgado's apartment stood open. Slumped against the wall in the dirty corridor, a teenage girl sobbed.

"What happened? Where's Caity?"

The girl ignored her.

"Where's Caity? Mrs. Delgado was watching my little sister while I was gone, what happened here, *where is Caity?*"

"How should I know? Wait . . . is that the crazy brat that kept crying she hears ghosts? Tasha was going to take her to some doctor."

"What doctor? Who is Tasha? What happened here?"

"Gun battle outside. The old lady got killed in crossfire. Cops just left here ten minutes ago. And Shawn . . . what, were you fucking my boyfriend, too? You and Tasha both?"

"No. *No*. Where is Tasha?"

"Probably gone with Shawn, the bitch. Shawn was *mine*."

"You said Tasha took Caity to some doctor. Who? Where?"

The girl shrugged, spat out a string of curses about Tasha and resumed sobbing.

Kenda grabbed her shoulders and shook her. "What doctor? Is Caity hurt?"

A knife appeared in the girl's hand. "Do that again and I'll cut you. I don't know what doctor or where your kid sister is. She wasn't hurt, just bawling her stupid head off."

Kenda backed off a few steps, made her voice conciliatory. "Sorry. Where is Janelle, Shawn's little sister?"

"Some relative took her. I don't know who. Now beat it."

Caity. Caity was gone.

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(Continued in next issue)