

**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, and has been translated into more than a dozen languages, none of which she can read. Her most recent novel is *Observer*, written with Dr. Robert Lanza.**

**You can follow her on Facebook: Nancy Kress. Part II of Nancy's latest novel finds three people confronting who they really are, the government confronting what technology can and cannot do, and everybody everywhere confronting the truth about . . .**

# QUANTUM GHOSTS

## PART II

**Nancy Kress**

### *Synopsis of Part 1*

*Robert Dayson, New York State senator, is juggling too many issues at once. His difficult daughter, Hailey, wants to have her brain implant removed, a risky operation that would also cut her off from QUESNU (Quantum Entangled Spacetime Network Unity), the communication network that links America's financial and political elites. Dayson is also trying to enact a ban on cheap, untested, imported implants, even as he conducts a campaign for United States senator in the shadow of his dead brother Cabot, a slain American hero. Worse are ominous scientific rumblings about the Upload Centers, facilities that store the consciousnesses of people rich enough to cheat death through technology. The UCs have always had minor electronic leakage, popularly called "ghosts," but now scientists are recording disturbing data that suggest the UCs' shielding, powerful geomagnetic fields around the quantum computers within, may be interacting with the Earth's magnetic core. And one lone researcher is convinced that something, or someone, in the Denker City UC is trying to get a message to the outside world.*

*Eighteen-year-old Kenda O'Malley, Cabot's illegitimate daughter, is fighting for acceptance by—or at least financial help from—the Dayson family. Left destitute by the*

*sudden death of her mother, Kenda fears her little sister Caity is being affected by the UC in Denker City, the only place the girls can afford to live. Kenda needs to get Caity out of the city. She hopes that Robert Dayson might help her, but Dayson's campaign manager, who wants no stain on Cabot Dayson's almost-holy legacy, prevents Kenda from seeing Robert. She does meet Hailey, who later turns up at Kenda's apartment after a nearly fatal operation to remove Hailey's implant. No electronics work in Denker City, and for reasons of her own, Hailey does not want to be found.*

*When she's a little stronger, Hailey leaves for a Quiet Town, an upscale Faraday-shielded community where neither QUESNU nor external electronics work. Kenda makes one more attempt to see Dayson and is again foiled. When she returns home, Caity has disappeared.*

## 22

**T**hree days after Sam's funeral, Dayson's intern entered his office, looking puzzled. "Sir, I just went through the paper mail and . . . I didn't mean to read . . . I was just scanning the usual stuff and, well, this came. You need to read it."

Since "the usual stuff" consisted mostly of pleas, complaints, and threats from the same unimplanted constituents who bombarded him on the internet, and since Dayson had just ended a phone call with a hysterical Claire who blamed him yet again for Hailey's disappearance, he took the opened envelope reluctantly. Reluctance vanished as soon as he glanced at the signature on the scrawled letter.

*Senator,*

*I'm sending this because I want you and Claire to know I'm all right. I had my implant removed and am recovering in a safe place. Please don't try to find me. I will contact you again when I'm ready.*

*There is something else you should know. I have been in contact with a daughter of Uncle Cabot's. Her name is Kenda O'Malley. Her mother was Eileen O'Malley, who died eight months ago. Until then, Nate Canfield sent money every month to support her and Kenda. Nate stopped the money when Eileen died, since she was supposed to never tell her daughter about Cabot. Well, she did tell, and Kenda went to Nate, who insisted on a DNA test that I'm certain had been performed when, or before, Kenda was even born. Then Nate stalled her further, probably hoping she'd give up, even though he knew that Kenda and her little sister (not Cabot's child) were destitute and living in dangerous conditions in Denker City. Kenda doesn't give up, so either he'll threaten her or buy her off.*

*I'm assuming you knew nothing of all this, and that your trusted chief of staff has been deceiving you for eighteen years. If, on the other hand, you do know, then you're just as morally bankrupt as Nate.*

*Kenda's address is below. Do the right thing.*

*Hailey*

His office turned into a red blur. When fury subsided enough to restore his vision, Dayson tore into Nate's office and thrust the letter at him. "Read this."

Nate did, then stood slowly behind his desk. "Senator—"

"You're fired. Now. Get out."

"You don't mean that."

"The fuck I don't! What else have you lied to me about? Get out now, before I—"

"Before you what? Senator, please think clearly for a moment. There's no way I was going to let that woman, that gutter opportunist Eileen O'Malley, ruin Cabot's chance at greatness. You have to realize that she—"

All at once Dayson felt an icy calm. This wasn't about him, had never been about him. Nor about Eileen O'Malley or her daughter, Dayson's niece. This was about Cabot. For Nate, all of it was always about Cabot.

"Get out, Nate. You're fired. Someone will send your personal belongings to your house."

"Senator, we announce your candidacy in January and this afternoon you have—"

"Leave now."

Nate moved slowly around his desk, almost shuffling, looking suddenly like an old man. At the open doorway, he turned to face Dayson, who heard several staffers scuttle away down the corridor. Nate said, "Bobby, I only had your best interests at heart."

Dayson didn't answer. There was nothing to say.

He took a car, driver, and bodyguard to Denker City. He Q'd Claire that Hailey was safe. He Q'd his staff to cancel the day's meetings. Well before he reached the city, QUESNU began to stutter, delay, allow him to send messages only on his second or even third try. Then it failed completely and he entered Denker City.

He was startled by the flicker vertigo, worse than on his previous visit. Nausea rose in his throat, and his legs wobbled as he got out of the car. Headache started behind his eyes.

There was no one at the address Hailey had given him. He talked to neighbors and to shopkeepers in dilapidated storefronts. All of them said that for two days a teenage girl had asked if anyone had seen a five-year-old girl with light brown hair and brown eyes, very thin, afraid of ghosts. By today, however, the incessant questioning had stopped.

"She's gone, mister," a woman said. "Maybe dead. Maybe the sister, too. You don't know how dangerous it is for kids around here. For everybody." She eyed Dayson's business suit with something that might have been contempt.

Dayson kept searching until dark, when his bodyguard insisted they leave. Tomorrow he would send people to resume searching. It was all he could do.

How did Hailey even know about Kenda O'Malley?

No answer. To anything.

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**K**enda had spent two days searching for Caity. No one knew anything, not at apartment buildings or the food pantry or the library or any stores. She could not find Shawn, his girlfriend who'd been sobbing in the corridor, or the "Tasha" that the girl said had taken Caity to "a doctor." Kenda went to every clinic she could find. No one had seen Caity.

The police would not release to her the name of the "relative" who had taken Janelle. She filed a missing-person report, but could tell, even before the harried cop finished taking down information, that they might look for Caity but not as a priority. The officer said, "We'll open an investigation. But we had sixteen homicides in Denker City last week, three arsons, too much major theft to count. Your sister will most likely turn up at a friend's house. They usually do."

"She's five! And I talked to her friends!"

"I said we'll open an investigation," the cop said.

"What if this was *your* kid missing?"

"I don't have kids. We'll open an investigation." And then, "It isn't like it used to be, miss." He turned away.

Kenda couldn't sleep. On the third day, when she nearly fainted, she made herself eat something. Then she did the only other thing she could think of: she took three buses to Hailey's quiet town. If Hailey balked at using her family connections to find Caity, Kenda would *make* her do it.

How? She didn't know.

It was late afternoon and very cold by the time the third bus arrived at Peaceful. The quiet town, which forbade all electronics, was nonetheless surrounded by some sort of electronic barrier. Kenda stood at the guarded entrance and peered through the fence. In the mellow October light, the quiet town was beautiful. Trees in autumn leaf, children playing in the day's last light, clean buildings free of graffiti and no higher than three stories. Bright flowers she couldn't name in tidy beds outlined with white stone. What did it cost to stay here?

Then she was astonished all over again when the human guard said, "Your name is on Ms. Dayson's visitor list. Do you already have the address?"

"Yes."

"Then go on through Security."

A building with conspicuously armed robo-staff. Kenda was scanned for, she guessed, anything not quiet, given a paper map, and passed through. The sun had set by the time she found Hailey's hotel and a courteous human had directed her upstairs. Kenda clenched her butt cheeks together to keep her legs from trembling, but there was nothing she could do about the wild banging of her heart. She knocked on Hailey's door.

The door took a long time to open. Slow footsteps, slow wooden panel swinging inward. Then Hailey stood there in blue silk pajamas, her head still bandaged, her eyes widening. "Kenda." And then, "Christ, look at you. What the hell happened?"

Kenda, for the first time in all the months since her mother died, broke into tears.

She told Hailey all of it, and Hailey listened without interruption, holding Kenda's hand. When Kenda finished, Hailey said, "Okay. Here's what we're going to do. You said the girlfriend called Caity 'the crazy brat that kept crying she hears ghosts,' and she said the teenage gangbanger dropped Caity off at 'a doctor.' There's—"

"I talked to every doctor around!"

"Every *medical* doctor. But there's a research facility in Denker City that's studying variance in responses to ghosts, part of a brain-mapping project. It was mentioned in one of my classes at Barnard. Maybe that's where Caity is. She might be of interest as a research subject if she claims she can actually hear ghosts."

"Research subject? Like a lab rat?"

Hailey smiled. "They won't dissect her, Kenda. It's a reputable research facility. If Caity was left there, she's perfectly safe. In fact, she's safer there than anywhere else in Denker City."

Kenda jumped up and staggered, nearly falling over. "You don't know that for sure! I'm going there. Do you know when the next bus leaves? Fuck, it's so late already, do the buses run—"

"We're taking a car. I'm going with you—I doubt you could get in on your own. There's more security than the Pentagon. And I don't think either of us would be admitted tonight. We'll leave first thing tomorrow. You'll have to help me get to the town entrance, where the guard can call a car."

Kenda's mind cleared. "If you need help walking to the entrance, you're not well enough to do this. And a car must cost . . . I'll pay you back. I told you that Nate Canfield gave me—"

"Shut up," Hailey said. "We'll find Caity."

Dayson woke to two messages, one hammering at him in his head via QUESNU and the other knocking at his bedroom door. Outside his window dawn stained the sky. He threw on a robe and opened the door to his housekeeper. “Mrs. DuCoffe?”

“I’m so sorry to wake you, sir, but this just came by courier and the boy will *not* leave until he gets a reply.” Her expression was eloquent about boys who would not leave.

“Thank you. I’ll be down shortly. Give him some coffee or something.”

Sleeping with QUESNU turned on was something Dayson never did, especially since Hailey had told him why she was having her implant removed. But lately he’d put a top-priority flag on any news reports related to Upload Centers and geomagnetism. The flag waved and screamed in his head.

\*QUESNU on. Stop top-priority notification and preserve message\*

He ripped open the courier’s envelope, hoping it was from Hailey.

It wasn’t.

Robert—

*Data from the UC shield shows accelerating deterioration, and we are packing up the research center and leaving later today. You should access the news services for more information, although don’t trust everything you read since it may well be inaccurate. The Sun is showing unexpected flare activity, but as yet there is no danger. We’re leaving Denker City solely because all of us, and especially the research subjects, are in increasing physical distress. I’ll be in touch after we’re out of here.*

Anna Foriss

Moving? Data showing UC shield deterioration?

He accessed the flagged QUESNU file. Article after article about geomagnetic shifts near UCs, ranging from the sober (“Scientists Say Solar Flares May Cause Power Outages Near Upload Centers”) to the luridly sensational (“Danger of UCs Destroying All Souls Within—And Maybe You Too!!”) None of the articles contained hard data. The few scientific sites to which Sam Malter had admitted him did contain data, but they were so technical as to be incomprehensible.

He threw on clothes, called for his driver, and went down to the kitchen. The “boy,” whom he recognized as one of Anna’s young assistants, stood gulping coffee beside the kitchen door. “Tell Dr. Foriss that I’m on my way to her as soon as I make one brief stop. Mrs. DuCoffe, some coffee to go, please.”

She frowned and put her hands on her hips. She’d been with the Dayson family since he was four. “And your breakfast, sir?”

“Just coffee, thank you.”

The intern had already vanished. The car pulled up outside. Dayson grabbed his go-cup, stopped at his office to sign some urgent papers he should have signed yesterday, and was driven to Denker City. Both QUESNU’s malfunctions and Dayson’s flicker vertigo were worse than just three days ago.

“I said you didn’t need to come,” Anna said.

“Yes, I did,” Dayson said. She looked harried and sleepless, her hair stuck on top of her head in a precarious bun, her clothes dirty from packing boxes. She was beautiful. “I won’t interfere with your packing, but I need up-to-date information I can understand. You said the Sun is showing flare activity, but there’s no danger.”

“Right. It’s not a CME.”

She saw his face and chuckled. “Sorry. A coronal mass ejection. A really big solar disturbance and really rare. Look, I’ll prove to you that this is not yet an emergency—I’ll take time to have coffee with you. Franz has all this well in hand.”

In the deserted cafeteria, she tried and failed to get her straggling hair out of her eyes. Finally she gave up and yanked it back into a ponytail.

"This really isn't an emergency. But my research subjects, who are by definition more susceptible to ghosts or they wouldn't be my research subjects, are in such distress that I had to get them out of Denker City entirely. They were all but one shipped off last night to a hotel in Albany at our expense, so I can schedule follow-ups with them. Zeus went with them. The rest of us are having worsening headaches—are you?"

"Yes."

She nodded. "The other reason we're packing up is just in case there is a solar flare large enough to cause the kind of power surge that could cause damage to the underground cables that bring electricity to Denker City, or the transformers just outside the UC field. This is an unprecedented situation and we don't want to take chances. Although personally I think it would take a Carrington event to cause real damage."

"What's a Carrington event?" And why did he always feel so dumb around her?

"Let me back up a bit, and forgive me if I tell you stuff you already know. A solar flare is a sudden eruption of magnetic energy released on or near the surface of the Sun, accompanied by bursts of electromagnetic radiation and particles, including ultraviolet and X-ray. Often that radiation causes electromagnetic disturbances in the Earth's atmosphere. That's what causes the northern lights.

"Sometimes a big solar flare is followed by a coronal mass ejection, a CME. That's a huge bubble of gas threaded with magnetic field lines, all ejected from the Sun over the course of several hours. Most don't come anywhere near Earth, but a big eruption aimed right at Earth can send a shock wave of particles that temporarily restructure the Earth's magnetic field. That causes something called telluric currents in the Earth, and that secondary field acts as a voltage source across networks, including power substations. Which sometimes get so overloaded they blow up."

She sipped her coffee and made a face. "God, this is terrible coffee. The kitchen staff is gone. Anyway, in 1989 a huge CME-generated geomagnetic storm took out the entire Quebec power grid. Fifteen years ago, much of South America went dark. Those storms, however, were nothing compared to the Carrington event—there has only ever been one—in 1859. Telegraph systems all over America and Europe failed, giving their operators electrical shocks or even burning them. Nearby papers caught fire. Skies turned so bright that birds woke up and began to sing in the middle of the night. Auroras were seen as far south as Cuba, so bright that people could read newspapers by their light. If the same thing happened today, a Carrington event could take down *everything* electronic. All of it."

"My God," Dayson said.

She smiled, and he saw that it cost her effort. She wasn't as confident about all this as she pretended. "It won't happen. We'll probably just get a series of normal solar flares. Did you find Hailey?"

"Yes. She's all right."

Now her smile was genuine. "I'm so glad."

Robert took another sip of the very bad coffee. "Why is one research subject still here?"

"Actually, I wanted to tell you about her anyway, once the evacuation is complete. She's five years old and was just dropped off at the front gate by herself, crying to make the ghosts stop. She doesn't know where she lives. She just clung to me, and hasn't stopped, although she's finally asleep now. I'll take her with me out of Denker City. In Albany I can QUESNU a social worker to take charge of her. But I wanted to tell you about her because, first, she's implanted, rare for kids living here, and I

would guess, although I'm not sure, that the implant is one of the new imported ones you're campaigning against. It's possible that's connected to what she says she can do."

"What does she say she can do?"

"Not just see ghosts but hear one particular ghost. Caity is terrified of him. She—"

"Did you test her?"

"Yes, that's what I'm trying to tell you. She says the ghost followed her here. The tests I did yesterday for upload-leakage sensitivity, before the flare activity began, are . . . strange. She showed incredibly strong response in several auditory areas: Brodmann area, auditory thalamus, relevant section of the hippocampus, superior temporal gyrus—never mind, the names don't matter. But the evidence suggests, although doesn't prove, that she *is* hearing something."

"What does she hear?"

"She says the ghost's name is 'Joe' and—"

He said sharply, "Joe? Joseph? As in Denker?"

"She doesn't, or can't, say. But Caity says that the ghost says everything is wrong."

Dayson considered this and pushed aside his coffee, which was indeed awful. "Joseph Denker was a genius. Nobel-class—you probably remember the fight over not giving it to him because technically he wasn't still alive. Could a genuine genius who's now some sort of quantum program figure out a way to communicate outside the parameters of—"

"No, it's impossible. Sam himself told me so."

A dim memory from college surfaced in Dayson's brain: a professor telling an uninterested class of non-science majors that someone—who?—had said that when an older scientist says something is impossible, he is often wrong, but when a younger one said it might be possible, he could sometimes be proved right.

Anna stood. "I have to get back to packing, Robert. But it was good to see you."

Their gazes held and there it was again, the electric jolt, the magnetic pull.

He said, "Thank you for the information, Anna. And be careful."

"I am," she said, "even when I don't want to be. Now I really have to get back to work."

He watched her walk away.

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**E**arly Friday evening, Dayson sat in his library with a book that he didn't pay attention to and a glass of Scotch that he did. It had been a hellish week. But now Hailey was safe in a quiet town, although Thomas was still unable to locate Kenda O'Malley. Nate Canfield was gone, and Dayson was going to need both a new chief of staff and a new campaign manager. Just thinking about that exhausted him.

He poured another Scotch, even though he'd told himself he was going to have only

one. Before he could raise it to his lips, Security called him from the gate to say that Dr. Anna Foriss wanted to see him.

"Let her come up!"

He ran downstairs and flung open the door. Anna, holding the hand of a small child, started talking even before she'd reached the steps. "Robert, listen. I was on my way to meet the social worker for Caity when Q kicked in and gave me a priority message. The space-weather AIs—there's more than one—say solar conditions are increasing for a big solar flare, or even a series of them."

"No," he said stupidly, "I have a flag on anything to do with space weather and I didn't get any—"

"You're not on these sites, they're restricted. But I stopped here to tell you about it because . . . well, because Sam would have."

"Is there danger?"

"No. Yes. Maybe. Can we come in?"

He took them to his study, the child clinging to Anna's hand. Robert knelt to her level. "Are you Caity?"

"Yes."

"I'm Robert. Are you hungry, Caity?"

She shook her head.

"But maybe you'd like a piece of cake. I'll just—"

Mrs. DuCoffe appeared in the doorway. "I heard the door. Can I bring you anything, sir?"

Robert stood. "This is Mrs. DuCoffe, my housekeeper, and these are Dr. Foriss and Caity. I'm trying to find out if she'd like some of your wonderful chocolate cake. Would you like to go with Mrs. DuCoffe to the kitchen and get some?"

More head shaking, and a tighter hold on Anna's hand. Robert had not raised a daughter for nothing. "Mrs. DuCoffe, please bring three pieces of cake here."

By the time the cake arrived, he had Caity seated on the sofa with some old children's books of Hailey's.

"You said 'maybe' danger. Tell me."

Anna had drained Robert's glass. She said, "Q just said a solar flare occurred, and then a second. It's a cluster, but nothing to be alarmed about. Yet."

"If you're not alarmed, why are you gulping down my Scotch?"

"Not because of what's happening. Most of Earth's power grids know how to handle even a big flare, and all indications are that a big one is coming. They'll shut down for a while, activate safety protocols. Even the UCs have experienced solar activity before, with no damage. I'm alarmed because of what could happen if there's a coronal mass ejection. There's a lot new going on here, intricate field interactions nobody has seen before. We don't know what will happen generally, and what will happen to the upload centers is an even bigger unknown. Maybe nothing."

"You don't believe that."

"I don't know! Nobody does! That's what I'm trying to tell you."

"Give me the worst case scenario."

She gestured toward the Scotch bottle, and he poured her another glass, relieved to see that this time she took only a small sip. It seemed to steady her.

She said, "With a CME, the storm may interact in ways we can't anticipate with the already anomalous shifts in Earth's geomagnetic field. Or with the fields generated by UC shields. QUESNU is the wild card in all this, since it uses the Earth's geomagnetic field's intersection with space-time to carry information. So implants could be affected. Another factor is the cheap construction of the power grid in Denker City. The transmission lines are too long and they have low tolerance levels for surges, to cut costs when they were built. Presumably the upload center itself has

better generators, capacitor blocking systems, and other controls, but I don't really know. You know how secretive the centers are.

"So—you did say worst-case, Robert—Denker City power could go down. Substations could blow up, fires could start, and the upload center could blow sky high. With completely unknown consequences to QUESNU."

It was a moment before he could get out, "Can you give me a percentage for the possibilities?"

Her hand rose and fell in what he was coming to recognize as exasperation. "No. I told you that this situation is unprecedented. If there's no CME, then maybe—no, I don't believe that. Something is happening in Denker City right now. *I felt* it before we left. But the feedback loops involved are so completely unpredictable that . . ."

"That what? Percentages, Anna. Give me a credible number, or a series of credible numbers."

She chewed her bottom lip. "If there's no CME, maybe 50 percent chance that the UC will blow. If there's a CME—90 percent."

He was stunned. "Ninety percent chance that Denker City will blow?"

"That the whole grid may blow, probably violently. All bets are off about the UC—don't you understand? Nobody *knows*."

"And the other five upload centers?"

"There are anomalies around all of them, but Denker City has become the most severe."

"Why?"

She met his eyes, and he saw the fear in hers. "I don't know for sure. But here's one possible explanation, and I know I said before that this is impossible, but *if* Joseph Denker really has discovered how to manipulate a subset of the quantum computer that he's trapped in, if he can control data and reach through his ghost to people as susceptible as Caity, then he's affecting the way Denker City operates."

Joseph Denker, by some estimations the most brilliant scientist since Einstein. "How much warning would we get?"

"For a huge solar flare, predictive warnings of maybe twenty minutes—enough time to shut down power grids. The first radiation reaches us eight minutes after the flare. A CME travels more slowly, so anywhere from fifteen hours to three days until it hits Earth."

"You said that even without a CME, with just a big flare that builds up dangerous voltages in Denker City, there's a 50 percent chance that the UC will explode. That's an unacceptable risk. What are scientists doing about it?"

"Right now? Arguing."

"Christ, you scientists are supposed to be smarter than the rest of us!"

"And you politicians are supposed to be the ones who act on our knowledge!"

They had raised their voices. Both glanced at the sofa. Caity, her mouth smeared with chocolate, was asleep.

"You're right," Dayson said. "And I'm going to act. Now."

"It's eight o'clock on a Friday evening. What can you—"

"I can prepare the ground for tomorrow, and I need you to help me. Anna, please call that social worker and tell her you can't deliver Caity to her until tomorrow. You can both stay here tonight."

She hesitated, and he saw that she had taken his words to mean more than he'd intended. Suddenly he wanted them to mean more. For a long moment, the world held its breath and even sun and radiation and the magnetism at the heart of the Earth went still, waiting.

Anna nodded. "We'll stay."

**K**enda woke to Hailey shaking her shoulder. Outside the window, bright light streamed through October leaves red and orange and gold.

"What time is it? Why didn't you wake me earlier? We have to go find Caity!"

"You needed to sleep. Kenda, when did you last sleep?"

"Wednesday. Thursday. I don't know." She didn't even remember falling asleep, but here she was in Hailey's bed, with Hailey dressed and holding out coffee. Where had Hailey slept? Beside her? *I was dead*, Kenda thought, and took the coffee. "What time is it?"

"Almost 2:00 P.M. You slept sixteen hours. You needed it. We both need our strength for this." Hailey didn't look like she had much strength. She tottered to a chair, sat, and said, "There's food on that table. You need to eat it. I sent for a toothbrush and stuff in the bathroom. We can't order a car until we get to the main gate."

"Okay." So many feelings pummeled Kenda that she couldn't look at Hailey. After she'd eaten and come out of the bathroom, she pulled Hailey to her feet. Hailey weighed nothing. She'd jammed a hat over her bandages.

"Hailey, are you all right to do this?"

"I'm fine. Just hold my arm while we walk."

At the gate, a woman—Hailey called her "the liaison"—was summoned by the guard. "Ms. Dayson?"

"I'd like to order a car, please. Put it on my account."

"Certainly. Where do you want the car to take you?"

"An address in Denker City."

The liaison's expression changed. "Denker City? There's a lot of . . . unrest there right now. Turmoil. Maybe even riots beginning."

"Riots? About what?"

"I don't know. Maybe riots is the wrong word. But I've received reports of looting and violence."

Kenda stopped herself from rolling her eyes. Didn't this woman in her expensive real-leather jacket know that there was always looting and violence in Denker City?

Hailey said, "A car, please."

"Of course." She vanished into her building.

The guard said, "Let me bring you a chair, Ms. Dayson."

"Thank you," Hailey said, almost absently, like someone who of course had chairs brought to her. Chairs, coffee, food, toothbrushes.

Long minutes dragged by.

Finally the liaison emerged. "I'm sorry for the delay, but I've tried five car companies and none of them will go into Denker City just now. They won't even send a drive. I can try more but—"

"Offer drivers directly—you must have a list of them—a quadruple fee and a commensurate tip, off the books. I'm sure you've done that before for important guests."

The woman blinked. "I can try."

She found a driver who would take the job as soon as his shift ended, in another hour. Hailey tottered slightly when she rose from the chair, but waved off Kenda's help. They went back to Hailey's hotel, lay on the bed, and held each other. Neither tried to go farther; Kenda could not keep her mind off Caity, and Hailey seemed to know that.

When the car finally arrived and they drove away, Hailey said to the driver, "What's going on in Denker City?"

"I don't know, miss. But I can handle it. Payment upfront."

Hailey paid him and said, "May I ask your name?"

Silence. Then he said, "Eric" in a tone that clearly shut down all conversation.

"Thank you, Eric," Hailey said. She leaned back against the seat, closed her eyes, and took Kenda's hand. Hailey's fingers, so much smaller than Kenda's, felt bony and warm.

She held them all the way to Denker City.

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**D**ayson had, he calculated, two assets: his name and his fortune. By Saturday morning, he'd made heavy use of both.

Last night it hadn't been hard to organize a press conference for the next day: *Senator Robert Dayson, brother to slain presidential hopeful Cabot Dayson and son to the late and beloved Vice President James Livingstone Dayson III, will make a major announcement tomorrow at noon.* What had been hard was getting anyone except the press to listen to him.

Throughout the night, Anna had checked reports from the agencies monitoring sun activity. The number of flares was increasing and the AI still predicted major solar activity by Sunday, but as she explained to Dayson early Saturday morning, "Timing and size of any flare are probabilities, not a real forecast. None of this is certain. It can't be."

"I understand. But you said 50 percent chance of major destruction. The kind where people die."

"Yes, that holds. It does."

He nodded and picked up his phone. Slower than QUESNU, but in a weird way, more likely to be answered, because everyone he needed to talk to was always bombarded with messages from Q. The older technology now commanded more attention than the new, like a biplane appearing in the sky amid helio-shuttles.

His first calls were to the commissioner of State Public Services, the Red Cross, the head of transportation, and the governor.

The Public Services Commissioner was on vacation in Mexico, and could only be reached on order of the governor if there was an emergency. Which, an official said acidly, was not happening now. "We are aware of the solar-flare cluster *and* of the fact that New York State power grids are prepared."

"Yes, but if there is a really large flare and a coronal mass ejection—"

"We are constantly monitoring every situation that could affect the grid. Thank you for your call." Click.

The transportation commissioner was at her daughter's wedding and could not be disturbed. Nobody else from the Albany regional office answered the phone; it was Saturday.

The Red Cross said they were sorry, but they responded to emergencies that were actually occurring, not those with slight evidence they might ever occur. Anna's evidence was dismissed as speculation.

She looked dazed. Dayson said, "I more or less expected this. I was preparing the ground. The governor is next."

Governor June Lester—incumbent, female, and a war hero, and so a triple-threat political rival, as Nate had endlessly reminded Dayson—took his call when it was passed up the line to her. "Governor, this is Robert Dayson."

"Yes. What can I do for you, Senator?"

June Lester had a deep, rich voice, perfect for political stumping. She'd been a su-

perb soldier, an honest public servant, and a completely ineffective administrator. Her honesty and her belief in the chain of command rendered her helpless in the face of New York State's long tradition of convoluted, corrupt, and contentious politics. But she was still a politician who would be running for reelection against Dayson. She would already have the news of his forthcoming press conference from QUESNU and would be receiving updates as they spoke, plus advice from her aides.

He said, "Governor, there's a dangerous, potentially fatal situation developing in Denker City. I have a biomagnetism scientist here, Dr. Anna Foriss, to explain it, but the stark fact is that the power grid has about a 50 percent chance of blowing up in a matter of days, triggered by coming solar flares, but also due to a combination of factors that have been mounting for a long time. And not only the power grid. You need to order an evacuation within a twenty-mile radius of the Joseph Denker UC, or thousands of people could die. Civil Defense has to be alerted, plus Public Safety and Transportation."

"Really. And why are you the only one who knows this?"

"I'm not. Contact any magnetobiologist or cyber-device expert you like, anyone with access to the data now pouring into QUESNU. And Dr. Foriss—"

"Cyber-device expert? So this is connected to your crusade against QUESNU and the newer implants that access it?"

"No! This is a real and present danger, Governor, that must be addressed now, today, or people will die."

Long pause. She was conferring with her aides, having them check both the space weather and Anna's credentials. Finally she said, "Let me talk to Dr. Foriss."

Anna introduced herself and explained the situation crisply, competently, with urgency but not melodrama. She was good at this; he would use her during the noon press conference. Key political reporters would receive copies of this conversation eventually. If Governor Lester ordered the evacuation and the city did not blow, she would look as much an idiot as Dayson. If she didn't order evacuation and nothing happened, she had just won the election. However, if she ordered evacuation and the city did blow, they would both be heroes—but she would then be allied with a rival bearing the sacred name of Dayson. But if she *didn't* order evacuation and thousands died, her political career was over.

Dayson visualized all this as a quadrant diagram, an illustration in some textbook of life and death. He made himself breathe normally.

Anna finished talking. The governor said, "Senator, my expert sources say the current solar flares are minor, not dangerous to Earth. I have listened to Dr. Foriss, but I need to know something. Is this the same Anna Foriss that was once a member of Bunker Hill Heritage?"

Fuck!

The governor said, "I'll take your silence as yes. I'm sorry, Senator, but my office does not play this sort of political game. I am not going to be dragged into a false emergency just so you can couple my name with hers. Your request does not have credibility." The phone went dead.

Anna said, "Oh, Robert, I'm so sorry, I . . . if people die because of *me* . . . wait, something is coming on Q . . . . A third solar flare just occurred, and a fourth. Relatively small so far, but the conditions are building for something big."

Something big. Even without a CME, a 50 percent chance of dangerous voltages building up in Denker City. Anger burned through him, a wildfire raging over prairies, up mountains. He said, "*We're* going to organize the evacuation."

"How?"

"With money. My money. I have a lot of it, you know. I even have a lot of it liquid." A crude phrase of his grandfather's rose to his lips. "Money can manure a lot of fields

if you shit it out right.”

He called the mayor of Denker City. This was an unpaid position no one wanted, as if Denker City were a hamlet in North Dakota instead of a city of twenty-five thousand in the third most populous state in the union. The mayor sounded drunk this Saturday morning. He seemed uncertain who Dayson was.

Okay. Move on.

“Anna?” She was monitoring QUESNU, switching rapidly among searches, while also watching four news channels, sound very low, on the wallscreen. She was his eyes and ears on the rest of the world.

“Power grids around the world are dealing with minor geomagnetic disruption from the flare cluster, mostly smoothly, and on alert for what they’re anticipating as a possible larger-but-normal flare. Nothing more on the Missouri UC. The fringe media have started castigating you for the ‘idiocy and despicability’ of your attempt to smear Governor Lester by announcing nonexistent danger. Wow, that didn’t take long.”

“It’s okay,” Dayson said. “More reporters at our press conference.” He phoned the superintendent of the Denker City schools.

This was a badly paid position, held by a Black woman whom Dayson had met a few times before and liked. Julia Marston cared about the children of her deeply dysfunctional city. She had taken the meager funds made available by Albany, and the even more meager funds from property taxes, and used them to the best possible advantage. This was hard to believe on any visit to the mostly falling-down, rat-infested schools in the district, but it was true. Dayson reached her at home.

“Ms. Marston, this is Senator Robert Dayson.”

“Senator.” Her voice was cautious; she’d already heard the governor’s take on Dayson. Yet she had taken his call.

“I need your help. And in return I’m willing to help your schools.”

Cautious silence.

“I will make a personal donation of fifty million dollars to the Denker City school district, the money to be used for betterment of the schools in any way you wish, in return for the loan of all your school buses for today and tomorrow, with drivers, to be used in a non-stop, twenty-four-hour evacuation of Denker City, with triple over-time going to each participating driver, paid by me in addition to the fifty-million donation. Starting immediately.”

A small sound from the phone; was it a gasp? Finally Julia Marston said, “Fifty million dollars?”

“Yes. But you have to marshal the buses immediately, and personally. Now. You can’t lose, Julia. No matter what happens, you get the money, and if there really is no danger, everybody just gets ferried back home.”

“Where will the buses take them?”

“To the Cuomo soccer stadium west of Albany. I will rent it for two days and arrange catering, beds, plus medical facilities. When the stadium is full, I’ll arrange something else.”

“Fifty million dollars.”

“Yes.”

“No stipulations on how I use the money.”

“No.”

“Why is this happening?”

“I’m going to put Dr. Anna Foriss, a magnetobiologist, on to explain it.”

Anna did. Julia expressed no opinion of Anna’s science. She said, “Senator, this call is recorded, but I want the deal in writing.”

“You’ll get a signed contract by email in five minutes.”

“Okay. Tell me what you want.”

"I want the elementary schools used as departure points. People will be told to go there and get on buses, bringing only what they can carry. They—"

"How will you tell them? We don't have mass communications in Denker City."

"I know. I'll be sending in a fleet of sound trucks with a recorded message explaining the danger and offering a hundred dollars to each person who takes a bus now to the Cuomo soccer stadium. Julia, I need this started now. Time may be short."

Another pause, and then she said quietly, "I'm going to do it. We're desperate for money and I will get it any way I can, for my kids. But you should know I think you've lost your mind."

"You're not the only one. Get the buses going."

A quick call to the owner of Albany's soccer team, and Dayson had rented its privately owned stadium. The owner, Paul Hawthorne of Hawthorne Industrials, had been with Cabot at Yale. Gulping more coffee and one of Mrs. DuCoffe's sandwiches—he couldn't have said what was in the sandwich, it might have been two slices of Styrofoam for all he tasted it—he made more phone calls. The fleet of sound trucks used by politicians throughout eastern New York State, and then another one from neighboring Massachusetts. Charter bus companies. His security team. A courier service, a large-scale catering firm accustomed to serving huge music festivals. Many more companies and individuals. Nothing seemed hard to do. All morning he made decisions, each one damning him more if he was wrong about the crisis, spending money as if it were air. Anna watched him, wide-eyed, from across the room as she accessed QUESNU.

Mrs. DuCoffe appeared with Caity. "There's a woman from the Child Protective Services here to take Caity. Shall I bring her up?"

Caity dropped Mrs. DuCoffe's hand and screeched, "What?"

Anna dropped to her knees. "Don't be frightened, Caity. A lady is going to take you somewhere safe."

"I'm safe here! I'm not going! I'm staying with you! You took away that bad ghost!"

"Caity, I promise it's only for—"

Dayson said, "Anna, I can't hear the congressman, can you take her into another room?"

Caity flung herself full-length on the carpet and screamed, "I want my sister!" Mrs. DuCoffe picked up the child and firmly carried her away, Anna trailing behind. The screams dimmed but didn't cease.

By the time Robert finished his last call, Anna had returned. "I talked to the woman from CPS. Caity will stay here until Monday. That's highly irregular, but it turns out the CPS worker has family in Denker City and wants to deal with them. You're all over the news now, Robert."

"Good."

"Not really. Half of the stories are distortions of fact, a quarter are sensationalized doom scenarios, and the last quarter think the whole thing is just a political stunt."

"Of course they do. They're trained to be suspicious. Come on, Anna, we have to meet the press."

The press conference was a disaster.

"Senator! Why did you attempt to smear Governor Lester?"

"Senator! This dirty-campaign trick—"

"Senator!"

Dayson raised his hand and waited. He and Anna stood on the front steps of his house, dronecams hovering in front of them, while reporters trampled his lawn. More dronecams zoomed overhead, angling for the best shot.

"Senator, why did you try to frame Governor Lester by inventing a 'crisis' in

Denker City?”

“I did not ‘invent’ anything—the crisis is *real*. This is Dr. Anna Foriss, a magnetobiologist. There is a 50 percent chance of widespread destruction in Denker City due to an unprecedented confluence of factors, and that goes up to 90 percent if sun activity increases in a certain way that Dr. Foriss will explain.”

Anna did, in crisp, intelligible, and—to Dayson—convincing terms. When she finished, the clamor resumed.

“Senator!”

“Senator! Why did you attempt to smear—?”

Dayson shouted, “Listen to me! There’s a 90 percent chance—no, hold all questions right now and *listen to me*—a 90 percent chance that if the current solar flares on the sun are followed by more flares and then what’s called a coronal mass ejection, Denker City will *blow up*. Power grids will explode and catch fire. Thousands of people’s lives are at risk. That is the story right now. I’m asking the press to help me evacuate everyone within twenty miles of the Joseph P. Denker Upload Center!”

A woman who had somehow squirmed her way to the front of the pack said, “When?”

Dayson bellowed over the din, “I’ve been asked when this could happen. It’s not possible to say, but it could be soon. So this evacuation—”

“The university astronomical department says—”

“Governor Lester says—”

“Nothing on Q says—”

Dayson had a sudden insight. Whatever the press had once been, much of it now mirrored American bureaucracy, which did not listen to science, did not trust science, did not either write or make policy on the basis of science. Technology, yes—show me the machine. Money and committees and purchase orders and action flowed toward technology. Missile shields, genemod medicines, fighter planes, QUESNU, smart buildings, laser weapons, maglev trains—any technology that could either make money or increase national security was worth listening too. Pure science was not.

Even when there was a crisis, it could take decades for officials to listen to the science. Look at climate change, brought under control at the last possible second. Look at ocean pollution. Look at estrogen mimickers. Not sexy, any of it. *Blue-sky stuff. Probably a new study would come out next year contradicting all this data anyway. Leave it to the ivory-tower lab types. Have you seen the new Apple product?*

Dayson didn’t have decades.

A few faces looked concerned, a few had the checking-Q look that Dayson knew so well, a few were directing intelligent questions to Anna, now explaining what a CME and a Carrington event were. But as soon as she stopped talking:

“Senator, these buses you sent to Denker City—who is paying for them?”

“Senator, are you using government funds for this unapproved and massive expenditure?”

“Senator, isn’t this a ploy to dramatically launch your campaign for governor?”

“Senator—”

In the back of the crowd, Dayson spotted Nate Canfield. His former chief of staff turned away and walked back to the helioshuttles parked in the empty field across the street.

“Oh my God, it's bedlam.”

Kenda didn't know that word, but Hailey's meaning was clear. What had happened in the last two days?

The car drove through Denker City, passing broken-into storefronts, people gathered in excited knots shouting at each other, people carrying armfuls of objects out of houses and stores, an unusual number of buses, and once, a body lying on the sidewalk. Police sirens wailed almost continuously. At dusk the car stopped in front of a big building surrounded by a wire-topped fence. Two men with guns stood by the open gate as a large moving truck drove out; the gate closed immediately. The men ducked into a guardhouse behind what Denker City had taught Kenda was bulletproof glass.

“Eric,” Hailey said, “wait for us here, please.”

“Can't.” The guard was shouting through some sort of speaker to move the car away from the building.

“Take it up that side street,” Hailey said, pointing. “We'll only be ten minutes at most.” And to the guard, “I'm Hailey Dayson, and we're looking for a child who was left here. Her name is Caity O'Malley and this is her sister Kenda O'Malley. May we come in?”

“You on the list?”

“No, but I'm—”

“You're not listed. Nobody comes in.” And then, perhaps in pity, “Miss, there's no kids here. The scientists and tech people and research subjects all left. The last of the equipment is going now.”

“No!” Kenda cried. “Left for where?”

“To their homes, I guess. Look, you have to move away from the building.”

“But what's happening here?”

Pity left his face. “I said to move. Now.”

A group of people rushed toward the building. A recorded announcement blared: THIS BUILDING IS ARMED. IF YOU TRY TO BREAK IN, YOU MAY BE SHOT. The group stopped, milling around angrily until one of them said, “Prob'ly nothing in there worth it anyway. Liquor store on Adams!”

They sped off, except for one man who eyed the girls and started toward them. Kenda took Hailey's gun from her pocket. “If you try it, you're dead.”

How did she keep her voice so steady? She didn't know.

He said, “Bitch,” spat, and ran off.

“We have to get to the car. Hailey—”

“I'm fine.”

She wasn't, tottering slightly as Kenda hurried her toward the corner where the car had turned. Hailey said, “You had the safety on.”

“What?”

“Give me my gun. You don't know the first thing about shooting it, or else you forgot what I told you.”

“So tell me again,” Kenda said, surprised that she was talking to Hailey like that, but too upset for the surprise to last.

A bus drove past them, loaded with people, and then another. From somewhere unseen came the sound of breaking glass. Kenda pulled Hailey along faster, and they rounded the corner.

The car wasn't there.

Hailey said, “Fuck! Fuck! He ghosted us!”

Kenda’s body turned cold. No car, and the guard said Caity would have been sent home . . .

A moan from behind an overflowing dumpster.

Eric lay face up, blood on his face. The girls dropped beside him. “What happened? Can you talk?”

The driver couldn’t, or wouldn’t, only making those terrible moans. Hailey put a hand gently on his arm. “Is the car nearby? What happened?”

More moans.

Kenda said, “A car-jacking. They beat him. There’s looting and . . . and *everything*. Caity . . .”

“We’ll find her. We will. But we have to get Eric and ourselves to somewhere safe.”

“There’s a clinic three or four blocks away. I took Caity there once when she had an accident.” Caity in convulsions on the library floor, never explained but never repeated . . . *where was Caity?*

“Good,” Hailey said. “Can you get him to his feet?”

Kenda did, succeeding only because Eric was able to help a little. His moaning never stopped, and she realized he didn’t know he was doing it. With Hailey on one side, just as much using Eric for support as helping hold him up, they shuffled to the clinic. Buses sped past them. Nearby they could hear, but not see, more looting.

“That’s the clinic,” Kenda said, panting.

The door stood open. Inside was a wreck, everything broken or stolen. No one was there. When they laid Eric on the floor, his moans stopped. His eyes looked glassy.

“Eric?”

Nothing.

Hailey said, “He must have internal injuries. I don’t think we can do anything for him.”

“That guard said that research subjects were sent home. I’m going to find Caity.”

“You can’t. It’s nearly dark out. You have to—wait, what’s that?”

Shouted words outside, getting louder, but still too faint to decipher from inside the building, then fading to nothing.

“A sound truck driving past,” Hailey said. “Turn out the light. We don’t want anyone coming in here. Kenda, you can’t go anywhere tonight. In the morning we’ll figure out what to do.”

Hailey’s face, barely visible in the gathering darkness, moved in something that might have been a grimace of pain or a smile of reassurance or anything at all. Kenda looked from her to Eric. By morning, she was sure, he would be dead.

If Caity had been dropped off at home before all this (all *what?*) started, she would be terrified. Had some neighbor taken her in, barricaded behind locked doors? Caity had a key to the apartment on a string around her neck and knew how to unlock and lock the door—was she now hiding in their apartment’s closet or in a cupboard in the kitchen? She and Kenda had so little to steal; the apartment wouldn’t be of much interest to anyone. But surely whoever took her home wouldn’t leave a five-year-old there by herself? Would they?

“Hailey,” she said, her voice wobbly, “tell me about this Dr. Foriss.”

But Hailey had fallen asleep, sitting with her back to the wall.

Kenda laid her on the floor. She groped around in the failing light from the barred windows until she found two tattered blankets, neither smelling fresh. She spread them over Hailey and Eric. Then, knowing she wouldn’t sleep, she sat beside the girl she’d fallen in love with and the man whose dying she’d unwittingly caused, and tried not to think about anything until daylight.

The good and the bad piled up all Saturday afternoon as Dayson continued to work the phone, Q, the internet, his aides—anything he could think of to save lives.

The Good: People were taking his hundred-dollar offer of a bus ride out of Denker City to free room and board. Not, as yet, a lot of people, but enough to get an evacuation started as word spread.

The Bad: As people left, the fragile social order of the city began to unravel. Bus drivers and journalists reported break-ins, looting, senseless destruction.

The Good: The latest solar flare had not been as large as expected. Power grids, including that for Denker City, had shut down for an hour or so and resumed afterward.

The Bad: The AIs of a dozen space-weather agencies predicted bigger flares to come.

The Good: A call he didn't even make. The head of the Denker City transit system, whose accent and diction said the Bronx as clearly as if he stood on the Grand Concourse, called Dayson and said that he'd heard from Julia Marston's people about Dayson's need for buses, and was it true there was danger to Denker City?

"Yes," Dayson said.

"Then fuck the Transportation Board. They fuck us enough. Look, I'll reroute all my buses to evacuate for the next two days if it'll save lives and if you donate fifty million to the municipal transit system. We gotta replace a bunch of meat buggies that're older than God."

"Done," Dayson said. He doubted the man had the authority to make this deal, but he didn't care.

His voice was hoarse. The sun slipped westward somewhere behind thick clouds. Overnight the clouds were supposed to disperse and leave sunshine and milder temperatures on Sunday. Good weather for an evacuation, and wasn't that a sentence he'd never expected to utter in his life.

The Bad and Good: Q was stuttering more and more, in a widening radius, near every UC, not just Denker City. That prompted enough panic for the press to give Dayson and Anna another chance at explanation, another round of possible cooperation. He was beginning to think this might all work, although there was no way to gauge how many people were left in Denker or how bad the brewing solar activity might become.

And then: the Very Bad.

Bernelli, the youngest member of Dayson's security team but reliable and equipped with good judgment, called from the gate. "Senator, there's a man here demanding to see you. Not press. I would have turned him away except that he's an infrastructure engineer and given everything that's on the news—well, I thought you might want to talk to him."

The earnest young face looked apologetic. Bernelli would have checked this guy out and found him legitimate. Dayson said, "Put him on. One-way visual." He and Anna sat in his study, facing a dinner neither could eat.

The face on the screen was old, much older than Dayson expected. A fringe of gray hair around a bald head, a double chin. Bright dark eyes above the unshaven stubble of a beard incongruously still red.

"Senator, I'm Benny Rebendorf, infrastructure engineer. I'm here to tell you that you're right and Denker City is going to blow. I don't mean the UC—I don't know anything about that. It'll be the gas mains. I been following everything, not like those idiots in Albany. Those mains are going to blow."

Dayson said, "I was told that probably only the power grid—"

"No! I helped put in those mains, fifteen years ago. Cheap lying bastards. . . . let me come up there and tell you."

Instantly Bernelli said, "Sir, that's not a good idea."

\*QUESNU, brief bio on Rebendorf, Benny, Denker City structural engineer\*

\*Q-Q-QUES—\*

Fuck it. "Bernelli, escort Mr. Rebendorf up to the house."

"Yes, sir. Out."

Dayson glanced at the national news on the wall screen. A night anchor was describing a mudslide in Washington State, which had a lot of rain but no upload centers. The anchor followed that with something heartwarming about schoolchildren in Des Moines, then a brief mention that some areas of the nation might experience minor power outages tonight or tomorrow "from sunspot activity."

Anna snorted.

Dayson met Rebendorf, accompanied by a conspicuously armed Bernelli, at the front door. The engineer started talking immediately, without pleasantries.

"I was on the team laying that pipe fifteen years ago for Denker City. Salvatore DiAngelo had the contract—I don't have to tell you about *him*, do I? All those regulatory agencies got shut down by the Libertarian government in the Unrest, but even if the corrupt politicians hadn't done that—begging your pardon, Senator, I was a big supporter of your brother—DiAngelo would have cut more corners than a cross-eyed tailor. And nothing I said later mattered because no matter how many reports get generated, nobody in government talks to anybody else. Not about anything but logrolling, anyway. See, pipelines are steel to contain high-pressure liquid or gas, and they have corrosion-resistant coatings. The Denker City pipes were 3-D printed below thickness level, and the coating thinner still. Now they been laying in the ground for twenty years, so even if they'd been done proper, you'd get localized corrosion from moisture. So cathodic protection is used to maintain the steel at a negative potential with respect to the ground. But geomagnetically induced currents cause these swings in the pipe-to-soil potential, so that over the life of the pipes—am I going too fast for you?"

"Yes."

"Okay. The bottom line is that the monitoring that should have been going on with the pipelines just wasn't. Or went on in a half-assed way. No money, or so they say. But those pipes have been exposed to all sorts of geomagnetic shifts, some of them big, because of the UC's effect on the field. With weak cathodic protection in the first place—those gas mains are gonna blow. Count on it."

"When?" Dayson said, his mouth dry.

"As soon as any really big electrical storm hits."

Dayson said, "Will you tell all this to the public safety commission?"

"Christ, Senator, I *been* telling them! They think I'm a crackpot. Nobody there will listen to me, which is why I'm here."

Anna said to Dayson, "Do you want to try Civil Defense again? Or the National Guard?"

"They didn't listen to me the first time. And anyway, only the governor can order them out."

Dayson wanted to smack his own head against the wall. All he had was a bunch of buses, school buses and city buses and every charter company he could reach, and a bunch of sound trucks, half of which had left the city as rioting and looting increased. And now rotting gas mains. The old conundrum: Nobody fixes the roof until it rains, and then it's too wet to fix the roof.

"Mr. Rebendorf—"

"Benny."

"Benny, I appreciate your coming here to tell me this. I can call the governor, but I doubt she'll take my call. What do you advise?"

"I have no advice, sir. I'm sorry." A grimace. "But I'm getting my family as far away from Denker City as I can. My three kids are all implanted, and Q—"

"Implanted? How old are they?"

Rebendorf looked puzzled. "Eleven, ten, eight. Why?"

Too old for the newer, dangerous implants. Dayson said, "Yes, get them away from here. And stock up on emergency rations."

"Already have."

At midnight, a big solar flare erupted. The western hemisphere, facing away from the Sun, was not affected. The eastern hemisphere had ample warning and power grids shut down appropriately, air traffic communications had been planned for, destruction was minimal. Engineers knew how to handle this.

Not so with QUESNU, which showed yet more stuttering, delays, and minor incoherence, sounding like a drunk not yet under the table. The globe's entire tech industry worked frantically to make adjustments that, as far as Dayson could tell, were ineffective.

Before he tried for a few hours' sleep, he checked the soccer stadium: five thousand people had ridden buses there. Best estimates, which were not very good, said the population of Denker City was twenty-five thousand. Maybe people would start leaving if another flare, predicted by AI, started blowing up Rebendorf's gas mains.

If the upload center didn't also blow, and it wasn't too late.

## 32

**S**ometime in the night, Eric died.

Kenda, who couldn't sleep, had checked on him over and over, but sometime between her anxious, ignorant checks, he slipped away without regaining consciousness. She dragged his body, wrapped in the blanket, to another room of the ransacked clinic and closed the door. She thought maybe she should say a prayer, but then it seemed somehow impertinent, an intrusion into his death by the person who had unknowingly caused it. She settled for a whispered, "I'm sorry."

Hailey slept on as if just as dead as the driver.

At first light, Kenda found a scrap of paper and a pencil and left Hailey a note. GONE TO FIND CAITY. STAY HERE.

The Sun hadn't yet risen but the sky had paled in the east. No people, although all around lay yesterday's destruction: looted stores, debris in the streets, a burned car. She walked swiftly, alertly, to the building where she and Caity had lived; maybe that's where the research-facility people had taken her when they evacuated. Kenda still had her keys around her neck, but she didn't need the one for the building. Its open door hung crazily off one of its three hinges. She took the stairs two at a time to the fourth floor.

Caity wasn't hiding in the apartment.

Kenda tried Mrs. Delgado's apartment on the floor below. It stood open, looted of anything even remotely valuable.

She pounded on doors up and down the hallways, to mostly no response. A few people flung open their doors to yell at her for waking them so early on Sunday morning. No one had seen Caity.

What now?

She tried the library. Closed, of course, but evidently not looted. Books had no street value. Could Caity be hiding somewhere inside? Kenda went to each barred window and screamed, “Caity! Are you there? It’s Kenda! Open the door!”

Nothing.

Buses had begun to roll, many more buses than Kenda had ever seen on these streets before, in unusual colors and with unusual logos. Most were empty, but a few carried people. One was completely full, and the people in the windows clutched suitcases on their laps.

Maybe the food pantry, the only other place she’d taken Caity?

She was running now, doubling back toward her street. People were emerging from their houses, many carrying bundles or suitcases and heading toward the elementary school that Caity had attended for less than a week. Before she could stop and ask anyone why, a sound truck drove toward her, its blare drowning all other noise even though she didn’t catch its first words.

**GARBLE GARBLE GARBLE . . . IN DANGER! THE CITY MAY BLOW UP! GO TO THE NEAREST SCHOOL AND BUSES WILL TAKE YOU TO SAFETY AT THE CUOMO SOCCER STADIUM, WHERE YOU WILL BE HOUSED AND FED! ONE HUNDRED DOLLARS TO EACH PERSON WHO JUST TAKES THE RIDE! BRING OVERNIGHT NECESSITIES, CHILDREN, PETS!**

“A stupid scam,” a man muttered, walking away from the school. “Fools.”

A scam? To do what—kidnap thousands of people? The Albany police wouldn’t allow that, would they?

It didn’t matter. She was not getting on a bus, not while Caity was in Denker City. Although maybe Kenda could get Hailey onto a bus. Hailey needed medical help.

She stood, irresolute, while another group passed her, carrying bulging plastic bags, chattering about the free trip, the free money. A woman led a Golden Retriever on a leash.

She continued her sprint toward the food pantry. The autumn sun was partway up the sky now, but lights burned in small-windowed apartments until, abruptly, they went out.

All of them at once.

Another sound truck rounded the corner. **PEOPLE OF DENKER CITY, THIS IS SENATOR ROBERT DAYSON. YOU ARE IN DANGER! THE CITY MAY BLOW UP! GO TO—**

*Senator Dayson?*

That didn’t make sense. Why would Hailey’s father . . . why would—how *could*—a city blow up? Was it really some sort of scam? But—

She resumed running, as if speed would put her questions behind her. Caity, she had to find Caity—

She reached the food pantry. It was closed.

She didn’t know where to look next.

There was nowhere to look next.

But now that it wasn’t so early, maybe more people in her apartment building would open their doors and talk to her. She was on her way back there when an old building to her left exploded.

A yellow fireball leapt into the sky in roar and fury. The top half of the building rose with it and then rained down as debris. Flames shot upward. Kenda was nearly thrown off her feet. When she regained her balance, she raced away from the searing heat and ear-scarring noise. Debris continued to fall: wood, furniture, insulation. The charred body of a rat hit her in the shoulder.

Now people were tumbling out of other buildings, screaming and crying. Someone yelled, “It’s the gas mains! Get away!”

Get away to where?

Hailey. She had to get back to Hailey.

Another explosion in the near distance.

### 33

**O**n Sunday, half of Earth went dark.

At 14:53 Greenwich Mean Time, sun-surveillance equipment predicted a massive solar flare. Within moments, the algorithms of sophisticated scientific AIs produced estimates of its speed, direction, and severity. Earth had about thirty minutes warning. Power grids were taken off-line. In the United States, federal stocks of mobile power transformers were readied to deploy to key substations if their transformers melted. Aircraft control towers braced to lose some or all communications with aircraft, especially those near the poles. Safety protocols were activated for satellites in orbit. Equipment was reconfigured.

At 10:19 EST in the United States, the solar flare erupted. Eight minutes later, radiation reached Earth in a flash of visible light. Spikes in ultraviolet light and X-rays sprayed Earth's upper atmosphere, causing magnetic disturbances at the surface already geomagnetically disturbed both by natural shifts in magnetism and by modern technology. Induced voltage overloaded the most vulnerable electrical systems, even those off-line.

The flare was followed by a slower, but far more lethal, coronal mass ejection from the Sun: a blob of plasma, charged particles, and an embedded magnetic field frozen in flux. As the blob traveled, it would expand in space. By the time it reached Earth, it would envelop all of the planet that faced the Sun. Essentially, the Sun would shoot a powerful magnetic field toward Earth, which also possessed magnetic fields natural and manufactured. The fields would slam together.

"Did you feel that?" Anna said.

"Yes." QUESNU had trembled, distorted badly, then righted itself. Dayson and Anna sat in his study, she accessing Q for both scientific and local news while Dayson made yet more phone and Q calls. Bright sunlight streamed through open curtains.

She said, "The CME is moving fast, although not as fast as the 1859 eruption. Best prediction is twenty-one to twenty-three hours."

Tomorrow morning, then. "Is this one the big Carrington event?"

"It might be."

Dayson and Anna stared at each other. Q screamed in his head; he shut it off for a moment. "Tell me again what will happen. I mean, in scientific terms."

"The plasma cloud will hit Earth, and the shock wave of particles will compress the Earth's dayside magnetic field, while the nightside gets stretched out. Like this."

She moved her hands in figures incomprehensible to Dayson.

"Then, sort of like a stretched rubber band, the geomagnetic field will snap back with energy like a lightning bolt. A huge lightning bolt. Geomagnetically induced currents of hundreds of amperes will flow into any conducting structure. That field will act as a voltage source across anything that can act as a network, including the planet itself."

"And the Upload Centers?"

"Nobody knows. Robert, it wasn't supposed to be possible, but maybe Joseph Denker *was* trying to get a message out through Caity and other susceptible people."

He rubbed his eyes. "Maybe. Denker is—was—*is* a genius, after all. Anna, are

those *conscious lives* inside the UCs? Are they . . . will their code be corrupted by the CME? Are they dying all over again?"

She didn't answer. Instead she said, "Robert, access WTEN. Aerial footage over Denker City."

\*QUESNU, display WTEN.\* How was anyone getting aerial footage? Even if the grid hadn't been turned off, drones and helioshuttles couldn't operate in the field of . . . *oh*.

An establishing shot of an old-fashioned, fossil-fueled helicopter taking off from a small airfield. The image switched to a low aerial shot of Denker City. Fires burned, people swarmed toward Dayson's buses or fled the edges of the city on foot. Vehicles and buses clogged the exit roads. As Dayson watched, a building exploded, the shock shaking the chopper's camera.

Rebendorf's gas mains. And the CME wasn't even here yet, with its unknown effects on hyper-wired civilization.

At least Hailey was safe in a quiet town.

34



35

**P**eople pushed past Kenda, shouting and crying. Each time a bus appeared, crowds ran toward it. If it was not yet full, they pushed each other to board, cramming inside until no more could fit and the overloaded bus lumbered away. If the bus was already full, they blocked its way while the bus honked its horn over and over, adding to the shouts and explosions. Sometimes the bus inched forward until it was clear of the crowds. Sometimes a few young men succeeded in forcing open a door and thrusting themselves inside or, if that failed, climbing on top. Kenda saw an old lady knocked down and almost trampled until two people grabbed her and set her again on her feet. A child let go of his mother's hand and was swept backward out of the press of bodies nearest the bus; his mother dropped her duffle of belongings and fought her way back to him.

More explosions.

Kenda ran through a deserted alley where buses couldn't fit. She had almost reached the street when strong arms grabbed her from behind.

"Where you going, girlie? Not away from me."

He turned her to face him, his stinking breath in her face, and kissed her. She nearly puked. He turned Kenda back around, tightened one arm across her throat. The other fumbled with her shirt, finally tearing it down the middle. By that time Kenda had Hailey's pistol out of her pocket. She jammed it blindly against his body and fired.

This time she had the safety off.

The shot deafened her, blinded her—no, she wasn't blind. But sight was not important compared to touch. She felt his arm loosen and she could breathe. He fell backward, dragging her with him. On the ground she scrambled off him as fast as she could. He lay face up, a hole in his belly, blood pooling on the asphalt beneath and around him.

Kenda vomited. Afterward she huddled against a wall, shaking and light-headed. Cold, so cold.

*Make it stop.*

But that only brought Caity's image, sharp as glass, slicing into her mind.

Eventually she stopped shaking, although she never knew how long she'd huddled there, shivering, or if she'd blacked out part of the time. The Sun was no longer directly overhead. Legs unsteady, she got to her feet and kept moving—toward Hailey, toward safety. She heard fewer explosions, but the fires they had started still burned, untended by any firemen. One had spread to buildings on either side, all three in flames and collapsing rubble.

She moved faster, dodging into alleys or behind dumpsters whenever she heard voices. Closer to the clinic, she saw smoke.

*No no . . .*

The clinic burned in clouds of acrid black smoke.

"Hailey! *Hailey!*"

"Here!"

Kenda couldn't find her, until she did. Hailey lay on scraggly grass behind the house next door. Kenda dropped to her knees and threw her arms around her.

"No, don't—my leg!"

Kenda let go. "What happened?"

"I tripped, trying to carry Eric's body out of the fire, and . . . I broke something. I can't walk."

"Okay," Kenda said, stupidly because it was not okay. Nothing was okay. "Does it hurt?"

"Not if I lie still."

"You can't lie still. We have to . . ." Have to what? ". . . have to get on a bus."

Hailey looked at her like Kenda had lost her mind, and that somehow settled Kenda's brain so that her next words strung together logically. She told Kenda about the buses, the explosions, the sound trucks blaring their message to get out.

"The senator?" Hailey said. "The senator sent them? Are you sure?"

"That's what the truck said. Hailey, we have to get out of Denker City. It's already started to blow up."

"I can't get on a bus as mobbed as you just described. I can't *walk*."

"I know. Maybe we can—"

"Is that *blood* on your jacket?"

"Yes. Not mine. Shhh—be quiet." Voices, coming toward them.

Kenda drew the gun. The barrel was crusted with blood. Hailey's eyes widened.

The girls sat silent, unmoving. After a few moments one of the voices cried, "A bus!" Footsteps pounded away from them.

"Kenda," Hailey whispered, "what did you do?"

Still silent, Kenda began to cry, hot stinging noiseless tears. Hailey groped for her hand and squeezed it hard, holding on while dusk gathered over Denker City.

She raided the deserted house next to the smoking clinic and had her first piece of luck. Looters had already ransacked the place, which must have belonged to the clinic doctor. The living room, bare of furniture and apparently used for storage, held torn-open cardboard boxes and cans of white paint; Kenda remembered a boy painting over obscene graffiti on the clinic's walls when she'd taken Caity there. Now some of the cans had been opened and splashed senselessly over everything. The vandals hadn't been interested in the medical equipment stored in a closet. A wheelchair, canes, bandages, more. Kenda piled onto the wheelchair some blankets and two cans of beans overlooked by whoever had ransacked the kitchen. She filled an

empty plastic bottle with the last water to sputter out of the kitchen faucet. “Hailey, we can’t stay in the open like this. Looters might come back to stay the night here. I saw two backpacks in the bedroom.”

“What else did you see?”

Kenda told her. Hailey sent her back for bandages and the shortest cane. She instructed Kenda how to splint her leg tightly to the cane.

Another house, not far away, exploded.

Kenda got Hailey, grimacing in pain, into the wheelchair. “This house might be next. We have to go where there aren’t any gas mains, but I don’t know where.”

Hailey frowned. “A playground, maybe. Not even Denker City would put a playground over gas mains that might injure kids. But most playgrounds are near schools, and you said that’s where the buses go. Besides, we’d be completely exposed. No, I think we need to stay here overnight. Not in the house, though, you’re right about that.”

“I have an idea. Wait here.”

Across the clinic’s gravel parking lot stood a medium-sized dumpster: bigger than a trash bin, smaller than its industrial cousin. Someone, or several someones, had already tipped it onto its side, its opening facing away from the house next door. Reeking trash littered the ground. Kenda breathed through her mouth as she wheeled Hailey over the scattered trash and into the dumpster. Hailey’s chair, adjusted to recline its full length, just fit. Kenda crouched beside her and partially closed the up-ended lid. “We can hide here.”

“Kenda, I can’t. I’m going to vomit.”

“No, you’re not, you’ll get used to the smell.” Then, “But if you do throw up, it’s all right.”

They couldn’t see each other. After a long silence, Hailey said, “I couldn’t get Eric’s body out. It burned.”

“I couldn’t find Caity. And I killed some man trying to rape me.”

“You were right to kill him. And someone could have taken Caity out on one of those buses.”

“Maybe. I hope so. Hailey, is this a war? Is Denker City really going to blow up? Completely?”

“I don’t know. Try to sleep.”

“I can’t,” Kenda said. But she hadn’t slept last night. When she woke again, sunrise leaked around the edges of the dumpster like wispy ghosts.

36

**D**ayson spent most of Sunday night simultaneously on the phone, a shaky Q, and TV news channels. He took calls from the press—anything to amplify the message to leave Denker City—and checked reports from the soccer stadium and bus-company drivers. The drivers said that gas-main explosions in Denker City had lessened, although Rebendorf had insisted that would be only temporary, until the CME hit.

The evacuation was finally working. By late evening, incredibly, most of the population had left Denker City, by bus or car or even on foot. The soccer stadium was inadequate to hold them all. The Red Cross and Civil Defense set up emergency refugee camps on public land. Governor Lester was now fully cooperative, and the National Guard, hastily roused from their beds, kept order.

News channels centered on power grids around the world: which ones had gone down, damaging which systems; which ones were adequately prepared to handle

this storm, invisible to humans except for its effects, and which had not. Looting and confrontations with police. Prophecies from religious nutjobs. Explanations from solemn scientists. Few of these were concerned with Denker City; it was not interesting enough compared to a total loss of power in New Delhi or the protection of nuclear sites in the United States. The phone calls to Dayson tapered off.

It wasn't until Monday morning that he received the call that destroyed his exhausted satisfaction.

The image was a middle-aged man, bald as an egg, with what looked like a permanent deep forehead wrinkle. "Senator Dayson? This is Peter Patterson of Newsome Car Service. On Saturday afternoon Hailey Lambert Dayson, whom public records identify as your daughter, tried to order a car and driver at a quiet town called Peaceful, in Montgomery County."

Sharp crystals of ice formed in Dayson's throat. "Go on."

"We're concerned because the driver, Eric Toller, has not yet reported in, nor has the car been returned. His shift was due to end and there is no electronic record of the hire, but it's possible Toller took this client off the books." Patterson shrugged. "It happens. We tracked the car from Peaceful to the outskirts of Denker City, where of course all tracking ceased. Information from the car indicates two passengers with weights of approximately 110 and 150 pounds. Given everything going on right now, can you help us understand what might have happened?"

Dayson couldn't speak.

The forehead line deepened. "Senator?"

"And you've had no word at all from the driver?"

"No, sir. And no electronic signal from the car."

Which meant the car was either still in Denker City or destroyed. "Let me make some calls. I'll get back to you when I know something."

"Thank you, Senator."

Why would Hailey go to Denker City? Where was she now, and who was the other passenger?

Possibility slammed into him with the force of a hurricane. "Oh my God . . . *no*."

"Robert?" Anna said. He hadn't heard her approach. "What is it?"

"I . . . she . . . maybe nothing. Maybe nothing."

"Then what might it be? You look like you've seen a ghost."

"Hailey went to Denker City and might still be there. With my brother Cabot's daughter."

"Who . . . why . . ."

Hastily he told her about Kenda, about Hailey's message, about Nate's treachery, the words gushing out of him like a flash flood.

Anna said, "I don't understand. Why would . . . wait. Franz said—"

"Who's Franz?"

"Head of security at my research facility. I left him in charge of the final stages of the evacuation, and last night when I had a minute I scanned his final report. He said the guard at the gate reported two people wanting to enter to see a research subject, although of course the guard didn't let them in. I just read Franz's summary, not the detailed logs, but I can look. . . ." Her face took on the absent-while-present look of someone scanning Q.

Mrs. DuCoffe, wearing a wet shirt and looking very put out, dragged a crying Caity into the room. The child said, "I'm not going!"

"Sir, she is not behaving very well this morning. I know she's upset and frightened and doesn't want to go with the lady from CPS, but she must not be allowed to throw a glass of milk at me."

Anna said, "The guard didn't record their names. But it was two young women."

"I'm not going!" Caity screamed. "I want Kenda!"

*Kenda.* Dayson knelt in front of the little girl. "We can talk about the lady and the milk, Caity. But first, will you tell me your whole name?"

She glared at him, "I'm Caity O'Malley!"

"Do you know a lady named Hailey?"

"Yes! She lives with us! I want Kenda!"

For just a moment, the room swooped and flicker vertigo encompassed the world.

Dayson stood. He accessed Q and instructed it to search all records of Denker City evacuees on all buses, in the soccer stadium, at all other emergency locations, at all area hospitals—Hailey had had brain surgery with complications—and on every list kept of those who'd walked out of the city and been tallied by the checkpoints ringing the area.

Nothing. Hailey and Kenda were still in Denker City, searching for Caity.

37

**S**unday night Kenda, stretched out in the stinking dumpster beside Hailey's chair, barely slept. She listened to Hailey groan softly in her sleep, and to the noise coming from the doctor's house next door. The looters were back.

But Monday morning was eerily quiet. Kenda crept out of the dumpster and cautiously rounded the burned heap of the clinic. Nothing to hear, no one to see. Even at the main street, she saw no buses, no cars, no anything.

A helicopter flew overhead, and she jumped up and down, waving her arms. It flew past. She was too small for it to see. Fuck fuck fuck . . .

She returned to the house next to the clinic. Its back door still hung crazily on one hinge. Again she listened. No snoring, stirring. Surely looters didn't wake up before the sun was even above the horizon? She went back to Hailey, who was awake.

"Kenda?"

"What is it? What's wrong?"

"I don't . . . feel well."

Kenda put a hand on Hailey's forehead. "You're burning up."

"An infection, I think. Where were you?"

"We have to get you out of here. We're in the middle of Denker City, I don't know if I can push the wheelchair all the way out without coming across men who might . . . I don't think that would work. And there are no buses anymore. But there are helicopters flying over—I saw one."

"Military? Red Cross? News? And how are they operating in the UC field?"

"I don't know. But here's what I'm going to do."

Was Hailey even listening? Her eyes closed, and she gave one soft moan. But when Kenda finished talking, she said, "Go."

"Not until I move you somewhere safe."

"Isn't anywhere safe. Go."

The small park, like most parks in Denker City, held rusted, broken playground equipment and little grass. There had been tents here, but most were gone, the remaining few reduced to dirty canvas puddles.

Kenda set down the two heavy cans of paint. Her arms ached from carrying them. She poured the gluey white paint over everything in its path: trash, syringes, rocks, a child's lone shoe, making the four letters as big and thick as possible, two per can. They had to be as visible as possible from the air: HELP.

She hid as well as she could in some scraggly bushes, and waited, every breath an agony of fear about Hailey. An infection—what kind? Did people die of that? Would it be better to go get Hailey and bring her here or leave her hidden in the dumpster? Kenda had left her the gun, but was Hailey strong enough to shoot it?

An hour later, when she couldn't stand it any longer, she ran back to the dumpster. Hailey lay sweating in her chair, her eyes unfocused, but she tried to smile at Kenda. "Hailey?"

"Sick . . ."

"I know, sweetie. I know, but you'll be better soon," and it was her mother's voice she heard, her mother's words when Kenda or Caity was ill. Pain pierced her. Her mother, Caity . . . now Hailey?

No. Her mother was gone, but Caity had been taken out of Denker City by the research people—Kenda had to believe that, she had to—and Hailey was not going to die. Kenda would not let her die.

Hailey said, "I heard . . . people next door . . . they left again."

Kenda barely heard her; she'd picked up the sound of a helicopter, flying low. She hurled herself out into the parking lot, jumped up and down, waved her arms. The copter was big and black. It flew on. She raced to her HELP paint—surely they would see that!—but by the time she got there, the copter was gone.

A weird, wrong light was growing in the sky.

### 38

**“Y**ou don't know that they're there,” Anna said. “Refugee lists are never complete. The city still has hold-outs, looters—the girls would be hiding if they're even there. You won't be able to find them. And Robert, the CME could hit in just a few hours.”

“I know,” Dayson said. “But I have to try. Here he comes.”

A quarter of a million dollars to hire one of the few old-fashioned news choppers and a pilot willing to fly it, plus the cost of the vehicle if the news station had to replace it. It had taken Dayson two hours on Q to find someone willing to take the deal, and it was a fringe cable station he would never have accessed for reliable news. By the end, Q was stuttering so badly—this far from Denker City!—that Dayson had been made to realize, as nothing else had done, the desperation of what he was going to do.

The helicopter landed on the lawn, blowing from the trees what remained of their autumn leaves. Dayson grabbed Anna, kissed her hard, and ran to the chopper. He was barely in before the pilot said, “I'm narrating all this for the station.”

“Yes,” Dayson said. It was part of the deal, possibly the only reason the iffy news station had agreed. **SENATOR IN DARING RESCUE MISSION IN D CITY! EXCLUSIVE EYEWITNESS ACCOUNT!**

Or: **SENATOR KILLED IN POINTLESS PUBLICITY STUNT!** Possibly that was the headline the station hoped for. More dramatic.

The chopper lifted, followed by news drones from other stations.

No one was coming. No one would ever come. Kenda had to get Hailey to a doctor, and she would have to do it by herself, push the wheelchair as far and fast as she could, shoot anybody who tried to stop her. She ran back to the dumpster, sobbing under the weird light in the wrong sky.

The aurora had started. Curtains of light like waving green satin shot through with

gold, rising high above the trees. Dayson had seen the northern lights before, but never like this. “*Billions of tons of superheated gas moving at over a million miles per hour,*” Anna had told him. “*They strike Earth’s upper atmosphere and this is what you get.*”

He tried to Q her. White noise in his head.

As soon as they were over Denker City, the following drones had either turned back or fallen out of the sky. Dayson scanned the ground constantly, his entire body clenched as if that would somehow *will* into sight the two girls. The pilot spoke constantly into a recorder, narrating: “Another explosion, probably a gas main. Beneath me, some building is still smoking . . .”

Dayson’s flicker vertigo had become a sharp headache. Accelerating shifts in the geomagnetic field?

“Go lower,” Dayson said, shouting to be heard over the chopper blades, the pilot’s voice, the explosions still muted by distance . . . until they wouldn’t be.

The scene below looked like a war zone. Explosions, fires, rubble. Acrid smoke stung Dayson’s eyes as they swooped toward the ground. Could anyone have survived in that hell? But people always had: in Berlin, in Beirut, in Gaza, in Rio de Janeiro. There was a chance. He leaned far out the door, glad for his augmented vision. Was that—no, not a person. A big animal, running terrified. What animal? It was gone.

“Black Hawk!” the pilot suddenly shouted. “I didn’t know the army still had those fuckers!”

Dayson squinted at the dark object flying toward them. He wouldn’t have been able to recognize it as a Black Hawk. Cabot had been the one to fly these things, to become a war hero flying one during—

A sudden ear-shattering explosion rose into the sky, throwing up a fireball that hit the Black Hawk. It went down.

“Jesus Christ,” the pilot said prayerfully, and narrated the demise of the Black Hawk for a future news audience. Then, “Senator, do you see anything?”

“No.” Despair seized Dayson; how could he find anybody in this hell? Was Hailey already dead?

He had a sudden lacerating memory of Hailey as a four-year-old, careening away from him at somebody’s Newport cottage, running down a slope of lawn toward a rough sea. “Catch me. Daddy! Catch me!”

He shouted, “There are train tracks over there. Maybe the girls followed those, hoping to get out.” It seemed like something Hailey might do.

The chopper followed the tracks. Nothing.

Kenda pushed Hailey’s wheelchair as fast as she could down the center of a street littered with trash and debris from explosions. She wasn’t sure whether Hailey was still conscious, but didn’t stop to check. More things were exploding now. She had a bad headache. Once she heard Hailey cry out. Kenda faltered before she realized it hadn’t been Hailey; it had been herself. She pushed faster. They were heading away from her pathetic painted call for help, but her only thought was to get them out of Denker City.

“There!” Dayson cried. “Look—it says ‘help’! Land there!”

“Can’t,” the pilot said. “No room.”

“Yes, there is! Land there!”

“Sir, you don’t know that the people you’re looking for are . . . I’m heading back now. Look at that sky. And don’t you feel it? My head . . . something’s going to happen. Soon. Now.”

“Land the chopper,” Dayson said, and put the muzzle of his gun in the pilot’s side.

"Jesus Christ," the pilot said, this time not prayerfully. "We get back, I'm charging you with assault."

"Okay." Dayson said, "Now land."

Kenda looked up. A helicopter, behind them, going lower . . . *in the direction of the park*. She couldn't go this slow. The copter would leave.

"Hailey, help is here! I'm going to get them and bring them to you. Do you understand? I'm not abandoning you!"

"Go," Hailey said, her first coherent word in an hour.

Kenda ran. Her lungs were going to break open, she didn't care, she had to get there before they left what if they left—

Two men standing beside a copter and screaming something she couldn't hear over the noise. Senator Dayson, looking bigger and wilder than his pictures, held a gun on another man. With a last burst of terrified speed, Kenda ran to him and collapsed. "I'm . . . Kenda . . . Hailey . . ."

"Where is she?"

"I . . . can take you . . . not far . . ."

Dayson turned to the other man. "You come with us."

"Not much choice while you're holding me at gunpoint, is there? Move, girlie!"

Kenda stumbled forward.

She was there, his daughter, slumped in a flimsy wheelchair, and at first Dayson thought she was dead. He grabbed her, reeking of garbage and hot with fever, and ran back to the chopper, the pilot racing a few feet ahead, Kenda trailing behind. The pilot clambered into his seat and began a furious narration. Dayson shouted to Kenda to get into the back and, still holding Hailey, he climbed in beside the pilot as the chopper lifted.

The pilot didn't narrate; he panted with what Dayson recognized as a very belated fear. The chopper flew faster.

Dayson felt it before he saw it, a strange tingling in his brain: not knowledge, not anything identifiable. The sensation had nothing to do with QUESNU. It came from a much older part of the brain than his implant affected: the hindbrain that whispered through muscle and blood. His arms tightened around his daughter, clutched in his arms as she had not been for a decade and a half.

The Joseph P. Denker Upload Center, mausoleum for those unwilling to die, glowed bright white and rose to meet the auroras dancing in the sky.

The shockwave from the explosion—sound, air, God-knows-what charged particles—hit the chopper. It wobbled and spun. Electricity jolted through Dayson, making his heart race so fast he thought it might kill him. Once, as a child, he'd been hit by lightning—this felt like that, fire streaming over his entire body. He gasped for breath. The pilot, face almost as white as the after-image in Dayson's vision, fought to keep the chopper steady. If the engine cut out, would they just drop?

Dayson tried to say something, couldn't get the words to come out. But he clearly heard the one word that Hailey uttered, and for a nanosecond he actually thought he could almost die happy.

"Daddy . . ."

The chopper steadied, held up by the unreliable air, rotors whirling. The pilot aimed it away from Denker City. Dayson, holding Hailey, twisted slightly in his seat to look back. There was nothing to see but smoke and, through the thick smoke, the dim lights of fires. No one could survive all that.

Not even ghosts.

EPILOGUE

**Q**UESNU was gone.

For two days Dayson stayed at the hospital, holding Hailey's hand as she fought the infection at her surgical site, not leaving her room until she was out of danger. While she slept, he read news on his phone.

Most of the world's power grids had, due to AI early warnings and sophisticated safety protocols, weathered the CME. Even New Delhi had 60 percent power by Tuesday afternoon. The world's nuclear arsenals were safe. Earth's geomagnetic stability had faltered, but the Sun's attack had not permanently destabilized it; that attack still lay five billion years in the future.

But the planet's Upload Centers were all gone, and with them, Q.

Businesses and individuals scrambled to change their way of life. Suddenly the Internet, which had never stopped being the primary means of communication for 95 percent of the global population, became critical to the other 5 percent. Stock markets dived, rose, dived as adjustments were made. Defense departments redrew plans. Minor revolutions sprouted, raged, withered, died, all of it happening at the speed of sound rather than light.

*Fast enough*, Dayson thought.

Claire visited Hailey, although after her predictable I-told-you-not-to-have-your-implant-removed tirade, Hailey refused to talk to her. That particular power grid could not be repaired.

Several times a day, Dayson phoned Anna, still installed at his house. She looked tired. "The doctor said Hailey's out of danger. How are the girls?"

"Caity is still confused. Kenda wants to know when she can see Hailey."

"Tell Caity we're all confused. Kenda can visit tomorrow. I'll be home tonight."

*Home*. The word had suddenly changed meaning. Home was wherever Anna and Hailey were and, now, Kenda and Caity as well. Life got stranger and stranger.

"Robert, a lot of press are still camped out here. They don't leave, just rotate personnel. I talk to them about the scientific aspects of what happened, but that's not what they want. Half of them want to idolize you as a hero, the other half want to demonize you for, I guess, not preventing the UC blow-ups, and all of them want to know when you're announcing your run for governor."

"What are you telling them?"

"That I don't know."

"We'll discuss it when I get home." Probably this call was not secure. Probably very little was secure anymore. Already the press had gotten hold—how?—of the knowledge that two of Anna's research subjects had babbled warnings from the ghost of Joseph Denker himself that the UCs would explode. Fortunately, they did not have Caity's name. Dayson would pull any strings he must to make sure they didn't get it.

Not even the hospital was secure. Nate appeared outside Hailey's room, having apparently pulled some strings of his own. Hailey was asleep. Dayson went out into the corridor.

"Senator Dayson."

"Nate."

Then, without preamble, "You can win the election now, if you announce immediately and in the right way, and if your campaign is managed right. We have had our differences, but I can—"

Dayson said, "I'm not running."

He hadn't planned the words. The idea had been building, wordless, in the underlayers of his mind. The moment he gave form to the thought, Dayson knew it was

true, that this was one of those moments that shifted a life, like tectonic plates moving deep underground until, unexpected but inevitable, continents changed in radical ways.

As governor he would be doing what governors always have to do—fight an oppositional legislature to get a small fraction of his program passed, enforce laws that others made, make deals he would have no taste for. That's what effective governing was, and bless those who did it well, as Cabot would have. Dayson didn't want to do it. He even found it funny, in a grotesque sort of way, that it had been Nate who'd once suggested to him that maybe, deep down, Dayson didn't really want the job.

Nate said, "Not running? What can you do instead?"

Not *What will you do* but *What can you do*, as if there were nothing else for Robert Dayson except to follow in his father's and brother's footsteps. Dynasty as destiny.

Dayson didn't answer, although he had an answer, and already he felt passionate about it. The cheap implants he had campaigned against were no longer a threat; with Q gone, all implants were just inactive chunks of titanium hardware unfortunately stuck in heads. But in Denker City, Dayson had accomplished something that mattered, had helped people not in a position to help themselves, had saved lives. He'd done it with information—from Sam Malter, from Anna, even from Benny Rebendorf—applied to money. The Dayson family foundation was moribund, funding the same tired initiatives year after year, many of them political rather than humanitarian. The foundation could do much more. Under Dayson's leadership, it would look at scientific research to see how it could best be applied to alleviate human suffering, as the Gates Foundation once did.

Nate said, "Senator, is this about the woman, Dr. Foriss? Because it may be possible to spin it as—"

"No. I'm sorry. Good-bye, Nate."

"Bobby—"

"No."

Cabot's ghost flickered in his mind, then disappeared for good.

As Dayson returned to Hailey's room, he glanced out the corridor window. The Sun disappeared behind a fast-moving cloud, then reappeared on the other side.

Dayson laughed. Some symbolism was too ridiculous to take seriously. And he had a new mission to launch, a new family to care for, both as soon as possible.

Nobody lived forever. ○

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