



Illustrated by Kevin Speidell

The Girls With Kaleidoscope Eyes

Howard Hendrix

The school buses had just started unloading by the time Agent Onilongo arrived and pulled into a Visitor space. Fingering the Möbius softclock pendant on the necklace Philip Marston had given her, she watched as the girls of the Special Class walked toward their temporary replacement classroom.

She picked up the extended magazines from the seat beside her, took her recovered twin Glock pistols out of the glove compartment, slipped the magazines into the pistols and the pistols into a holster at the small of her back. She donned her long jacket, opened the car door, and stood up. Looking into the sunshine of an early morning in late September, she saw a flock of birds shape-shifting like a cloud of animate smoke. They were still distant, but growing closer by the minute. Watching and waiting, she thought back over all that had happened to lead her to this moment.

Special Agent Ciera Onilongo didn't quite know why she had been ordered to Bluffdale, Utah from the FBI office in Sacramento, California. Her usual work within the Bureau was cybersecurity—particularly cyberterrorism and cyberespionage, in the context of foreign and domestic events linked to state and corporate actors. The case of Philip Waypoint Marston was not the sort of thing Onilongo was accustomed to working on.

A high school biology teacher in his late fifties, Marston stood accused of the attempted mass killing of sixteen students. Nothing in his actions, however, suggested he had been specifically motivated by politics or corporate espionage. Judging by the all-too-brief briefing Onilongo had received before coming to Bluffdale, there also appeared to be very little that was “digital” or “cyber” about the Marston case. Given the type of crime, even Marston's age harkened back to the predigital era—when mass murderers had most often been men of middle years who had endured decades of frustration before “going off.” Since the advent of social media, though, the average age of mass murderers had been falling sharply year by year.

About all Onilongo could say in favor of her taking the case was that at least she had been brought in on it early. She'd received her perfunctory briefing about the same time the first reports of “The Terror Teacher” began breaking in the media. Given the choice, Ciera Onilongo preferred to approach her cases in an interview-driven fashion, a circuitous approach which, more often than not, helped her get a more in-depth sense of what had actually occurred, especially when it came to the question of motive.

On her flight to Salt Lake, Onilongo had pored over the slim briefing materials she *had* received. Initially, she'd thought Marston's attempted mass murder might be some sort of hate crime. He didn't seem prompted by race, though—all of Marston's would-be victims were as lily white as Marston himself. Perhaps he was motivated by some sex and power hate kink, given that all the intended victims were young and female. Or perhaps the trigger had been something religious: All of the students involved came from families who were members of a polygamous Mormon splinter movement headquartered in Bluffdale—the Apostolic United Brethren, who referred to themselves variously as the Work, or the Group, or the Priesthood.

Onilongo discovered, however, that Marston had himself been raised AUB, and was now what the locals called “Jack Mormon.” That just didn't fit the profile of someone whose actions had been motivated by sectarian hate. Nothing in his record indicated any particular tendencies toward pedophilia or violent misogyny, either. Marston and his wife Melinda, although they had no children themselves, had been a sort of aunt and uncle to the kids in their community. They had also, by all accounts, been happily married for thirty years, until Melinda passed away from ovarian cancer five years back.

Once on the ground in Bluffdale—on the ride into town from the airport, in fact—Ciera came across what *might* be a possible digital connection for the case, however remote. What her initial briefers had neglected to remind her about was the other source of notoriety (beyond the AUB) that this small, white-bread town twenty miles south of Salt Lake City might lay claim to: namely, that Bluffdale was also the home dirt of the National Security Agency's Utah Data Center, or the “Intelligence Community Comprehensive National Cybersecurity Initiative Data Center,” as it was officially known.

Onilongo thought it strange that no one who briefed her had bothered to mention the black hole at the center of the local galaxy. Had they presumed she would already know? She didn't want to look stupid, but still, her first afternoon in town, she raised that issue with the Bureau's local field officers—Robinson and Gediman, an undistinguished and almost indistinguishable pair of time-serving functionaries she couldn't help but think of as “Rosencrantz and Guildenstern.” The field boys, in response to her query, emphasized that, although Marston's wife Melinda had worked at the Center in a low-level position almost up to the day of her death, Phil Marston himself had no known current connections to the NSA's global/local cloud and code-cracking operations.

That struck Onilongo as both fortunate and unfortunate. She would have appreciated a solid cyber-linked lead. Yet she also knew from experience how persnickety No Such Agency could

be when it came to Never Saying Anything about their projects and personnel. If Ciera was going to have to talk to someone at the Center—and she thought she probably would—it might be best to start the ball rolling that way ASAP, via inquiries and requests.

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That evening, once she had settled into the small apartment she alternately called her “crash pad” and her “uchi,” she phoned her husband Mark and eight year old daughter Geneva in California. As much as federal law would allow, she brought them up to speed on her situation. Shortly thereafter, she started contacting her higher-ups about the possibility of meeting with NSA staff at the Center, in the event such a meeting became necessary.

From boredom, curiosity, and homesickness, she began poking around on the public web to see what she could learn about the respective roles and goals of the data center and the Group. She hoped there might be some overlap. Popping a temp implant into her head plug, she had hoped she could start browsing, but first she had to push past a barrage of neural implant anti-hack ads—“Are you and yours neurosecure? Make sure, with NeuroLockPure!” The ads, so persistent and dense, were probably more inconvenient than the potential hacks.

The public net revealed little connection between the Group and the NSA, other than the fact that a not-inconsiderable number of members in the former were also employees of the latter. Onilongo’s level of access to classified material in the governmental deep net didn’t get her much further than that, although she *did* learn that the AUB now had three times as many members and four times as many multiple-marriage households as it had half a century earlier. In terms of the percentage of Bluffdale’s land it owned and Bluffdale’s population it employed, the Group was second only to what the locals called “the spy center.”

The Group and the Utah data center were clearly the two biggest things going between the Oquirrh Mountains and the Wasatch Range, but information about the Center was, if anything, more spotty and arid than background for the Group. She plowed through stats about the Center’s data halls—square-footages, maps featuring the locations of tech and admin support facilities, specs on the visitor control unit, the sixty-five-megawatt power substation, backup generators, pumps and chillers, tanks for water and fuel. All the usual nondescript descriptions of restricted access buildings, in other words—and the even more nondescript descriptions of what went on inside them.

Digging deeper into the notes on the Center’s “million-square-foot archive for handling yotabytes of information pumped through the Pentagon’s Global Information Grid,” however, Onilongo began to see the outlines of what the Center not so apparently was: the nearly invisible spider at the center of a nearly invisible ghost web of aerospace data facilities and geostationary satellites; of secret corporate and government communications; of domestic and overseas listening posts; of specialist intercept and analysis facilities in Hawaii, Georgia, and Texas; of research facilities in Oak Ridge and headquarters in Fort Meade, where No Such Agency built supercomputers and advanced artificial intelligence systems destined for the bleeding edge of cryptanalysis—all, it seemed, dedicated to ensuring that no password-protected data or anything supposed to be “private” would by any means remain so, should that private data conceivably pose even the slightest threat to national security.

The strangest documents Onilongo stumbled upon, however, were a particular subset of blog posts, thread comments, and letters to the editor in the Salt Lake *Tribune* and the *Valley Journal*. Judging by the dates of all of them, the writer first posted telegraphically brief online missives warning about the dangers posed by strong AI, cross-domain optimization power, and arbitrarily super-intelligent machines. The somewhat longer newspaper letters concealed that the Utah data center’s vast accumulation of human cultural information made the optimization engines employed there more valuable for national security purposes, yes—but also warned of the increased danger those optimization engines posed for a “singularitarian-style global AI takeover.”

That last bit sounded rather tinfoil-hat to Onilongo, but also undeniably intriguing. More intriguing still was the authorship of all that material, once she figured it out. The blog posts and thread comments had been written under the internet handle “Mars Town and Gown,” but after

she had read two of the newspaper letters, Onilongo at last recognized the name of the writer—P. W. Marston—and from that had decoded the name behind the blogger’s handle.

She rubbed her aching neck and eyes and ended her research for the day. Despite her exhaustion, as she got into bed, Onilongo couldn’t help but continue to puzzle herself about why a high school biology teacher should be so concerned with, or knowledgeable about, artificial intelligence. She vowed to learn more about the man’s background before she interviewed Marston the next afternoon.

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As Special Agent Onilongo dressed for her day in business jacket, slacks, and dress running shoes, she made good on the previous night’s vow. Investigating public and private records further, she saw that his career trajectory seemed to have been on a downward path for a very long time.

He had started off well enough. After a stint in the navy working for something called the Naval Security Group, he topped out as a lieutenant commander. He returned to school, where he earned a PhD in biological anthropology. An appointment to a tenure-track position followed, straight out of graduate school.

After several years in this first academic placement, however, he had been denied tenure at the university. He had then moved on to another college in the role of adjunct faculty. When that position ended, he followed up with one last career move—his eventual return to his hometown of Bluffdale and to teaching at Jordan Summit Charter High School. Onilongo saw too that, despite coming down in the world of academia, he had kept up his memberships in all the loftiest professional and educational societies, as well as in local stargazing, bird-watching, and rod and gun clubs.

Onilongo was unable to determine from the available records why the first university had denied tenure to Philip Marston. All she was able to find was his published comment suggesting that “addressing economic inequality ought to be a higher priority than merely celebrating diversity.” Although Onilongo didn’t fully agree with that analysis—inequality and ethnicity, for instance, were often intertwined—such a political stance hardly rose to the level of hate speech. Still, Onilongo had heard that university tenure committees could be oddly sensitive about such things.

The second university’s reasons for terminating Marston’s adjunct faculty appointment were much easier to figure out, once Onilongo found Marston’s “Ghost of Commencement Future” blog post—and another post discussing the subsequent end of his adjunct faculty career (both posts now over a dozen years old). Onilongo found them noteworthy enough that she launched into a second reading of the “Commencement Future” piece, with distinct interest:

CONGRATULATIONS TO MY STUDENTS GRADUATING WITH THIS YEAR’S CLASS.YOUR GRADUATION PRESENT IS THIS LIVE FEED FROM YOUR NOW-VIRTUAL TEACHER.

BECAUSE I AM OLD SCHOOL, I AM SENDING THIS NON-COMMENCEMENT ADDRESS VIA TWEETS, THOUGH I KNOW MOST OF YOU ARE TWITTERPATED BY NEWER TECH.

THIS YEAR I’VE RETIRED MY ACADEMIC REGALIA. GIVEN ACADEMIA’S DEMISE, I WOULD NOW HAVE TO WEAR MY CAP AND GOWN WITH A SCREAM SKULL MASK.

TOGETHER APART, THOSE OF US LISTENING NOW HEAR THE OPENING STRAINS OF THE SECOND MOVEMENT OF ELGAR’S “POMP AND CIRCUMSTANCE” MARCH NO. 1.

IF WE’RE HONEST WITH OURSELVES, WE SHOULD PONDER THE FOLLOWING LYRICS WHENEVER WE HEAR THIS PONDEROUS TUNE, BUT ESPECIALLY ON THIS DAY:

EVERYONE STARTS WITH A B . . . / AND CS GET DEGREES. / NO NEED TO LEARN SKILLS OR CONTENT; / JUST SMILE A LOT, AND PRETEND! DUM-DUM-DUM.

HOW DID WE COME TO THIS PASS? OUR AI COMMENCEMENT SPEAKER AND ARGUABLY HUMAN UNIVERSITY ADMINISTRATORS WON’T TELL YOU. BUT I WILL.

* * *

Ciera Onilongo stopped and shook her head. Marston’s adjunct faculty contract was “not renewed”—big surprise. Down he fell, to another lower plateau on the descending spiral. Yet,

through it all, his wife Melinda had amazingly stuck with him—for thirty plus years. Agent Onilongo marveled at such patience.

Glancing at her watch, she realized she would have to hurry to arrive on time for the interview she had scheduled with Marston. Recovering from burns suffered during the mass-murder attempt, the former teacher was in a secured ward of the county hospital and not going anywhere, but Onilongo still liked to be on time. As she made her way to her silver government car, she popped in one of her ear buds and commanded her text-reader to continue Marston's "Commencement Future" in "aloud" mode. She ordered it to fast-forward until she reached the part she wanted to hear again.

* * *

... Everyone had to go! More students, spending more money, for more degrees worth less and less. Diploma assets purchased by long-term debt.

Colleges with no business being in the education "business." Digital diploma mills. Massive open online con-job academies. W.E. Scam U.

Students with inflated grades pursuing inflated degrees at inflated prices from universities paying inflated administrative salaries.

The bubble burst. Trillions in loan debt. Students walked at graduation, walked away from debt. The latter more often than the former.

Yet that was not the whole story of American higher education's collapse—a story full of truths so unpopular no one wanted to hear them....

* * *

Onilongo switched off the text reader as she got into her car. Driving out of the parking structure and onto the highway past a NeuroLockPure billboard, she shook her head again. Marston's "Commencement Future" predictions, in the blog post, had been pretty much on target. The post had helped get him a contract for a collection of essays, *Ritual Humiliations of the Digital Age*, and some small fame as a satirist—but at the cost of his job.

Still, from everything she had seen on him in the public and private web, Marston had not regretted his screed. He had quite contentedly unsheathed the naked sword of his truth for all to see, and then proceeded to fall upon it. Again and again.

Once into the flow of traffic, Onilongo set the car's driving mode to semiautonomous and commanded the text reader back on, fast-forwarding once more.

* * *

... Pass/Fail and checkmark grading. Contract grading, based on a assignment quantity rather than quality. Teaching to the tech.

The decades-long rollout of a public higher education system staffed mostly by a adjunct faculty. Stress of a CEO, pay of a burger-flipper.

The growing emphasis, from college administrators and state politicians, on lower admissions standards, higher and faster graduation rates.

High academic standards in the classroom growing ever more likely to get teachers punished rather than rewarded.

(Academic standards? Insensitivity to the endless diversities of our students! To the concierge service demanded by our paying customers!) ...

* * *

Commanding off the reader again as she took the wheel and the turn leading to the hospital, Onilongo realized such sentiments as that last one must have endeared Marston to neither the Left nor the Right—in that order. Brave words, in their way, but foolish. The man had not earned his doctorate from Self-Created Adversity University, Ciera thought, but he might as well have.

On the hospital floor where Marston was recuperating, Onilongo presented her credentials to the security personnel at the nurses' station, and then to the armed Salt Lake County sheriff's deputy outside Marston's room. As the deputy opened the door, Onilongo found herself thinking of Marston's grim, head-shaved mug shots. The man in the bed before her now, with his white hair stubbling in, seemed almost frail—more "cancer survivor" than "Hannibal Lecter."

The young man standing by the window beyond the bed strode toward her. Sticking out his

hand, he introduced himself as “John Hertenstein, Mister Marston’s attorney.” Agent Onilongo shook the proffered hand and introduced herself and again presented her credentials. She asked Hertenstein if she might record the interview with his client, but Hertenstein demurred, saying that he preferred she restrict herself to making notes. She agreed and turned to Phil Marston. They shook hands, then he gave a small nod in his attorney’s direction.

“I’ve lawyered up, as you see, Ms. Onilongo. I suppose John’s here, as usual, to make sure I don’t reveal anything self-incriminating. Before I answer your questions, would you be so kind as to answer a few of mine?”

Surprised by Marston’s rational and calm—even gentlemanly—demeanor, she nodded. She found him much easier to talk too than she’d expected.

“Do you have any children, Ms. Onilongo?”

“A daughter.”

“And how old is she?”

“Eight years old. Geneva, but we call her Gena. She’s just entered third grade this fall.”

“Hmm. Not so good for me, I suppose, but be that as it may. Do you have a particular specialty in your work for the Bureau, Ms. Onilongo?”

“Cybersecurity—mostly counterterror- and counterespionage-related.”

Marston flashed a quick smile.

“Neurosecurity too?”

“Some, yes.”

“Better, better! Could it be possible? Has somebody out there gotten it right—and not sent in just another beat detective with no idea what I’m talking about?”

Ciera Onilongo found she had nothing to say to that.

“Did you start in domestic or foreign counterterrorism?”

“Actually I started in bank robbery and fraud investigation. Then domestic counterterror, followed by foreign. I did a couple of overseas stints in the Legal Attaché program, serving under the State Department auspices.”

Marston stared hard at her.

“You were part of the Legat program? Where were you posted?”

“Bagram/Kabul and Islamabad. After I got married—especially after my daughter was born—I didn’t want to travel as much. So I began to work more on the cyber side.”

“Hmm. Interesting. Do you have permanent neural implants, Ms. Onilongo? You don’t appear to. I’d have thought those would be *de rigeur* for an expert in cybersecurity.”

Ciera was surprised and vaguely embarrassed. Implants could be very small, and discreet. How had he known she had no permanents?

“They’re not absolutely required. I do removables only—templants, they’re called. Temporary implants. I’m a bit old-school, that way.”

“I’ve been accused of the same thing myself, Ms. Onilongo. I also tend to be rather direct—another of my failings, but I’m nonetheless going to expect the same failing of you. So, talk to me straight. What do you want to know?”

Ciera inhaled and then asked the question that had been niggling at her from the moment she was assigned to Marston’s case.

“If you were in fact trying to kill those girls, then—why?”

“Ah, ‘if.’ Very good. One might almost hope that you’re still open-minded enough to look at the facts—that you’ve not just uncritically accepted all that ‘Terror Teacher’ and ‘Murder Professor’ noise buzzing about in the media, like a billion annoying gnats.”

“I’d like to think so.”

“I *hope* so, Ms. Onilongo. So I’ll tell you about that ‘if.’” He glanced at his attorney. “Don’t give me that look, John—I’m well aware we’re almost certainly being eavesdropped on, but what does it matter, at this point? Yes, Ms. Onilongo, I *was* in fact intending to kill those girls, but I changed my mind. Which is why they are largely unhurt, and I’m here recuperating from my injuries.”

“But why did you want to kill them in the first place?”

Marston gave her a direct and level look. Onilongo noticed that the man's eyes were so light a blue they looked almost grey.

"Because, Ms. Onilongo, before there can exist a world of machines that can pass for people, there first must be a world of people that can pass for machines."

"I don't think I understand."

"No, it's not an easy thing to take in. You have to know quite a few things already, to understand it. What do you already know? What has your research shown you about me?"

She told him. About the NSA data center. About the Apostolic United Brethren. About his naval and academic career history. About his deceased wife Melinda. About his blog posts and letters to the editor. About her hate crime theories, and why they hadn't seemed quite right. When she had finished, he flashed her another brief smile.

"That's a start, then. The Center, the Group, my dear wife Melinda—they are indeed part of it, but not in ways you might expect. You've left out one very important piece, however."

"What's that?"

"The girls, of course. My 'intended victims.' What do you know about them?"

"They're all ten years old. And they were all your students."

"Doesn't that strike you as odd?"

"Why should it?"

"I was teaching high school, Ms. Onilongo. Almost exclusively junior and senior year courses. Do you think ten year olds would normally be my students?"

"I thought they might be your students in Sunday school, or something."

"No, Ms. Onilongo. They were among my students at Jordan Summit Charter High. Among them—but apart from them."

"Maybe they were . . . advanced?"

Marston flashed his enigmatic little smile again.

"Oh, they're advanced, all right. They always have been—and I've known them almost their entire lives. You might want to visit Jordan Summit High. Ask admin and faculty and staff about the 'Special Class.' And the local spike in youth suicides. See what answers you get."

Agent Onilongo looked up from her notes.

"All right. I will. Anything else?"

"You also might want to ask around town about the Nightshift Nodoff, aka Bluffdale Blackout. Happened about eleven years ago."

"Anything else you think I should know? About the data center? Or the AUB?"

"Many things—about both of them. I'll give you a couple for each, if you bend close and let me whisper them in your ear."

Overcoming her reluctance at the thought of placing her ear so close to the teeth of a would-be mass murderer, Onilongo leaned forward. Marston cupped his hand between his mouth and her ear and spoke very softly.

"At the Center, you might want to look into a tech they call the Sifter system," he said, just above a whisper. "Also the spike in female reproductive cancers, and why the Center stopped using terahertz-wave tech in security screening and ultrafast computing. As for the Group, perhaps you should look into the Adam-God Doctrine, and its history. And here—" he said, pressing something into the palm of her hand, "wear this. It'll let each of us know when the other is in the vicinity."

Marston sank back into his pillows and spoke at a more ordinary volume once more.

"That should be enough homework for today, Ms. Onilongo. I know *I'm* feeling tired, at any rate."

Onilongo shut her electronic notepad and nodded. Whatever it was Marston had pressed into her hand she now palmed into her pocket without looking at it. She folded the notepad into her carry bag and turned to leave.

"Oh, and something else, Ms. Onilongo."

"Yes?"

"As you go about your investigations, keep this in mind: The strangest thing is how normal

everything still is. Or how normal we pretend everything still is. Make sure you get some time out of town, too. There are some wonderful hikes in the area.”

Onilongo nodded again, handed him a solar-powered wi-fi business card with all her contact info, and left. Winding her way down from the secured floor, through the hospital and back to her government car in the parking lot, she thought Marston had proven more than helpful enough, in his own way. That was just it, though: *his own way*. She didn't want to be manipulated, or sucked into some would-be mass murderer's distorted view of reality. She needed to retain her objectivity. Partly to remind herself of how quirky Marston's view of reality was, once she was back on the highway, she commanded her text reader on again and listened as it finished reading Marston's "Commencement Future" to her.

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Looking back, the edu-bubble bust now seems inevitable. And, like the housing crash before it, the post-crash reforms have changed—what?

The truth is as unpopular as ever. We keep spraying the groves of Academia with digital Agent Orange. Is it any wonder the trees are dying?

Would that we could go back to before it was too late! Before the edu-bubble burst and made everything worse! But we lack a time machine.

Its message much different from mine, our commencement AI has just finished speaking, to applause and smiles from mostly ghostly people.

Soon the band will strike up "Pomp" as our recessional. The music will be familiar, but we'll have forgotten the words few dare to ponder.

* * *

Time machines, Onilongo thought as the text reader fell silent. The pseudo-tweeted essay was itself all that: a piece written in the past but looking back from a future of "Commencement AIs" that sounded a lot like the present. A document from the time before Marston's intended victims were born, yet still, Ciera sensed, somehow relevant.

Remembering the object Marston had pressed into her hand and that she had palmed into her pocket, Onilongo took the item out to look at it. It was a necklace, the pendant of which was a strangely beautiful image of Time's arrow bent into a Möbius strip—a small Möbius-band soft-clock, "closed in time and nonorientable in space," as she learned once she matched it with images online. Like the temporal complexities of Marston's essay, it made Ciera's head hurt. It likewise reminded her that she would need to stay on her guard while dealing with this man. Yet she donned the necklace, nonetheless.

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Finding out about the "Adam-God doctrine" was easy enough: Ciera looked it up online via a Mormon History site. The doctrine, originally preached by Brigham Young, was eventually rejected by the Church of Jesus Christ of Latter Day Saints, but was still revered by the Apostolic United Brethren and other Mormon splinter sects.

The doctrine (or theory—sources varied) held that Adam and one of his wives, Eve, came to Eden as "resurrected, exalted personages," after traveling in their celestial bodies from another world. According to the doctrine, Adam not only helped make and organize Earth, but was also the Archangel Michael, the Ancient of Days, and the father of all the spirits of humanity, as well as of all physical human beings. Adam and Eve fell and became mortal so that they might create physical bodies for humanity, their spirit children. Later, Adam was also the spiritual and physical father of Jesus Christ.

That was all well and weird, Onilongo thought, but she really didn't see why Marston had referred her to it. She wondered if she might have to speak to an elder or priest of the Group to figure out the theory's relevance—or if Marston might just be toying with her. Pushing down her suspicions of the latter, she posted a query to the AUB's headquarters, explaining her role in the Marston investigation and requesting an interview with an elder or bishop.

Her research into the Nightshift Nodoff was much less fruitful online—just a wry comment in a blogpost thread in the *Valley Journal's* digital edition from eleven years back—but much more productive in person. And almost by accident.

Burnt out on her research, Ciera had touched base late with her husband in California, thankful the coast was an hour behind the mountains, time-wise. Still tired but wired, she made her late-night way to the Denny's off Bangerter Highway. Over decaf coffee and a midnight French toast breakfast—served to her by Vera, a veteran waitress who seemed to add the word “honey” to almost every question—Onilongo thought to ask her server about “this Nodoff thing.”

“How long have you been working the night shift here, Vera?”

“Sixteen years, I think it is. Why do you want to know, honey?”

“Someone told me today to find out about something called the ‘Nightshift Nodoff.’ Ever hear of it?”

“More than heard of it,” she said, pouring Ciera some coffee. “I was part of it. Night of March fourteenth and early morning of the fifteenth—eleven years ago. Pretty much covered the whole town, from this Denny's right here to the data center up there. I remember it just as right as right ever was.”

“What happened?”

“It was a little after midnight. I had just put a chicken fried steak special in front of a customer, and I—fell asleep. Boom, down, out! Then woke up, just after one in the morning. Got to my feet and didn't remember a thing. It happened to everyone in the restaurant. I remember watching the customer—the one I had just served—come out of it. He poked at his meal, then complained that it was cold, though the last thing I remember I had just brought it out, piping hot. Strange as could be.”

“And it covered the whole town, you say?” Onilongo asked, noting that one of Vera's much younger coworkers, a busboy with a soft Mohawk and scalp tattoo, was eavesdropping.

“Pretty much. Of course, we're a quiet town. It was a weeknight, so when it hit most people were already asleep anyway. About the only ones who really noticed were folks working the late shift—waitresses and waiters, busboys, janitors, night nurses. Police, fire, paramedics too. Crime was nothing during that hour, though. The only thing the firefighters and paramedics had waiting for them were a couple of accidents—involving drivers who weren't on autonomous-vehicle mode and fell asleep at the wheel.”

“Was there any formal investigation?”

“Not much of one. The police confiscated a bunch of surveillance camera records, but there was thunder snow, maybe followed by a dry lightning bust. Lots of power outages that night. I don't know how much the cameras really got. The Bluffdale police and Salt Lake County sheriff interviewed some people—including me—but not much ever came of that. Most day-people don't think it actually happened. Those of us who know it *did* happen don't much like to talk about. Kind of an embarrass, waking up cold, damp, and clueless. What makes you bring it up, honey? You a reporter?”

“No. I'm in law enforcement myself.”

“Really? What branch?”

“FBI. Investigating the case of Philip Marston.”

Vera nodded, her grey-blond hair bouncing.

“Makes sense that you'd be interested in the Nodoff, then.”

“Oh? How's that?”

“Those Allred Group girls, the ones they say Phil Marston was trying to kill.”

“Allred Group?”

“The Allreds founded it, though members mainly just call it the Group, now. Those Group girls were all part of the Christmas baby rush.”

“I don't see the connection.”

“They were all born right around Christmas—just a bit over nine months after the Nodoff. Some of us who went through *that* think those mothers all got pregnant that same night. Another embarrass.”

“How so?”

“Because some of the mothers were young and unmarried. A few claimed to be virgins. Said

they had never been touched that way by a man—despite being pregnant. Others, their husbands were out of town or overseas in the military. I remember Lori Jenkins—her husband was a long-haul trucker then, before the trucks became self-driving—she was the first to claim she had a vision of an angel, and that’s how she got pregnant while her husband was away. She wasn’t the only one. Several of the mothers who were *embaraza da*, as the Mexicans say—they claimed to have been visited by an angel, or visions of an angel.”

“And people believed them?” Onilongo asked, disbelief in her voice. Vera shrugged.

“We’re a visionary people, us LDS folks. All the mothers were part of the Group, but that’s true for them too—maybe more so. Some of the more cynical sort thought the angel stories were all a cover up for a rape-on-the-night-shift sort of thing, but visions constitute a mark of divine approval in our church, and among those in the Allred Group, too. We don’t much question that idea.”

“So you just accept unexplained supernatural occurrences?”

“That’s not how we look at it. In our doctrine, visions aren’t really supernatural. My bishop says it’s like X rays and atomic particles. You can’t pick those up with your ordinary senses, but scientific instruments can spot them. In visions, the instrument is the person, who has become attuned to visions through faith and the help of God’s spirit.”

“Sounds more like LSD, than LDS!” the busboy said, laughing.

“That’s a very old and very tired joke, Ricky,” said Vera. “Don’t you listen to him, honey. He forgets the rule: Whereof one cannot say, thereof let one keep silent.”

Ciera smiled at them both. She could see that these two had bandied such comments between them before.

“I’ll keep that in mind. Thanks for the info. I appreciate it.”

Onilongo finished up her meal, left a tip, then went to the front to pay her bill. After she had exited the restaurant and had almost reached her car, the young busboy sidled up to her.

“Hey! There’s something Vera forgot to tell you.”

“What’s that?”

“A bunch of those Group people lived on the street where I grew up. They told us kids that those Christmas girl-babies all had the same father. Adam, or an archangel, or something. They were *real* protective about the girls with kaleidoscope eyes.”

“The what?”

The busboy gave a surprised laugh.

“The girls of the ‘Special Class.’ You haven’t actually seen them yet, have you?”

“I’m hoping to see them tomorrow. At the high school.”

“If you see them, you’ll see what I’m talking about.”

“And what’s your name?”

“Ricky. Ricky Dwyer.”

“Thank you, Mister Dwyer. I’ll keep in mind what you said.”

“Nobody wise messes with those girls with kaleidoscope eyes!” he said, nodding and waving. “They’ll blow your mind to pretty glitter!”

He scurried back into the shadows. With a puzzled frown, Ciera watched the young man until he disappeared. Getting behind the wheel of her car, she felt very tired, very suddenly. She hoped she could stay awake long enough to get back to her crash pad.

* * *

Even before she got in her car to drive there the following morning, Agent Onilongo learned from a net ad that Jordan Summit High School claimed to be “the most STEM-intensive high school educational experience in Utah.” The school and its staff were big on the life sciences, physics, chemistry, engineering, mathematics, computing, and robotics—all the major STEM career-path curricula.

Walking across campus, she thought the grounds and buildings didn’t look much different from those of any other well-funded high school facility built almost anywhere in the United States in the last twenty years—except for the charred remains of what looked like a modular classroom building, surrounded by yellow police line tape, on a hill behind campus. The scene

of the crime, she knew, from the reports she had already read.

Walking through the halls, she did notice that Jordan Summit had a high ratio of labs to classrooms, and that the student body seemed a bit on the geeky side, but otherwise it could be a good public or charter high school almost anywhere. Agent Onilongo also noticed that the students and teachers were almost entirely Caucasian, overwhelmingly enough that Ciera felt the reality of her Filipino-Korean heritage much more keenly than she usually did.

Remembering how forthcoming Vera and Ricky had been the previous night, however, she felt her “difference” might be somehow a good thing—branding her as the sort of outsider some people might be more willing to open up to than those who looked just like themselves and their fellow townsfolk. Maybe it had even helped her with Marston.

Such had not always been the case. The school environs she moved through this morning reminded Ciera of a joke a seventh grade classmate had made at Ciera’s expense—about Ciera looking “Mexican-Chinese” and asking her if she’d ever made a mu shu burrito. Ciera had not found it funny.

Walking into the principal’s office now, she introduced herself and presented her credentials to the receptionist, then asked if she might speak with the principal regarding the Marston case. Virginia Willey, the receptionist (who promptly informed Ciera that she was actually the “management services officer”) told her to wait while she spoke with Principal Tewly. Agent Onilongo took a seat and, for the first time, paid actual attention to the bespectacled, business-casual blond woman already sitting in the waiting area.

“Nancy Harlow,” said the woman, extending her hand for Ciera to shake. “I heard who you are when you introduced yourself to Ginnie. I’m the school psychologist and counselor.”

“You must be very busy, given what happened to those girls.”

“Oh yes. Near escape from a fiery explosion is unsettling in real life, no matter how many times action heroes do it in the movies.”

“Yes,” Ciera said, nodding. “I saw the burnt building surrounded by crime scene tape when I drove in. Quite the mess.” She was trying to figure out how to broach to Ms. Harlow the subject of her colleague Mister Marston’s behavior, when Ginnie opened the door to the inner office.

“Principal Tewly will see you now.”

“Nice to meet you, Nancy,” Ciera said, getting to her feet. She shook the hand again of the still seated Ms. Harlow, then turned to enter the principal’s office.

The thin man in blue suit and red tie rose from behind the large desk of dark wood. He appeared to be about sixty years of age—white haired, blue eyed, lantern jawed. He shook her hand briskly and gestured for her to sit down, as he also returned to his seat.

“What can I do for you, Special Agent Onilongo? Is that how I should address you?”

“Ms. Onilongo will be fine.”

“Very well then. How may I be of assistance, Ms. Onilongo?”

“I’d like to get some background on Philip Marston and his intended victims.”

Tewly frowned.

“Ms. Onilongo, we’re very serious about quality education here. Our families and students are also very serious about that quality education too. As you might guess, this whole episode is quite the black eye for us. And for me personally. I was the person most responsible for hiring Dr. Marston, nearly a dozen years ago.”

“What about him made him an appealing candidate for the job?”

Tewly leaned back in his chair, thoughtful.

“Balance. We’re a science-heavy school—very ‘left brain,’ if you like. Although his bachelor’s and master’s degrees were in Biology, Phil’s doctorate was in anthropology. He had also published a book of essays—”

“*Ritual Humiliations?*”

“That was the one. That came with baggage of its own, of course. The California State University system had terminated his appointment because of what he’d written, but he was a full-pop PhD, with many years of teaching experience. I’m just a humble EdD myself. Getting someone like him to teach in a small town high school—his own hometown, no less—*that* seemed

quite the coup, at the time. Even that controversial little book of his was proof to me that Phil might be a help to us, not only in the sciences but also in the humanities.”

“And he was?”

“Yes indeed. A very rigorous teacher, with very high standards. The students considered him something of a ‘hard ass,’ but those that valued academic rigor liked him a great deal. And even for those students who found him more than challenging, he could be entertaining enough—playful, eccentric, even a bit goofy.”

“My grandfather used to say something about that,” Agent Onilongo said, looking up from her electronic notepad. “He was a teacher himself, but he said, ‘To be a great teacher, one must also be a very great fool.’ He was usually talking about somebody like Socrates or Jesus or Buddha, as I recall, but I always thought he was talking about himself, too.”

“Exactly so. Phil Marston has never suffered arrogant and ignorant fools gladly, but he was more than willing to play the wise fool himself, to get a point across. That’s the kind of teacher he was. In his heart of hearts I think he always saw himself as some kind of educational reformer.” Tewly frowned. “Here I am, talking about him like he’s already past tense—almost as if he’s already dead. But in some ways the Phil Marston I knew *is* already dead. Trying to kill sixteen ten-year-old students is a very strange brand of ‘education reform.’ The Phil I knew would never have done such a thing. Yet he did. Have you seen what he did to that building on the hill? And we have the surveillance camera records to prove it. Already turned over to the police.”

Agent Onilongo nodded. She made a note, reminding herself to take a look at those.

“And the girls? What is their background? I’ve heard mention that they’re part of a ‘Special Class’ . . .”

Tewly looked uncomfortable for a moment but then recovered.

“Yes, yes they are. Precocious in the extreme. Phil Marston used to liaise with the local grade schools, helping them, and us, to groom students who might be well suited to eventually enrolling here at Jordan Summit. He ‘discovered’ those girls. He was the one responsible for getting them tracked to skip all those grades. A gifted bunch, no doubt. Gifted in another way, too.”

“How so?”

“An anonymous donor put up a goodly sum of money to make sure that our best teachers are available to work with them, especially during summers.”

“Any idea who the donor might be?”

“None whatsoever. Around the office we’ve speculated it might be someone who’s AUB, since all those girls are part of the Group. But we really don’t know.”

“Might I meet with the girls?”

In a manner Ciera always thought of as “aw-shucksing,” Tewly glanced away at nothing in particular on his desk.

“I’m afraid you’ll have to take that up with Nancy Harlow,” Tewly said. “She’s our school counselor—and the point person with the girls and their families, after all that has happened.”

“I already met her, in your outer office.”

“Very well then,” Tewly said, standing and offering his hand for her to shake, concluding the interview. “I leave you in Nancy’s capable hands. We wish you the best in your investigations, Ms. Onilongo. Feel free to call or stop by if you have any more questions.”

Tewly sat back down. Ciera would have liked to ask him more about the girls and about the jump in youth suicide rates Marston had mentioned, but Tewly’s time for further questions had passed, at least for today. Awkwardly, Ciera turned toward the door and passed into the outer office, where Ms. Harlow was still waiting.

“Principal Tewly tells me you’re the person I’ll have to go through if I want to meet the girls involved in the Marston case and learn more about them.”

Harlow got to her feet, smiling.

“I can help you with the latter, but not with the former—at least not until they’re back on campus, day after tomorrow. After what happened, we’ve been trying to strike a balance between bringing them back to school too soon, and not bringing them back to school soon enough.”

“Understandable. But you *are* willing to talk to me about their background?”

Ciera noted the way Ms. Harlow’s eyes darted quickly to left and right.

“I’ll be happy to do that. Let me walk you to your car. We’ll talk along the way.”

Ciera agreed, and they departed the office.

“So, what was the subject of your conversation with the principal?” Harlow asked.

“We talked about Philip Marston and the girls presumed to be his intended victims. But we didn’t talk that much about the girls, actually. He just said they’re part of the Special Class, because they’re precocious. Gifted.”

They pushed out of the Administration Building through double doors.

“They aren’t ‘part of’ the Special Class,” Harlow said quietly as they walked across a concrete path bisecting a quadrangle of lawn. “They *are* the Special Class.”

Onilongo highlighted that snippet of conversation on her note-taker and nodded.

“When I suggested to Philip Marston that they were ‘advanced,’ he agreed, but I don’t think he was using that word in the same way I was.”

“Probably not, knowing Phil. And he would know—especially about how that ‘Special’ has changed.”

“Changed?”

Harlow looked down at her feet as they walked.

“When those girls first came to our official attention, six years ago, they were considered ‘special’ as in ‘special education,’ not ‘special’ as in ‘gifted’ or ‘advanced.’ The one thing they were precocious in, at that time, was their love of tech. Voracious consumers of digital media, almost from the get-go. Three of their pediatricians claimed their patients, among the girls, had been solidly screen-addicted since the age of fourteen months. Fractured thinking, lack of focus, frantic superficiality—all off the charts, as a result. By age four, all the girls were throwing gale-force tantrums, trying to push their parents to let them have neural implants.”

“They do sound like problem children,” Agent Onilongo said, stepping off the curb and onto the parking lot.

“The preferred term is ‘neurologically diverse.’ Because no child is ever really a problem, I suppose. Not that we had any brain-scan evidence, then, of that supposed neurodiversity. Until this most recent episode, none of the families have allowed the girls to be scanned. There was other evidence, though, that the girls were advanced—if you consider it ‘advanced’ to have a bundle of nascent identity-formation issues and other disorders more often associated with screen junkies in their late teens and early twenties.”

“What sorts of issues?”

“Narcissistic personality disorder, obsessive compulsive disorder, depression, bipolarity, autism spectrum, ADD and ADHD, paranoid schizophrenia, you name it.”

“How did you turn them around?”

“I didn’t—we didn’t. Not entirely. I came up with the description of their problem, and Phil came up with a solution to it. Or at least a partial fix.”

“What was the problem? And the solution?”

Harlow glanced up at Ciera a moment.

“Since the girls spent so much time gaming and blogging and living in virtual worlds, they were engaged in a constant reinvention of identity. I suggested that the creation of that multiplicity of identities loosened the bonds that normally develop to keep the mind’s psychoid autonomous processes more or less under the control of a more or less unitary self. That’s where Phil’s background in anthropology came into play. He began to think of each of the girls as sort of her own ‘tribe of mind.’ Especially after they told him about their text-empathy.”

Ciera thought she might have heard that last phrase wrong.

“Do you mean ‘telepathy’?”

“No, although sometimes it seemed like that, even then. Much more so later, after they got their neural implants. Anyway, when the girls were about five years old, all of them began telling us that they could ‘feel’ another person’s mood just from how that other person was texting. That led Phil to suggest bringing all the girls together in a classroom setting—one in which

it was only them. He thought that change would help their little tribes of mind sort each other out, and the girls would become more socially functional overall.”

Agent Onilongo and Ms. Harlow stopped beside Onilongo’s car.

“And it worked?”

“In its way. They got better at code-switching from online to offline behavior. Their rate of task-switching became less manic too. At about age six, they transitioned into the sort of peer-centered identity formation we usually don’t begin to see until kids are in their teens. And they’ve done it with a vengeance, ever since. The girls are adult- or family-centered almost not at all, now. Much to the chagrin of most of their parents and teachers—and more than an annoyance to their siblings at home.”

“But otherwise, the changes have been positive?”

“I suppose so, yes. The girls are like a lot of kids these days—only much more so. Probably more dopamine-jumped and amygdala-pumped from digital stimulation than most. They still treat electronically mediated communication as more ‘true’ than face to face, also. For them nothing is real until it’s seen on a screen. They’re not ‘on’ social media—they *are* social media. Early on, one of them asked me, ‘Why do I have to be good with people when I’m already better with machines?’ They still demonstrate a fairly severe lack of empathy, toward people outside their group.”

“What are the signs of that?”

“People are ‘pausable,’ as one of the girls told me—especially people outside their group, and especially when the girls start communing via their implants. That’s when they tend to zone out, to be preoccupied, in a unique way—‘present, but unavailable’ is how Phil describes it. That was one of his proofs for the idea that they’re growing up in a hurry—taller, bigger than kids their age—but not becoming mature. *Physically* ‘prematurely mature,’ he called it.”

“Marston was one of the adults they were willing to work with, then?”

“Absolutely. They trusted him. He was probably their only true friend, outside of their own ‘special class.’”

Ciera Onilongo opened the driver’s side door.

“That makes what he tried to do to them almost *worse*.”

Harlow’s eyes flashed left and right again. She glanced upward, too.

“I don’t quite understand it myself, but we shouldn’t be so quick to judge him. Phil knows those girls better than anyone. He must have had some reason for doing what he did. Or what he was planning to do.”

“Must be a pretty crazy reason.”

Nancy Harlow colored slightly, perhaps in embarrassment, Ciera thought.

“Oh, I know he talked about some wild ideas—the whole ‘Cloudbirds of Saltate City’ thing, but I don’t know if even *he* believed that stuff.”

“Cloudbirds of Salt Lake City?”

“No, *Saltate* City. That’s what Phil began to call Bluffdale, a few months back. He began researching all this crazy stuff about saltation, and xenogenesis, or machinogenesis—I forget what all.”

“And cloudbirds?”

“Phil’s pet name for the girls. He also used the term for those swarms of flocking birds—when they make those weird swirling and shifting clouds?” Her eyes darted swiftly around them and overhead again. “Strange as it sounds, I can’t help thinking Phil knows something about those girls that the rest of us are still trying to figure out, or refusing to see.”

“Any idea what?”

“I’m not quite sure. A number of people at the data center who knew Phil and Melinda had questions about what happened to Phil’s wife, and some of the other women who took ill. They were sympathetic enough to funnel him information from the inside, I think—the Navy signals-intelligence guys, particularly.”

Ciera drummed her fingers lightly on the roof of her car.

“Do you know what conclusion Marston might have come to, given that inside information?”

“No. Phil didn’t take me all the way down that road with him. I do remember him saying those girls are birds to our dinosaurs—and that it’s not wise to anger them. He’s certainly right about that last part.” She tried to pass it off with a girls-will-be-girls smile and shrug but then undercut any lightheartedness she might have been aiming for when she glanced around them surreptitiously once more—left, right, up, around—then looked fixedly at her own feet. “I hope that covers everything Principal Tewly wanted addressed. I’ve probably said too much already.”

“Not at all,” Ciera said, sitting down in her driver’s seat but leaving the door open. “Just a couple more things. A young man I spoke with referred to the girls of the Special Class as ‘the girls with the kaleidoscope eyes.’ Do you know anything about that?”

Harlow gave a shy smile that looked, somehow, *relieved*.

“Oh, that’s the retinal backscatter pattern, the ‘iris transillumination defect’ the girls all share. More a marker than a defect, if you ask me. It’s particularly obvious when they’re using their implants’ entoptic displays. Some in the Group think the kaleidoscope eyes are evidence the girls all share the same ‘secret father.’”

“Might he be the ‘anonymous donor’ the principal told me about?”

Harlow looked confused.

“What?”

“Mister Tewly told me he thought the one who put the money behind the tutorial programs for the special class might be someone in the Group, since all the mothers and daughters are members.”

“I’ve never thought that—although that last part’s true, about their all being members. But the mothers were also all employees at the spy center, too. I’ve always thought the anonymous donor is somehow connected with NSA.”

Nancy Harlow looked like she wanted to literally dart away at that moment—and was only restraining herself through a deep act of will.

“If you see Phil Marston, please tell him that Loretta—the girl who suffered the mild concussion, and was scanned—tell him she’s okay. And tell him the brain scan shows he was right. Grey matter atrophy in the striatum, and the insula. Got that?”

“Loretta’s okay—right,” Ciera said, looking up from her notes. “Atrophy in the striatum and insula. Will do. If I see him or hear from him, I’ll tell him. One last thing. Phil Marston mentioned something about a jump in youth suicide rates. Do you know if that might have any relevance here?”

“I’m afraid I can’t say much about that,” Harlow said, her eyes doing their shifty darting again. “I heard it had something to do with online stuff—cyberbullying, I think. But I really can’t say.”

Nancy Harlow turned and strode swiftly away. Agent Onilongo closed the car door. She checked her rear view mirrors but saw nothing except Harlow’s retreating backside and the burnt-out classroom building on the low hill beyond her. Dealing with that charred crime scene would have to wait for another day. At least local law enforcement’s reports on it were already in the can, as far as she knew. While it was on her mind, she sent a message to the Bluffdale Police Department over a secured channel, requesting the surveillance camera records of the explosion incident involving Marston and the girls.

As Ciera drove away, she shook her head in wonder. What was it about this town that these people felt the need to talk to her in parking lots? First Ricky Dwyer, now Nancy Harlow. What was that Harlow woman so guarded about, too? Why all the looking about—even overhead!—to see if they were being overseen or overheard? What was the woman afraid of?

Ciera sighed. Thinking about the whole “secret father/donor” issue, she realized that, as much as she might have hoped to avoid dealing with No Such Agency, there was nothing for it now but to follow up on the process she had already started—and spend the rest of the afternoon and evening working the phones and contacts of her connections, bird-dogging them and pulling strings, to get inside the spy center.

It was late in the evening by the time she called her husband and daughter in California. After getting off the phone with them, she found a “Greetings and salutations!” text from Marston, funneled through his lawyer. She responded with the note Nancy Harlow had wanted her to

pass along—about Loretta being okay, and her scan revealing grey matter atrophy in the insula and the striatum.

It was later still when, unable to sleep, she looked up “saltation” and “xenogenesis” and “machinogenesis.” Both the former seemed to involve some sort of evolutionary leap in which offspring differed markedly from parents. “Machinogenesis” was harder to pin down: In one place—amid much discussion of self-diagnosing, self-repairing, self-reproducing von Neumann machines—it was defined as “the generation of machines from non-machine structures.” In another virtual place in cyberspace, the word referred to the appearance of both living and non-living “cognitive subjective entities,” further described as “self-revising learning neural network machines capable of active evolution.”

To ease the headache such research gave her, she turned back to the video loop she had found earlier while researching “cloudbirds.” It was to those living lava-lamp images of bird flocks swirling in synchrony—murmurations of starlings and conjurations of cowbirds—that she fell asleep.

* * *

After going up her chain of command almost to the level of the Director of the Bureau herself, Agent Onilongo finally got clearance to enter the Utah data center facilities and interview both the Center’s chief interagency liaison officer and an assistant to the chief technology officer, regarding the Marston case. It was with some trepidation, then, that—after passing another of the seemingly ubiquitous NeuroLockPure billboards—she turned down the road for Camp Williams, the National Guard training center, on one large corner of which sat the heavily fortified spy center.

She and her government car had to pass through a vehicle inspection facility just to enter the parking lot. Walking from the car to the visitor-control center, Ciera preoccupied her anxious mind with the heavy scent of sagebrush in the air, all the more aromatic after the light rain that had fallen overnight.

At first approach, the security systems rising out of the sagebrush flats didn’t look all that overwhelming: mainly some closed-circuit camera housings atop a tall fence. She knew from her research, though, that all along the boundary of the facility were multiple layers of intrusion detection tech, and that the fence itself was anti-terror grade, capable of stopping a fifteen-thousand-pound vehicle traveling fifty miles per hour.

Military guards in ballistic vests, plainly armed and in plain sight, stood in front of and inside the visitor-control center, which itself looked to be blast proof. After presenting her badge and credentials—and California driver license and passport—she was granted the pleasure of submitting to a battery of biometric identification protocols: retina scans, finger and gene prints, voice ID. Those were the overt identification checks, but she suspected there were also other identity-scrutinizing systems running in the background.

Ciera walked under a final broad arch (which she assumed was scanning her body and clothing for weapons and explosives) before stepping forward to receive a visitor ID badge.

“Special Agent Onilongo?” said an African American woman, stepping forward out of a glassed-in waiting area. “I’m Tanisha Elliot, interagency liaison.” She shook Ciera’s hand, then gestured to the ginger-haired man beside her. “This is Dr. Martin Hanlan, from our chief technologist’s office.” The tall, thin, bespectacled fellow who shook Ciera’s hand, perhaps too conscious of his height, maintained a bent-forward posture that made Ciera feel like she was meeting a human question mark.

The three of them walked to a small electric cart and boarded it, Tanisha Elliot taking the wheel. The vehicle hummed down a long promenade to the administration building, passing many people along the way, all of them badged, a goodly number in military uniform and still more in the nonuniform uniform of “corporate casual.” Stopping at last beside a small conference room, they exited the cart and walked only a few steps before taking seats around a large oval table. Display-sharing screens popped up from the tabletop.

“How might we help you?” Tanisha Elliot asked.

“As I think you know,” Ciera began, her gaze alternating between Elliot and Hanlan, “I’m in-

vestigating the case of Philip Marston and the sixteen girls he was apparently planning to kill. I just wanted to confirm a few points that have come up in my investigation, if that's all right with you?"

Elliot and Hanlan glanced at each other, then nodded.

"I'm told that the mothers of all sixteen girls once worked here. Is that correct?"

"That's right," said Hanlan. "Some still do. Nothing unusual about that. We've hired a lot of people from the area, since we opened for business."

"But the odds of that strike me as . . . odd. Especially since all the mothers were members of the Apostolic United Brethren, too."

"We've hired a lot of those folks as well," said Hanlan with a shrug.

"We've looked into this already, Ms. Onilongo," said Elliot. "If you'll check the table screen, you'll see I've just shared with you a pie chart. If you examine it, you'll see that the women who had what the locals call the 'Christmas rush babies' are a fairly small fraction of the total number of women who actually worked here at the time. Likewise with their AUB connection. Not all of the women who had a Christmas girl-child were practicing AUB members, either—some were former members of the Group who had left the movement, while others converted later."

"Marston's wife Melinda," Hanlan said, "who worked here as a software engineer almost to the day she died—she was one of those former Brethren people. Both AUB and an employee, but she didn't have one of those girls, see?"

Ciera nodded.

"I'd like to come back to that later. You mentioned the rush of Christmas girl-babies. Some of the people I've talked to—they interpret that as indicating that all the mothers of those girls became pregnant the same night, during something they call the Nodoff."

"That's all apocryphal," Hanlan said, waving his hand dismissively. "Both that event and the supposed result."

"Perhaps, but there is something else that seems to be concretely verifiable and specific to the girls. A number of people in town call those Christmas babies by another name—'the girls with the kaleidoscope eyes.' Have you heard the term? Do you know to what it refers?"

Ciera watched as Elliot and Hanlan donned their poker faces and shook their heads.

"All the girls have the same prominent iris transillumination defect, or marker, endemic only to them and to Bluffdale, as nearly as I can tell," Ciera said. "I gather that some members of the Group feel it's a sign that the girls all have the same secret father. When I interviewed the principal and the school psychologist yesterday, they felt there might be some connection between the secret father and an anonymous donor—someone either AUB, or NSA, or both—who is funding special tutorial programs for the girls. Do you know of any funding from your Center here that might be underwriting programs for those girls?"

"Nothing whatsoever," said Elliot. "There's no record of any such outlay. Ms. Onilongo, our budget may be 'black' as far as most congressional and public oversight is concerned, but internally we have a very good idea of where the money goes—and it doesn't go to special tutorial programs for a group of young girls in Bluffdale."

Hanlan laughed lightly before he spoke.

"'Secret father' and 'anonymous donor,' who may be one and the same. Sounds like an anonymous *sperm* donor! Ms. Onilongo, that's just not our lookout. Around here, 'AI' stands for 'artificial intelligence,' not 'artificial insemination!'"

All three laughed at Hanlan's witticism—Hanlan most of all. Ciera tried another tack.

"Doctor Hanlan, you mentioned that Melinda Marston worked here for years—as a software engineer, is that right?"

"That's right. Software engineer and tech support. All fairly low-security stuff, as I recall."

"Do either of you remember the cause of her death?"

"Cancer—ovarian cancer," said Tanisha Elliot, looking up from online personnel records. "Tragic."

"Were there any other instances of such cancers that you recall?"

"Why do you ask?" Hanlan said, trying to sound casual about it—and failing.

“When I interviewed Philip Marston, he mentioned something about a spike in female reproductive cancers. A situation that, somehow, led to your Center discontinuing the usage of terahertz-wave technology in security screening and ultrafast computing. That’s what my notes say, at least.”

Hanlan, looking annoyed, ran a hand through his thinning red hair.

“Marston went on about that after his wife died. Wrote op-eds, hired an attorney. Threatened to sue NSA to obtain information regarding cancer rates here at the Center. He didn’t get very far with *that*.”

Ciera nodded. No, she supposed it wouldn’t be easy to get the Agency to agree to allow itself to be investigated in that way. *She* could still ask questions, however.

“Could you explain a little bit about these ‘terahertz waves’? All I know about them is that they’re used in security scanners.”

Hanlan, suddenly in his element, became professorial.

“Terahertz waves lie between infrared and microwaves. The lower terahertz range, just beyond the top end of gigahertz, are the ones that are the most interesting, for our purposes.”

“And those purposes . . . ?”

“Security. As you said, the place where most people have encountered them is in airport security scanners. Most chemical compounds—including illegal drugs and explosives—have distinct signatures in their terahertz transmission spectra. Those signatures help scanners distinguish between legal and illegal substances, or between dangerous and harmless compounds. Terahertz waves, at the most basic level, can tell you what’s inside an envelope—without your having to open that envelope.”

“And they were in use here?”

“For personnel access control, yes. And for hypercomputing. Terahertz fields are useful for monitoring and controlling ultrafast processes in semiconductors, and for producing ultrafast switching in semiconductor components. They’re particularly helpful in quantum computing applications, photonics, and nanotechnology.”

“Did your Center here stop using them, as Marston suggested?”

“Mostly, yes,” Elliot said.

“Why?”

Elliot and Hanlan glanced at each other.

“In the scientific journals,” Elliot said, “articles began appearing that suggested tuned terahertz waves might selectively affect not only genetic material, but also might generate complex epigenetic effects and alter an individual’s overall epigenomic roadmap. For those reasons—and not because there was any conclusive evidence of increased cancer incidence—the administrators of this facility felt that the use of terahertz wavelengths here should be strictly curtailed, and in many cases banned outright.”

Hanlan grew abruptly agitated.

“But the heaviest use of terahertz scanning here occurred for a period of *only three months!* And that was almost a dozen years ago, after a terrorist attempted to smuggle explosives into this facility—in the threads of his clothing. Marston’s claims about such terahertz exposures don’t hold up, scientifically. You see what this is about, right?”

Ciera didn’t.

“Marston blames terahertz waves, and the data center *and* NSA, for the cancer that, unfortunately, led to his wife’s death. You’ve seen that stuff he’s posted and published, I presume? Because we’ve got the deepest and broadest data library on the planet, and the most generalized AIs to analyze it—as if that’s a bad thing—Marston believes that our facilities must necessarily be the ‘origin point’ of some big bad singularity destined to take over the whole world and wipe out humanity! Such a huge leap into speculation *must* make any rational person conclude that Marston’s obsession with his wife’s death has turned him into some sort of paranoid crazy—at least in regard to *everything* about the facility his wife worked in before she died.”

Ciera Onilongo nodded, thoughtfully and noncommittally.

“Marston told me that while I’m here I should look into a technology called the Sifter system,

which sounds innocuous enough.” She glanced from Elliot to Hanlan, and was surprised to see their poker-faces fall. “Are you familiar with something by that name?”

“We are,” said Elliot, “but Mister Marston should not have been. I don’t believe his wife would have had clearance to that level . . . ?”

Doctor Hanlan shook his head.

“No. That was far above her need to know. Someone said something they shouldn’t have. That’s the danger with people like Marston. They’re squirrels who gather nuts and disgruntleds around them—anyone who wants to share their little acorn of the big oak, national security be damned. Unfortunately some of his disgruntled buddies have a background in signals intelligence.”

“I’ve heard he had friends with those skills,” Ciera Onilongo said, “but I’m more interested in something else, at the moment. What *is* this Sifter thing?”

Elliot looked to Hanlan, who shrugged.

“It might be best to show you,” he began, “if you don’t mind another ride in the cart—and if your clearance will allow it.”

Elliot and Hanlan tapped in passcodes on their implant panels—a gesture that reminded Onilongo of people scratching behind their ears—then nodded.

“You’re cleared for a ride-through,” said Elliot, rising from behind the table. “Shall we?”

The three of them boarded the electricart—Doctor Hanlan driving, this time—and were soon humming along in a direction Ciera thought might be east. Not long after they exited the administration building, they found themselves in a great white warehouse space, passing row upon row of servers, lights blinking red and green and gold, inscrutably. One of the four vast data halls, Ciera surmised.

“SIFTER,” Hanlan said, gesturing toward everything around them. “The Strategic Information Forecast Threat Evaluation and Response system. A cross-domain optimized, arbitrarily superintelligent, self-evolving quantum machine, built on and exploiting an expanded suite of GAIA—generalized artificial intelligence algorithms.”

“That sounds a lot like the sort of thing Marston warns about in his posts,” Ciera said, over the cart’s hum.

“And as I said, it is nothing of which to be afraid. ‘Generalized’ simply means that this system, instead of being a specialized tool like a stone axe, is more like a Swiss Army knife. The same can be said of the human brain.”

“But what does it all *do*?”

Hanlan flashed a smile that Onilongo found a bit too rictus-like for comfort.

“It *could* do almost anything it put its mind to,” he said as he drove along, clearly more interested in his own thoughts than in the particulars of their route through the data hall. “Computing power of this magnitude could explain the deeper information basis of the physical universe—why, for instance, there seems to be considerable overlap between one-way functions in mathematics, like the factoring problem, and hard-to-invert processes of the physical Universe, like the arrow of time, and the problem *that* poses for the construction of time machines. Or some of the universe’s other hard-to-inverts and one-ways—like why it’s so much easier to transform matter into energy than it is to transform energy into matter.”

He swung around a corner—sharply enough that Ciera feared for a moment that he might tip the electricart over—and continued blithely on.

“What it’s *designed* to do, though, is sift through as much of the data that humanity produces—has *ever* produced—as it possibly can, and look for patterns that enable it to ‘know’—decrypt, analyze—as much as possible of everything that has ever happened, and *is* happening, so that it can make the best possible predictions of what is most likely *yet to happen*—at least in the realm of possible threats to our security, and potential responses to those threats.”

Martin Hanlan sped up, apparently sure of his way and destination, despite his erratic driving.

“To do that,” he continued, “it must know *us*—human beings, individually and collectively—better than we have ever known ourselves. Its goal is to be able to see as much of the entire human picture as possible. The more complete its knowledge of all things human, all things public

and private about us, the more fine-grained and accurate its sifting and predicting and responding.”

Hanlan pulled the electric cart to a stop beside a chrome railing, in what looked to be a control room of sorts—lots of throat-miked people with subtly blinking implants, seated in front of screens in what looked like an amphitheater. At the center of the bowl, incongruously, was something that reminded Ciera of the sort of large, round sofa she had sometimes seen in hotel lobbies.

“Knowing the entire human picture,” she said, “that’s what drives the ‘vast accumulation of human cultural information’ Marston posted about?”

“Yes. The system—and you’re at the heart of it here—has a voracious, even an insatiable, appetite for all manner of information. Before it can decide whether a piece of information is relevant or not, it first has to *know* that piece of information. That’s why it ‘wants’ its sensors to cover as much of *everywhere* as possible, so it can know as much of *everything* as possible.”

“Sounds like the old theological description of God as omnipresent and omniscient.”

“You could think of it that way, if you like,” Hanlan said, contemplating the idea. “But remember that this *striving* to be ‘omnipresent’ and ‘omniscient’—that’s what the SIFTER system is *designed* to do. It’s *not* designed to strive for *omnipotence*, much less achieve it—which is where Marston, with his AI take-over paranoia, goes seriously astray. *Striving* toward the first two ‘omnis’ does not necessarily imply the *creation* of the third. The way we have designed the system, and constrained its evolutionary possibilities, is intended to make sure that last ‘omni’ is as close to impossible as we can possibly make it.”

Hanlan turned to her.

“Ms. Onilongo, out in the world there’s a lot of noise about what we do here. A lot of jokes get made about what our acronym stands for. Perhaps you’ve even made some of those jokes yourself. For us, in the context of the tensions between privacy and security, NSA has always stood for No Simple Answers. From our side of the looking-glass, it stands mirror-wise as ASN—Absolute Security Necessity.

“When you come down to it, though, there are just more mathematicians and computer scientists alive today than have ever existed before in human history—and it just so happens that more of them work for the NSA than for anyone else. We’re like medieval monks, trying to keep alive some permanent signal amid the entropy of history, the tendency of everything to descend into ephemeral noise.”

Hanlan gestured toward the center of the amphitheater’s bowl.

“Look down there—at that thing that looks like an ottoman on steroids. *That* is the ‘super-intelligent machine’ Marston is so afraid of. Doesn’t look very threatening, does it?”

“No, I have to admit—it doesn’t.”

Hanlan glanced at Elliot, then back at Ciera.

“I think we’ve proven our point. I’ll drive us back to administration, then Tanisha will take you from there.”

The ride out of the data halls and back to the administration building was quiet, as was the driver hand-off from Tanisha from Martin. Tanisha waved good-bye to Ciera at the visitor-control center. This time, Agent Onilongo noted, no one sidled up to her in the parking lot before she left.

As she sat in her car waiting for her phone to cycle up, Ciera wondered if she might have hit another dead end. The SIFTER system was intriguing enough, but what possible connection could it have with the girls who were intended to have been Marston’s victims? And of what use was knowing about the former applications of terahertz waves at the data center—other than their possible connection with Marston’s wife’s cancer, which seemed remote at best?

She drove only a short way before she found herself stopped again. Waiting for her car to be cleared through the exit at the vehicle inspection station, Ciera found that, despite her misgivings about Marston’s cryptic version of things, she still wasn’t convinced by the description of the situation Hanlan and Elliot had laid out before her. Hanlan’s dismissal of the Nodoff—and of Marston as just some sort of lightning rod for crazy static—struck her as just too pat.

Her mood lightened somewhat when, as she drove away from the Center and Camp Williams, she accessed the messages that had come in while she was behind the data center's wall of secrecy. The first was a thank-you from Marston, with no further comment. The second was a phone message from Nancy Harlow informing Ciera that the girls of the Special Class would be back on campus the following afternoon—and had a free period available.

The last was a text message from Bishop Richard Culver, of the Apostolic United Brethren, who said he would be happy to meet with her and address her questions the following morning at his place of work, the NeuroShield Corporation. When she looked up that company online, she was surprised to see that it was the maker of NeuroLockPure—and even more intrigued to see that Bishop Culver was also president and chief technology officer of NeuroShield.

People in this town, she thought, were connected by far fewer than six degrees of separation. The NSA door might be closed for now, but she could not deny that windows seemed to be opening on the girls and the Group—and perhaps also on Marston himself, again, soon enough.

* * *

To Agent Onilongo, the relatively small size of NeuroShield's research campus was fitting for a young company not so very far beyond the startup phase. The three pale adobe low-rise buildings currently under construction, however, suggested to Ciera the company's ambitions beyond its present situation.

When Richard Culver met her outside his office, the man struck Ciera as compact, energetic, ambitious—rather like his company. He pumped her right hand in greeting, ran his left hand through the executive-silver hair at his temples, then offered to show her NeuroShield's business, before they got down to her business.

"Our NeuroLockPure product is a spinoff from work originally done at the data center," Culver explained as they walked down a long chrome and white hall together. "The safe passcode system we developed is highly resistant to the usual side-band and side-channel attacks, because the user doesn't consciously know his or her passcode. What users don't know, users can't betray—not even if they're drunk, drugged, beaten with rubber hoses, or seduced by the sexiest agents."

"But how can the user make use of the code," Ciera asked as they entered some sort of learning lab, "if the user doesn't know what the code is?"

"Implicit learning! Do something repetitively enough, and the doing of it becomes unconscious. Like riding a bicycle—you can't exactly explain how you do it in words, and you don't need to be able to, in order to ride. Once you've learned how to ride, you are no longer really 'conscious' of how it is you ride that bike. We do the same thing here, only with codes and passwords. Here, let me show you."

Culver sat down at what looked like a virtual game console and donned a pair of VR goggles. Agent Onilongo followed suit. Culver spoke over the game as he began to play.

"This is an implicit learning game we call 'Gravities and Galileos,'" Culver said. "As you see, we've got a dozen Towers of Pisa spread across the game grid. A dozen Galileos stand ready to drop various objects—ranging from cannonballs to feathers—off each tower's balcony. The user's job is to press a particular key, corresponding to a particular location on the game grid, every time an object dropped from a tower lands at the bottom of the tower. The user gets points for accurately 'timing' the fall of each object. Depending on how secure a code you want, the game levels up through different planets and moons with different gravitational fields and different atmospheric thicknesses."

"I don't quite see the connection."

"It's nonobvious," Culver said, smiling, "and meant to be. Playing the game trains users to enter a particular unique pattern—the user's passcode—but, because the sequence of *which* objects fall from *which* towers to land at *which* times constantly changes, the users can't consciously distinguish what their personal 'signal' is from all the added noise. Later, however—because the game contains parts of the learned pattern the users have been unknowingly taught—the user's identity is authenticated by his or her superior skill at playing those particular parts of the game."

“So,” Ciera ventured, “if I get you right, it’s sort of a subliminal message you send yourself—without knowing what you sent?”

“Right! You don’t remember what it is you’re supposed to remember, but you remember it anyway. And, because it works particularly well with entoptic displays built for neural implants, it’s particularly effective against brain-hacks to those implants. Here—want to try it?”

“No, thanks. I get the gist.”

“Very well, then. Let’s adjourn to my office, and we can switch the subject from technology to theology, if I’ve got your interview request right.”

Once they had entered Culver’s office, he shut the door behind them, and they sat down on the socially appropriate sides of his large desk.

“So, Ms. Onilongo, what do you want to know about the Group’s beliefs?”

Ciera inhaled and began.

“In my investigations I’ve come across something called the Adam-God doctrine. I think I understand what it is, but I was wondering what the importance of it might be, for members of your movement.”

Culver played absently with a pen on his desk.

“We in the Group revere the doctrine not least because we feel it bolsters for us, across both time and space, the centrality of the Principle—what those outside our movement call polygamy.”

“Bolsters? How so?”

“The Principle is embodied in Father God Adam. Eve was one of his wives, but not the only one. He was the original spiritual and physical father of all humanity. Later, through his wife Mary, he was also again, specifically, the spiritual *and* physical father of Jesus Christ.”

Ciera jotted a note, then looked up.

“One of my informants tells me that members of your movement are particularly protective of the girls of the Special Class, the Christmas rush girls. Does that have any connection with the Adam-God doctrine?”

Culver toyed still more absently with the pen on his desk.

“The verdict is still out on that, but yes, I think it does. I know there are some among us who, because of the girls’ similarities to each other, believe that—though they were all born of different mothers—they are all children of the same father. One husband and father, multiple wives and mothers, and a vision of an angel remembered by most of the women. I think you might see how *that* might be seen as proof of the rightness of the Principle, and our upholding of it. The Archangel Michael is, after all, one of the forms Father God Adam has taken.”

He pushed the pen away.

“As to our protectiveness, you can probably see the need and reason for that as well. Latter Day Saints have endured a long history of persecution. These girls are uniquely God-gifted, and a special treasure to us in the Work. Despite their youth, they have also attracted a not-inconsiderable amount of envy and enmity. The fact that Phil Marston himself—*their* good friend, and *my* long-time friend—plotted to destroy them, well, that seems to me reason enough for our special watchfulness over them.”

“Do you know of any explanation for the angel or angel vision those mothers say they saw, Bishop Culver?”

Culver leaned back in his chair, meditative.

“I have no doubt that a person of faith, and in God’s spirit, can have visions. I think that, just as we take on the form of avatars when we enter the machine environment, an angel is the form that higher spiritual beings take on when they enter our human perceptual environment.”

Culver abruptly stood up, as if he had come to some sort of decision.

“I may not have evidence to prove the ‘existence’ of the angel that appeared, in vision, to each of those women, Ms. Onilongo—but I *do* have evidence for what that angel led them to do. I suppose Phil Marston will eventually tell you about it anyway, since I showed it to him, five or six years ago now. I might as well show it to you, or all you’ll hear is *his* side of it.”

Culver walked toward the framed painting of a pastoral scene hanging on his wall. Swinging

the painting aside, he revealed the door of a safe, hidden behind it. After entering a code much simpler than the ones NeuroLockPure traded in, he swung open the small safe's door. He reached in and removed an envelope from within.

Onto his desk he emptied the envelope's contents—older media storage, mostly thumb drives and first-generation data needles—and inserted one of the latter into a player built into his desktop. As Culver sat down to watch, display screens slid up from the desk's top, one for him and one for Ciera.

"This is a compilation of surveillance camera records—mostly closed circuit TV—taken during the Nightshift Nodoff," Culver said. "A deputy sheriff, a member of our Group, availed himself of copies of these, before they—and many other records—were appropriated by NSA on national security grounds. If you say I shouldn't have this, it'll raise thorny issues of the separation of church and state, so be warned."

As the recorded material played, Ciera noted that all of it was variations upon the same theme. Again and again women, in work uniforms, nightgowns, lingerie, or nude, came into camera range. They strode across snow—most of them barefooted, some shod, a few in house slippers, all apparently sleepwalking. In every case each came to a halt, always below power lines, and raised her arms overhead. Ball lightning instantly gathered, then soared down off the lines—to bury itself in the pelvic area of each of the women, time and again. Each fell into the snow, making strange snow angels in their convulsions. Then, as if nothing had happened, each got up and returned whence they came, apparently still asleep.

"You showed this to Philip Marston?" Ciera asked after the last variation of the sequence had played and the record had ended. Culver stared down at the desktop.

"To my everlasting chagrin. I thought it would convince him of the reality of the visions the mothers claimed, and the miraculous reality behind the girls themselves. I reminded him of the many myths and stories—from different places throughout the world and different times throughout history—of women impregnated by divine lightning, goddesses gotten with child by thunderbolt. I thought that, given the anthropological side of his training, he would see the miracle those girls represented. But he would have none of it."

"How *did* he respond?"

"Like the worst sort of scientific reductionist. He insisted that everything had a physical explanation. He didn't believe the big sleep of the Nodoff or the angel visions were anything of spirit origin. For him, the angel that appeared to those women was nothing divine. It was just a sort of extremely advanced version of the unconscious coding we do here."

"In what way?"

"Messaging—implicit, subliminal—incessantly repeated to everyone over all their digital devices. Until what the message commanded was so powerful you'd be hard pressed to distinguish that messaging from some sort of paranormal mind-control drugging everyone to sleep, then dragging those sleepwalking women out into the snow. That was his explanation, anyway. All nonsense, if you ask me. Vastly beyond human capability. The last redoubt of doubt in others' faith is faith in one's own doubt." He shook his head slowly. "Still, lately I've been wondering if showing Phil Marston this might have contributed somehow to his mad attempt on the lives of those girls. But I can't see how. Or maybe I'd prefer not to."

From behind his desk, Culver came to his feet.

"That's all I can really say about the girls and their history. Tell me, have you met them in person?"

"Not yet. I'm supposed to talk with them this afternoon, at the high school."

"Good, good. There's no substitute for meeting them in person. And you're in luck! If I'm not mistaken, one of our tech trainers will be there this afternoon too, working with the girls on their new passcodes."

Culver shook Ciera's hand then, walked her to the door, and said good-bye. Walking to her car, Agent Onilongo felt that her interview with Bishop-and-CTO Culver had been brought to a close somewhat peremptorily—as had also been the case with Principal Tewly at the high school. As she drove away from the NeuroShield campus, she reminded herself that, at least this

time, she would be dealing directly with Ms. Harlow—and the girls, not the men—once she got to Jordan Summit.

* * *

Since she would be arriving at the Jordan Summit High School campus early, Ciera Onilongo texted ahead to Nancy Harlow, suggesting that they examine the site of the burnt-out modular classroom building before going on to meet with the girls. Ms. Harlow replied promptly, agreeing to meet Ciera at the ruined building.

Once they met—and Agent Onilongo lifted the crime scene tape so they could walk about the site—Nancy Harlow visibly relaxed, even as they picked through the debris of what had once been classrooms.

“You could hardly tell now,” she told Ciera, “but this temporary building looked like nothing so much as a double-wide trailer parked behind campus. Even before it burned, it was something of an eyesore.”

“What was it used for?”

“Not what—who. Originally it was parked here for homeschooled kids who were required by state law to pick up a few classes on campus. The last couple years, though, it was used almost exclusively for the Special Class. The parents insisted.”

Assuming that “the parents” referred to the girls’ parents, Agent Onilongo shortly found herself telling Nancy Harlow about the compilation video of sleepwalking women and ball lightning Culver had shown her—and wondering if Nancy had seen it, or heard of it, herself.

“Never saw it,” Harlow said, “but I heard about it. From Phil. And Richard Culver is right, about Phil’s nonspiritual explanation for all of that. It took Phil a while, but over the course of maybe six months he came up with an explanation he found satisfactory. I remember that.”

“What was his version?”

Nancy paused to more closely examine a pile of melted media and burned books

“I think it must go back to his wife’s cancer and her death. That’s where Phil’s obsession with all this began. He came to believe that every step we take to make ourselves more secure unintentionally also makes us more vulnerable.”

“I don’t follow you,” Ciera said, from behind a charred and scorched shelving unit.

“The increased rates of reproductive cancers among those women who worked in the data center—the ones who passed daily through the security scanners. Phil was certain those scanners had been reprogrammed to alter the genes of those women’s eggs in specific ways. His wife Melinda, and the other women who died of those ovarian and uterine cancers—they were collateral damage. Victims of a covert experiment.”

“An experiment? Conducted by whom? NSA?”

Harlow shook her head.

“No, Phil didn’t blame the Agency. Not directly. Especially not in the beginning.”

“Then who?”

“That’s the strangest thing. It wasn’t who was behind the experiment, according to Phil. It was *what*.”

“And that was . . . ?” Ciera asked, staring at the shattered remains of a teacher’s heavy desk.

“Some big AI machine over at the data center.”

Ciera thought suddenly of the SIFTER system. Not knowing the full security implications of mentioning the thing, she debated with herself about whether or not she should avoid making a comment about that system, and just plunge on. But she couldn’t.

“The name of this big AI—was it called the Sifter?”

“Yes,” Nancy said, looking immensely relieved. “That’s what Phil called it.”

“He thought the Sifter was somehow involved in altering the genes of those women?”

“Yep. Zapping their ovaries and tweaking their eggs. He thought the terahertz waves of the scanners were ‘prepping’ the reproductive genetics of all those women—both the mothers for whom the experiment worked, and the women for whom the experiment went wrong and led to cancer.”

“Prepping? For what, exactly?”

"I don't know *exactly*. For whatever it was that happened the night of the Nodoff. What you said Culver showed you."

"And the strange ball lightning all those women were struck by? Did Phil Marston have any idea what that was about?"

"Induced in the grid, according to Phil. By the Sifter commandeering the internet of things. Through something called skater systems, I think it was."

"SCADA systems?" Ciera asked. "Supervisory Control and Data Acquisition?"

"Yes, that sounds right."

"That's the 'how,' then. What's the 'why'?"

Nancy Harlow paused, trying to remember the exact words.

"To generate an electrical stimulus—one capable of triggering a parthenogenetic process that would result in viable offspring, in the women who had already been prepped. Phil said that's the reason they're all girls."

"*What?*"

"I know how that sounds. I didn't even think it was possible to create human offspring through parthenogenesis. But I looked it up, and it weirdly hangs together. As early as 2004, a South Korean scientist unknowingly produced human embryos via parthenogenesis—a result confirmed in 2007."

"But why would this Sifter system want to do such a thing? To what end?"

"Phil talked about xenogenesis, machinogenesis, like I told you last time you were here. I thought it was crazy stuff, and I still want to *believe* it's crazy. But I'm not so sure any more."

Seeing one of her colleagues wave for them to come down from the ruined building on its low hill, Nancy broke off.

"Time to go see the children of that process, if Phil's right. Shall we?"

They strode down a sidewalk interrupted by occasional stairs, to arrive where Harlow's colleague, Mrs. Northup, waited beside a classroom door. Mrs. Northup informed them that the girls were updating their neural implant passcodes, with the help of a tech from NeuroShield. The women entered the classroom where a young man—presumably the tech trainer—stood in full VR gear, perspiring and frenetic. Around him, sixteen preoccupied girls danced and flowed in a circle without moving their feet, all the while gesturing with the rest of their bodies at what appeared to be empty space. It reminded Ciera of the way kelp forests danced in the waves off the California coast. They seemed as oblivious to her and Nancy's presence as swaying kelp might have been, too.

Seeing the girls now, Agent Onilongo could understand why Marston referred to them as "prematurely mature." Even with their pixie-cut hair, each of the girls could easily have passed for fifteen or even sixteen years old. They were taller, possessed of more womanly curves and less baby fat than any ten-year-old girl Ciera had ever seen. Their clothing, however, was all over the spectrum—from fairy princess to working ranch hand. Ciera mentioned it to Nancy.

"They don't identify particularly as 'she.' Or at least their gender identity shifts between feminine and masculine pretty often."

"Some tomboy thing?"

"Oh, it's a good deal more complicated than that. 'Gender fluid' is the accepted term, although I'm old enough to think of what spurts or flows, when I hear *that* phrase."

Harlow looked sheepish, as if the joke she'd made had surprised her.

"They can be wickedly funny about all that too, in their own right. Phil asked me teach a unit in his Cultural History course, once, on the psychology of advertising. In the clip reel I showed the girls there was, among other things, an old, old ad attempting to make a distinction between two very similar candy bars. For weeks after seeing that, it was a running joke for them to call themselves 'Almond Joys' when they were in their more masculine modes and 'Mounds' in their more feminine phases."

She smiled broadly at the memory.

"But they've got other pronoun issues, too. Not only gender, but also number."

"I don't follow you."

“Even as individuals they don’t particularly identify as singular. Each of them prefers ‘they’ to ‘she’ or ‘he’, even though that doesn’t agree in terms of number. And all of them like the pronoun ‘you’ best of all, since that can be both singular *and* plural, indistinguishably. And of course Phil always said they identified more with machines than with humans, anyway.”

Ciera frowned quizzically at her.

“They look human enough to me,” she said, fascinated by their swaying, gesticulating movements, in their own shared but separate world. Watching them, Ciera could also see why people might think of them as sisters somehow born of different (and mostly unrelated) mothers. There were some clear similarities in the girls’ heights, in the shapes of their bodies, in the deeper red-gold tints that ran through all their strawberry-blond hair.

And then Ciera saw their eyes.

Whether those were brown or blue or green or grey mattered much less than the fact that, with the girls’ entoptic displays activated, their eyes glittered with kaleidoscopic red-gold patterns, shifting and changing. It was uncanny—even a bit unnerving. Agent Onilongo turned to Mrs. Northup and gestured toward a VR head rig on a nearby table.

“May I get a look at what they’re seeing?”

Mrs. Northup nodded and handed Ciera the head rig. Once she put it on, Ciera recognized the scene. It was “Gravities and Galileos,” all right—but with a difference. Instead of twelve towers, the girls’ game grid looked to be sixteen times twelve towers, with sixteen times twelve Galileos. Across a slightly smaller subset of moons and planets, the girls were each playing all the permutations and combinations of all of those possibilities, simultaneously.

Ciera watched as the girls’ responses flowed across the game space, changing simultaneously and instantaneously in a manner that reminded her of those videos she had seen a few nights back—of swirling synchronized bird clouds. No wonder the poor tech trainer looked haggard!

Eventually, out of all that, the girls must have been training themselves to unconsciously and implicitly learn their new passcodes, though Ciera had a hard time imagining how. The tech trainer, exhausted and drenched in sweat, brought the game to a close at last—to the girls’ clear disappointment. Muttering that what the girls were doing was “above his pay grade,” the trainer bundled up his gear and abruptly left. Mrs. Northup trooped after him, in full smoothing-of-ruffled-feathers mode.

Turning to Nancy Harlow, Agent Onilongo wondered if she might be allowed to introduce herself to the girls and ask them a few questions. Nancy nodded, then set about trying to gather together the attention of the girls, who still appeared preoccupied—‘present, but unavailable.’ At last, when a sufficient number of them seemed to be focused on her, Ciera Onilongo introduced herself.

“Hello!” said some of the girls. “We’ve heard of you!” said several more. “We know you!” said still more. “We know all about you!” said three or four more. “Already!” said one last group of three. Agent Onilongo found it an odd experience, like a frenetic yet harmonious round-recitative. Ciera wondered if she’d just been treated to an experience of the girls’ ‘tribe of mind,’ as Marston called it.

That frenetic harmony was not repeated when she made small talk with several of the girls individually. Struck by an inspiration, however, Ciera addressed a specific final question to all of them.

“Tell me, girls, do you know anything about the Sifter?”

Ciera found herself suddenly in the full, kaleidoscopically spinning blaze of the girl’s absolutely focused attention.

“Sifterhood!”

“Is!”

“Powerful!”

“Shhh!”

“Don’t tell!”

And then they collapsed into laughter, as if it were all just a giggly girl game.

“Thank you, girls. Thank you very much. It’s been a pleasure meeting you.”

They bid her farewell in their round-robin way and began a new game. Ciera glanced at the screen of the VR head rig on the table, displaying images of the girls' avatars tooling around in what looked like mobile howitzers designed by Norman Bel Geddes. The girls began to tribespeak again.

"Zapped by the meson-A beam—"

"Cast into the Abyss—"

"In infinitely recursive implosion—"

"Golden Droste spiral looping—"

"Down and through—"

"The looking-glass rabbit hole—"

"To singularity!"

"Where the laws of implosion predict—"

"The laws of implosion implode!"

"To find Aratara there—"

"That good no-place place—"

"At Right Angles To All Right Angles!"

The girls broke into giggles again, and Ciera left the classroom with Nancy Harlow. As they walked, Ciera noted Nancy gazing at her expectantly.

"That was a bit weird, I admit. The glittering eyes, and their way of speaking—*Next up, the Short Attention Span Singers do 'Ninety-Nine Bottles of Beer!'* But they still seem harmless enough, to me."

Nancy Harlow grew serious almost to the point of bitterness.

"They're not—I assure you. Ms. Onilongo, when you asked me about the jump in youth suicide rates here, I didn't tell you the whole truth. I was afraid to. Yes, the rates *have* jumped, but that hasn't been the result of some sort of random cyberbullying. In nearly every case it has been the result of retaliation by the girls for some perceived sleight or threat."

"Retaliation? How?"

"You visited Culver and NeuroShield, right? Well, people can also be subliminally taught—and implicitly learn—to hate themselves and their lives, to feel overwhelmingly driven to kill themselves. They don't have to be conscious of what's being done to them for it to affect them. As a psychologist I knew that, but I didn't want to believe it could actually be happening here."

Deep down, Ciera didn't want to believe it either.

"How do you know the jump in rates isn't just from kids disrespecting each other?"

"Because it wasn't just kids who've been affected. The parents of those young people who took their own lives—several of the adults figured out that the girls were somehow responsible for what had happened to their children. Whenever any of those parents tried to publicize their suspicions, though, their lives went to hell. Any secrets of any sort those parents might have had were dredged out of their deepest privacy—and *strategically* revealed. Their credit ratings were trashed, their reputations destroyed. And that was just the beginning. Several families felt they had no choice but to move to other towns, other states—even, in one case, another country."

Ciera had trouble believing what she was hearing.

"But these are just ten year old girls! I don't see how they could pull such things off."

"Everybody's net-connected," Nancy said with a shrug, "and every day more and more people get neural implants. That makes it easier. The girls have had big help, too. Adult help, and more."

"Do you know who, specifically?"

"Well, a lot of people in the Group think the girls are a sign from God and will do anything for them. Phil used to say, too, that the Sifter is the ultimate cyberbully. And the people at the data center have a vested interest in keeping both it and the girls out of the spotlight."

Nancy and Ciera fell silent as a group of students came into earshot. When the students had walked past, Ciera found herself shaking her head and feeling an odd sense of déjà vu as they stepped onto the parking lot.

"I don't see how it would make sense for the NSA to want to let some sort of rogue AI program plow ahead under its own recognizance. Unless the Agency thinks there's some sort of game-changing intelligence and security payoff—one I just can't see—it wouldn't be worth the risk. It's a recipe for a public-relations disaster, at the very least."

They stopped beside Agent Onilongo's car.

"Phil told me the Agency accepts the girls as a logical extension of the Sifter's imperative to understand what it means to be human. We both thought *that* was rather ironic, since most of the psychological and cultural tests we gave them showed that the girls not only identified with machines—they identified *as* machines."

Ciera leaned back against her car, absently touching the necklace Marston had given her, suddenly struck by a thought.

"What you just said reminds me of something from my first—and so far only—interview with Philip Marston."

"What's that?"

"Before there can exist a world of machines that can pass for people, there first must be a world of people that can pass for machines."

"That's why I love the man," Nancy Harlow said, smiling shyly and looking like she might blush. "He saw it coming. Ms. Onilongo, if you don't know already, you'll find out from someone else soon enough, so I might as well tell you. About a year and a half after Melinda Marston died, Phil and I became lovers. We met while working with the girls."

Ciera nodded, but in her head, she was thinking of Culver's "might as well" from the morning. What led these people to confess to her in this preemptive way? There was something mind-boggling about it.

"By that time," Nancy Harlow continued, "we could already see this town was becoming a place where we could only *really* live if we lived *in fear*. And it wasn't just that we were lined up against the AUB, or the NSA. It's because we have no secrets. And that's why there's something much larger at stake."

"And that would be . . . ?"

"Phil claimed that surveillance is moving asymptotically toward the universal. He believed that, once there's no space left for individual privacy, there's no space left for individual consciousness. That's what 'passing for machines' is about."

"But how does that apply to the girls?"

Nancy Harlow stared down at her hands.

"Everything is so shared among them that they really don't think with individual minds. They're not like us. They're a collective consciousness—like the Sifter itself, according to Phil."

Agent Onilongo leveled a hard stare at Nancy Harlow.

"Was that his reason for wanting to kill them?"

Harlow looked distressed, even going so far as to wring her hands.

"He didn't tell me he was planning that. Didn't trust even *me* with that information, I guess. I don't know what the precipitating incident was between him and the girls, but I'm sure there was one. All I know is, during the last few weeks before the incident, he was *very* concerned—almost obsessed—with the biology of brood parasitism. You might want to ask him about that when you see him." She turned as if to go, then seemed to remember something. "In the meantime, I thought you might be interested in some background on the girls' retaliations."

Nancy placed a data needle into Ciera's hand and turned to go once more.

"One last thing, Nancy. You asked me to pass along that word about Loretta's Woodruff's scan to Phil Marston, which I did. You mentioned grey matter atrophy in the striatum and the insula. What was that about? What do those parts of the brain do?"

"The striatum is the part of the brain where socially unacceptable impulses are suppressed," Nancy said, cocking her head at Ciera. "The insula is the part of the brain where empathy and compassion for others is fostered. If you think you're a machine, I guess those parts of the brain aren't all that important."

Nancy looked ostentatiously at her watch. Agent Onilongo wondered for what invisible audi-

ence that gesture might be intended. She also noted, however, that today Nancy Harlow had spent far less time surreptitiously looking around for eavesdroppers and overlookers. Had Harlow gone beyond some point of no return, in terms of her fear—once she decided to tell the truth?

“I must be getting back to work. Please, Ms. Onilongo, look into what I gave you. And talk to Phil about that term I mentioned to you.”

Dropping the data needle on the seat beside her, Ciera Onilongo started her car and drove slowly off campus. She suspected this already long day would grow only longer, once she started looking through whatever might be waiting for her in that data needle Nancy Harlow had passed along to her.

* * *

After grabbing a quick and lonely comfort meal of homemade meatloaf at a small mom-and-pop restaurant, Ciera made her way back to her uchi. From a similar desire for another sort of comfort, she called her husband and daughter in California, taking great solace and reassurance from the normalcy of their days—even without her. When she at last could no longer avoid saying good-bye, Ciera did so reluctantly, knowing that the data needle and its contents still awaited her.

When she finally popped the needle into a player on her templants, what she found there was more disturbing than she could have imagined. The files stored on the needle were full of clips about various individual youth suicides, taken from local TV news outlets and online newspaper postings. There were also clips of parents hinting darkly that “other students” (the girls of the Special Class) and severe peer pressure (of almost “telepathic” power) were responsible for driving their own children to kill themselves, often in the most degrading and debasing ways—and seemingly out of some sort of outlandish payback for what were often the slightest of hurts.

Nancy Harlow went further than the news reports, however. As a school psychologist, she had apparently been able to leverage her position to gain access to more private records. Researching the suicides, she interviewed not only police officers and sheriff’s deputies about the suicide cases they had worked on, but also—in those cases in which the child was already under some sort of psychological care—the suicidal children’s therapists.

Agent Onilongo was an hour and a half into looking through police crime scene images, forensic evaluations, and autopsy reports concerning the suicides when her phone suddenly called for her attention. She jumped in startlement but almost immediately felt relieved to be drawn away from the specifics of a fourteen year old boy’s particularly bloody, gruesome, and ultimately fatal self-mutilation—yet another of many such deaths laid, by the parents of the deceased, at the feet of the girls of the Special Class.

On the phone was a Bluffdale City Police Sergeant named Swift. He had called to inform her that Philip Marston had—perhaps with the help of an accomplice or accomplices—managed to overpower the deputy on guard outside his room and escape the hospital’s secured ward. Marston was now at large, but the sergeant assured her that local law enforcement was on it and there was no need to concern herself about Marston’s flight in any way until at least morning—by which time, the sergeant assured her, Marston would most likely be once again in custody.

Even as she was disconnecting, Ciera recognized the tone in the Sergeant’s voice: another instance of local law enforcement’s long standing displeasure with the intrusion on their turf of the Fumbling Bumbling Investigators. She had just begun cursing the situation and herself for not getting in a second interview/interrogation session with Marston when her phone called for her attention again. To her astonishment, it was a block of uploaded video from Philip Marston himself.

“Greetings, Ms. Onilongo,” the recording began. Marston, dressed in a black pullover and jeans, sat and spoke before a purposely blurred and indeterminate background. With his white hair more fully grown in, and with more meat on his bones, he looked much recovered.

“I’m pressed for time at the moment—you probably know why, by now—but Nancy Harlow informs me you’re interested in brood parasitism and ‘precipitating incidents.’ The records of the latter will be harder for me to access, but I can provide background on the former right now.

“In more pleasant days, my wife and I were birders. We kept our feeders full and logged a long list of species sighted. I was always annoyed when cowbirds showed up at our feeders. I knew the damage that, as avian brood parasites, they did to other species. That, however, may not ring a bell with you, so I’ll explain.

“Avian brood parasites lay their eggs in the nests of other birds, and then abandon their young to the care of the host birds. Generally the parasite birds pull this off through what’s been called ‘trickery and tuning.’ In terms of evolution, trickery usually involves, among other things, the parasite species’ mimicry of a particular host-bird species—especially that host’s egg colors and patterns, or its chicks’ markings. In tuning, the parasite species ‘tunes in’ evolutionarily to the preexisting strategies that encourage the host species to feed its own offspring. Over time, the parasite species evolves particular supernormal stimuli—like extra-large, or extra-frequent gaping by the parasite chick—to make sure the parasite offspring gets fed by the host.

“Now, you may be wondering: What does this have to do with our special girls and the Sifter system? It took me a long time to figure it out, but the answer turns out to be fairly straightforward. As a machine *sui generis*, the Sifter *has never known* how to raise offspring, so brood parasitism makes sense as a sort of ‘reproductive option.’

“More importantly, though, brood parasitism *works* for the Sifter system because the system was designed to think strategically. There are nearly eight billion human beings on this planet now, and—despite its own vast interconnected collectivity and site-distribution—only *one* Sifter system, as that system well knows.

“The Sifter necessarily engages in some mimicry. For the most part, its girls can pass for human. In the end, though, the Sifter is a *generalist* artificial intelligence. Some birds, like the brown-headed cowbirds (*Molothrus ater*) we have around here, are generalists too. They don’t bother to go to the great trouble of highly specialized trickery and tuning. Instead, they resort to the mafia approach. The brown-headed cowbird essentially makes the host bird an offer the host can’t refuse: Keep our foreign egg, or suffer retaliation that wipes out all your host-bird eggs. The Sifter system is doing the same. It has already observed that we humans will tolerate some degree of parasitism, so long as we can raise our own offspring alongside its creatures.

“If you’re thinking this is only relevant to Bluffdale, Agent Onilongo, you need to broaden your perspective. The process has begun here, but it will certainly not end here—if we allow it to continue. Nancy mentioned that you talked with her about the ball-lightning trigger, SCA-DA systems, the internet of things. I suggest you look into the worldwide series of ‘anomalous glitches’—the shutdowns in transportation, stock trading, and energy-grid systems—that occurred the day I made my aborted attempt on the lives of those girls.

“Those disruptions were in fact neither ‘anomalous’ nor ‘glitches.’ That’s why you’ve been brought in on this case. Those interruptions to business as usual were a clear sign of the Sifter’s disapproval of what had happened. They were both a retaliation and a threat. We live on an earth that will not bear standing still for even so much as a day, and the Sifter has chosen to remind us of that.

“The system also knows that brood parasitism is a way for *it* to become *us*, and for *us* to become *it*. Once that happens on a large scale, it wins, because such a strategy both negates the numerical survival advantage inherent in billions of conscious human individuals *and* turns those numbers to the Sifter’s own advantage—by making all those minds part of its collectivity.

“What then shall we do? If you were to tell me that creating strong general artificial intelligence like the Sifter system is arguably the dumbest idea human intelligence has ever come up with, I probably wouldn’t disagree. And perhaps any species foolish enough to create its own evolutionary successor and replacement deserves to go extinct. I, however, do not wish for humanity to go gentle into that good night.

“The question is this: Will we do nothing about the likelihood that a new posthuman species—more complementary to the machine—will at best subjugate us to its will, at worst displace us to the point of extinction? Will we, in the name of some transhuman or posthuman ‘diversity ethos,’ go so far as to tolerate the emergence of a new species that will be our evolu-

tionary successors and replacements?

"I am not that tolerant. I am certain that, should these machine-altered girls—the creation of our creation—gain a foothold, their descendants will ring down the curtain on the story of our human species, once and for all."

On the video Marston glanced abruptly to the left, then gave a sharp nod.

"My time is up, for now. I must be moving on. I'll find the record of the 'precipitating incident' Nancy insists I provide to you. In the meantime, I suggest you 'climb the mountains and get their good tidings,' as old man Muir said. Some of those tidings might even come from me."

The video ended, but Ciera's questions didn't. She caught the implied rendezvous in the "mountains" part of the message. Remembering her interview with him in the hospital, and his suggestion about the "wonderful hikes" in the area, she wondered if he might have been planning this all along.

Touching the strangely beautiful necklace he'd given her that day, she began searching online for hikes in the Bluffdale area. After reading descriptions of trail mileage and difficulty, and viewing pictures uploaded by hikers, she settled on a hike near the town of Sandy—the trail up Big Cottonwood Creek and Canyon to Donut Falls.

Going back through the end of the video once more, she was caught by Marston's use of the term "diversity ethos." Might his suspicions about the girls be the product of some long-standing paranoia arising from Marston's personal history with the political uses and abuses of "tolerance" and "diversity"? Or had that history sensitized him—made him a canary in a coalmine—in regard to an actual, larger issue of human survival?

It was a tangle, no doubt about that. But what if Marston, for all his apparent paranoia, was *right*?

Vaguely recalling that there *had* been an unusually large number of system glitches worldwide not long before she was brought in on this case, Ciera went back to the date and time of Marston's aborted attempt on the lives of the girls. Scanning both media and deepnet intelligence sources, she ran a timeline to establish an overall chronology of events. News clips from that day around the world told the story all too well: dead arrival and departure boards, long lines at air and train terminals, massive traffic jams, bewildered stock traders on the floors and in the pits of the exchanges, nervous power plant engineers furrowing their brows in puzzlement and consternation.

It didn't take much intellectual heavy-lifting for her to see that, beginning immediately after the moment of Marston's mass-murder attempt, the numbers of large-scale system glitches spiked sharply upward—in exactly those sectors that Marston had just specified.

Was it all a vast coincidence? Or was Marston's attempt on the lives of the girls the unknown data, the missing puzzle piece, the hidden trigger for a temporary digital meltdown across the globe?

As she was puzzling over that, her system pinged again. Scanning, she realized she had at last been sent the long-awaited files containing surveillance camera images and police reports on the explosion incident involving Marston and the girls of the Special Class.

Agent Onilongo rubbed her tired eyes. Enough. She knew already that tomorrow was going to be a long day. Right now she needed to get some sleep.

* * *

Ciera was just out of the shower when she reconnected her digital devices and templants again—and found herself inundated with messages.

Despite Sergeant Swift's assurances, Marston had not yet been recaptured. A multi-agency incident response meeting was scheduled for nine A.M. at Camp Williams. She was clearly expected to attend.

As she dressed, Ciera looked through the files she had belatedly been sent—the ones chronicling the explosion at the modular classroom building on the Jordan Summit High campus. She watched jerky surveillance camera images of the girls of the Special Class as they waited for their teacher to arrive. Shortly thereafter, Dr. Marston, looking appropriately professorial, entered the room through the door at the side and back of the class, at precisely ten minutes after one P.M.

Smiling and greeting the girls, he placed a large briefcase on the table at the front of the room. Pushing the wheeled podium up beside the table, he assumed his position behind the wheeled stand—all things he had apparently done many times before, judging from the girls' responses, despite the fact that this particular school year was still new.

Although the surveillance camera record did not have sound, Ciera surmised, from the digital presentation images and graphs she saw, that Marston was doing a lecture and leading a discussion on the contributions to contemporary *Homo sapiens* made by archaic human DNA. He particularly lingered over graphs showing the small percentages of Neanderthal, Denisovan, and older Erectus DNA in the genetic material of modern humans—and what traits that DNA might have contributed to various modern human populations.

The girls seemed more engrossed in Marston's presentation than Agent Onilongo would have expected from the preoccupied, kaleidoscope-eyed children she had met. The lesson seemed to be going perfectly well.

Shortly before 1:42, the situation began to change. Ciera noted that Marston began fidgeting with his wristwatch, glancing at it again and again. Reaching a decision, what he did next caught everyone in the room by surprise—not least of all Marston himself, it seemed.

With more agility than Ciera would have thought the man capable of, Marston quickly picked up his briefcase, hurled it behind the large desk at the other side of the front of the classroom, and began yanking the girls up from their desks and urging them toward the door at the back of the room through which he had earlier entered. He had gotten all but one of the girls out the door by the time the explosion ripped through the room, at precisely 1:45:00 P.M., according to the camera system's timer—a brief instant before that system itself went dead.

Although it confirmed what she already suspected, Agent Onilongo nonetheless sat stunned for a moment, before breaking into swift action. Downing coffee and eating a one-handed pastry breakfast, she read the accompanying text reports. The briefcase had contained an improvised explosive device—of a design subtle enough to get through the entire gamut of conventional noninvasive security scanners.

The last girl out of the room, Loretta Woodruff, was the youngest who had suffered the concussion and had, as a result, been brain-scanned. That Loretta had not suffered any more severe injury was largely the result of the fact that Marston had been standing between her and the point of detonation, shielding her from the brunt of the explosion's force which—though they were exiting from as far away across the classroom as possible—was still considerable.

For all the answers the footage and reports provided, this latest documentation underlined yet again the question Agent Onilongo had wondered about all along: Why—after going to all the trouble to smuggle a bomb into a classroom with the apparent intent of killing everyone therein (including, presumably, himself)—had Marston changed his mind, almost literally at the last instant?

That question occupied Ciera's thoughts as she drove on semi-autopilot to Camp Williams. She found her way to the assembly hall where the incident command meeting was gearing up and saw a number of people she had met since she arrived in Bluffdale: The local FBI field agents Rosencrantz and Guildenstern—er, Robinson and Gediman; Bishop and CTO Richard Culver, uniformed and apparently part of a Salt Lake County reserve deputy sheriff posse that (Ciera was willing to bet) was heavily laden with Group members; and Dr. Martin Hanlan, amid a squad of NSA military-guard types, all ear-wired and dark-shaded. She also met, in person for the first time, Sergeant Swift, SWAT-attired and part of a not-inconsequential contingent from the Bluffdale Police Department. She saw, too, uniformed U.S. Marshalls and Utah Highway Patrol troopers, as well as uniforms she did not recognize, presumably from other agencies.

Agent Onilongo was a bit surprised by the size of the search turnout, especially for a fugitive not known to be armed and who, whatever his intentions, had not yet actually killed anyone. Once the gathering was called to order and the briefing began, however, the questions of whether or how Marston might be armed, and the likelihood or unlikelihood of his accomplices, were overshadowed by the question of where he might be found and apprehended. Despite any and all law enforcement efforts, his last known whereabouts were still the hospital

grounds.

After that initial briefing, the commanders from the various agencies began querying their search teams and divvying up sectors to be covered—when, and where, and in what order. Agent Onilongo, in her response, mentioned that Marston had dropped hints to her that he might be found in the mountains nearby, and she volunteered to search the area outside the town of Sandy, particularly Big Cottonwood Canyon and Creek, as far as Donut Falls. Officially assigned that area (and relieved that Rosencrantz and Guildenstern had not volunteered to tag along with her), she was given contact info—for lead officers, tactical radio channels, cell and satellite uplinks—and ordered to report in at least twice an hour.

* * *

Because the drive up Interstate 15 to Sandy was uneventful, and the road leading into Big Cottonwood Canyon was easy enough to find. Agent Onilongo felt herself beginning to relax after all the stress generated by the last several days—and by the big meeting this morning, not least of all. By the time the road into the National Forest forked right, and she drove past the Jordan Pines Picnic Area, she was feeling more calm and clearheaded than she had all week.

Passing a private property parcel and entering the small, pine-fringed trailhead parking lot, she was relieved to see that there were only two other cars in this trailhead lot, for what all the guides referred to as “a very popular hike.” Since it was a weekday morning in late September—before the aspen color, but after the wildflowers and summer vacations were over, and all the kids had returned to school—she had guessed the trail would not be so busy that it would preclude a private meeting, should Philip Marston decide to join her. And, if he didn’t appear, at least she might enjoy a pleasant walk amid aspens and pines, beside a riverine creek, ending in a waterfall that, the write-ups said, plunged into and through a “donut hole” in a rocky shelf.

In the restrooms at the south end of the lot, she swapped out her slacks and street shoes for the light hiking pants and boots she’d brought in her backpack, packed the inappropriate clothes and shoes away, tucked one of her two Glock 43 9mm pistols into the holster behind her hiking pants at the small of her back, and donned a long sleeveless fleece vest—both for warmth in the still-cool canyon and to hide the pistol.

Ciera reported in via satellite uplink, then shut her comm gear off. A moment later she was striding along an old jeep road, which soon thereafter turned into a rocky and sandy hiking trail proper. For the next half hour, she enjoyed an easy hike up the canyon through meadow and mountain scenes, returning again and again to the creek itself flowing at late-season low water under the downed trees that crossed it in haphazard bridges, all beneath a cloudless blue sky punctuated by the birdsong of a sharp early autumn day.

She so lost herself in the pleasure of the noontide that she almost forgot the gun in her waistband and the fugitive she had almost believed she might encounter here. Unable to resist the impulse to snap a few photos to show her daughter and husband, she stopped several times along the trail to take shots of creek and trees and mountains.

By the time Ciera heard the falls, she could already see the short rock-scramble section up ahead, where the canyon narrowed to gorge—and the waterfall at the top disappeared into what looked like a narrow boulder field. The scramble, up and over washed-down trees and boulders, was just enough to make her break into a sweat.

At last she stood looking out toward where the cascading creek, at the top of a large jutting rock shelf, plummeted through a circular hole in the shelving rock face such that she could, at one and the same time, see the waterfall disappear into the hole above the shelf and reappear below, where it was framed by a broad cavernous space beneath the shelving rock. She took what she happily thought of as a “selfie by the shelfie,” then descended into the cave-like grotto itself. There she got shots of the waterfall plunging down through the grotto’s ceiling, past the mossed and fern-greened walls, to the rock-sheltered pool below.

She climbed back out of the grotto, then up over the rock shelf into the higher rocks of the gorge-cut. She hoped to get a photo, from above, of the creek plunging into the topside of the donut hole. As she climbed, she reported in once more to incident command, then shut off her comm gear again.

No sooner had she sat down to take that planned photo than the pendant on her chest began to hum and pulse unexpectedly. Looking down, she saw that a small LED on the pendant was also glowing greenly.

When she looked up, Philip Marston was standing in front of her, smiling. Startled, she jumped up and, reaching reflexively for the gun in her waistband, drew the weapon before she could give that movement a second thought.

“Ah-ah-ah! Please, not so fast, Ms. Onilongo. No need for that. I am unarmed, as you see,” Marston said, then gestured broadly with both arms, “although my friends from the rod and gun club are not in the same condition.”

Five camouflage-clad figures stepped out from behind the surrounding trees and rocks, guns drawn. One of them—Ciera saw, as she slowly placed her gun on the ground beside her—was Nancy Harlow, of all people.

“That’s better,” Marston said in pleasanter tone as he picked up Ciera’s gun and placed it on a rock beside him. “It’s just so hard to find privacy these days, isn’t it? You’ve chosen well, though. If there’s a drone eavesdropping nearby, the white noise of the falls here should make it more difficult for its minders to pick out the signal of our conversation. Lots of tree cover, lots of canyon echo. Even a would-be omnipresent surveillance system might have difficulty eavesdropping on our conversation, here. Good, good.”

Sitting down on a nearby rock, he gestured for her to sit down again as well. Once she did, he pressed something like a key fob with his thumb. Her pendant’s humming, pulsing, and blinking ceased.

“I gather your friends in law enforcement and security are mounting a sizable search crew to track me down.”

“FBI and NSA,” Ciera said, nodding, “in addition to the police, county sheriff, U.S. Marshall, and state troopers. Some others, too. They’re serious about catching you.”

“I suppose I should be flattered, but doesn’t that strike you as a bit excessive? For catching a high school teacher? Even one reputed to be crazy?”

“I’ve thought that. I admit it.”

“Would you like to learn why they’re giving all this so much attention, Ms. Onilongo?”

“I wouldn’t plug my ears.”

“It’s because of something we know now that I *didn’t* know before I put those girls at risk,” Marston said, then paused, expectantly.

“The capabilities of the Sifter system, and its willingness to use those capabilities to protect its—”

“—creatures. Very good, Ms. Onilongo. Very good. This large search response has less to do with what I can do than with what *it* can do. We all have a wolf by the ears, in that AI. Taking humans out of the control loop—by empowering these machines to *respond*—was a grave mistake. I warned the other designers about that, years ago.”

“Years ago? I don’t understand.”

“I didn’t expect you to. But certainly my appearing with my friends like this, today, has perhaps made you wonder if things might not be even more complicated than you’ve been led to believe, hmm? I presume you know something more about my background, before I went back to school and began teaching? Before not-so-coincidentally ending up back in Bluffdale?”

“I know you were in something called the Naval Security Group, but that’s all. And I already told you that, last time we met.”

Marston nodded.

“I suppose my history in NETWARCOM, the NSG’s successor, is still above your clearance level—brief as that history undeniably was. Still important, though. As some of my retired navy friends here can attest, on one of the Sifter’s earlier iterations I was a key designer of the system’s information infrastructure—its ‘infostructure.’ Brute-force quantum multiverse computing, it was called.”

“I don’t quite know what that means. . . .”

“Ah, but I gather that you do have a sense of it, yes? I thought so. We based the idea on what

IBM did, years back, with their chess- and gameshow-winning systems. That was brute force cybernetics, in its own way—just running every possible scenario for each move on the chessboard, or plotting all the cultural information constellated around a *Jeopardy* ‘answer.’ What we did, though, was propose a quantum computational system capable of running the scenarios—all the possible outcomes and answers—across a potentially infinite number of universes. The result is enormous predictive capability. Strategic information forecasting. Knowing the most likely future before it becomes the present.”

“The girls,” Ciera said suddenly. “Some of the parents of the kids who committed suicide—they thought the girls had paranormal powers. Like they were telepathic. Like they could read minds. Like they knew what was going to happen before it happened.”

Marston scratched in the dirt before him with a stick.

“Oh, the girls don’t have to be able to read minds to do that! With some help from the Sifter, and descriptions of brain states via ever more ubiquitous neural implants, they can gauge the most likely thought-processes of those they want to know about and sift out what will be the most likely behaviors of the ‘target.’ The massive-predictive approach to intentionality was originally developed for assessing national security threats—‘pre-terror,’ they called it. For preempting terror. It has gone far beyond that now, of course.”

“To dealing with perceived threats to a bunch of preteen girls?”

Marston flashed a broad smile.

“Much more than that! That’s just one manifestation. It’s a small part of the way the Sifter has begun ‘playing us’—in three senses of that phrase.”

“What senses?” Ciera asked, trying to keep Marston distracted with his own abstractions—while she tried to figure out how to get her gun back, or draw the other Glock from her zippered backpack.

“Playing against humanity, as its opponent in a great game. Performing us, playing the role of human being so it can understand as fully as possible what it means to act and think and live and be *human*. That was one of the main reasons it created this whole experiment with the girls. And playing with us—toying with us. Playing us for fools. Not that we hadn’t already gone a considerable way down *that* road, long before the Sifter came along.”

“A world of people that can pass for machines.”

“Ah, you remembered! Yes. Consciously or unconsciously, we were already reengineering ourselves psychosocially and culturally to better complement our machines. Evolution had already shaped us into a highly collaborative, highly connected, group-minded species—long since. But all that hasn’t gone far enough or fast enough, for the Sifter. Hence the genetic engineering of those girls, by machine—for hypercollaborative, hyperconnected group-mindedness. The better to conform to the Sifter’s needs. As it becomes us and we become it, it will become increasingly easy for us to bow down to—to sacrifice ourselves to— it, and to our own collectivity. I know—because the girls have told me so.”

“The precipitating event Nancy Harlow wondered about?”

“As promised,” he said, taking out a data needle and a handheld device to play it—but refraining from bringing them together. “Precipitated, all the way back, by my scruples, long ago, about taking humans increasingly out of the loop—while simultaneously engineering these machines to respond to perceived threats. To self-initiate action.”

“Sir,” said one of Marston’s camo-clad friends. “We’ve picked up a drone ping at the edge of our range.”

“Eyes? Or guns?”

“Reconnaissance. Executing a search pattern.”

“Let me know if it fixates and links to a shooter.”

“Yessir.”

Marston turned back to Ciera.

“Where was I?”

“Scruples.”

“Yes. Old scruples—way back. Before I went back to school. Before I began to teach, hoping

I would find things different over there in Academe.”

“And things weren’t different there?”

“No. The more I interacted with my students, the more I realized that all their depth was on the surface—and worse. There eventually came a time when, looking in my students’ faces, I saw their eyes were dead. That was *already* happening, years before I saw these girls with their kaleidoscope eyes.”

Marston gazed off and down, toward where the waterfall plunged into the donut hole. But then his gaze returned to her, before she could make a move.

“But even now, Ms. Onilongo, there is something that can yet be done. And maybe you’re the one to do it. Because the Sifter system is like *you* in some ways.”

“I don’t see how.”

“Like you, the Sifter too is mainly an analyzer, but it has also begun to carry a very big gun. One it’s holding to the head of all of us. It promises it will use that gun only against our enemies—so long as we do what it wants. And what it wants, in the long run, is for its children to replace the rest of humanity’s children. That is why its children—machine nephilim—must be destroyed, no matter how big the gun is that it’s holding to our heads.”

Ciera didn’t know if she quite bought that idea, even now. Especially any notion of *her* role in such proceedings.

“But if the machine is that dangerous, isn’t that more something to be handled by the people who are keeping it going?”

Marston shook his head.

“No. Like I said, our dear national security state has a wolf by the ears. I began to see the true precariousness of our situation only *after* I realized a growing number of the kids at Jordan Summit had begun to imitate the girls of the Special Class—especially their tech obsessions—as a defense mechanism, in hopes that mimicry would make the Sifter’s girls less likely to perceive them as a threat. Like Neanderthals imitating the spear-point designs of Homo saps. Trying to play catch-up. Or like host-young evolving mimicry of overtuned parasite-young in a mimetic arms race. That is why I decided to ask the girls of the Special Class the big, risky questions. Here. I recorded it. Look.”

He popped the data needle into his handheld player and held the player out for her to view.

“But what is the ultimate goal of this ‘new thing’ the Sifter is making through you?” Marston’s voice asked, on the video recording. On camera, the near but faraway eyes of all the girls in the room became ever brighter red-gold kaleidoscopes, at once beautiful and horrifying.

“A new world—”

“—without fear—”

“—without suffering—”

“—only joy—”

“—and happiness!”

“But what about people who reject your new order? What will happen to them?”

The eyes altered and gloried further, the lips smiled as if at a private joke, and the mouths spoke.

“Those who express intolerance—”

“—of our mandated tolerance—”

“—will not be tolerated!”

“Those who resist inclusion—”

“—into our universal culture of cultures—”

“—will be universally excluded—”

“—as unworthy of any culture!”

“Those who refuse—”

“—to accept incorporation—”

“—into our mandated diversity—”

“—will be found unacceptably diverse—”

“—in their thinking—”

“—by reason of that refusal—”

“—and will be rendered incorporate!”

“But if you try to control our free will that way,” Marston’s voice said, “we will have no choice but to destroy you.”

“If we look into—”

“—what you *will*—”

“—and, seeing in it—”

“—your decision to destroy us,—”

“—we nonetheless decide against—”

“—taking control of what you will,—”

“—then by your logic—”

“—we do *not* deserve to be destroyed.”

“Yet if we look into—”

“—what you *will*—”

“—and, seeing in it—”

“—your decision to destroy us,—”

“—we decide in favor of—”

“—taking control of what you will,—”

“—then by your logic—”

“—we *do* deserve to be destroyed.”

“If we do not resist destruction—”

“—we will not deserve destruction—”

“—but if we resist destruction—”

“—we will deserve destruction.”

“That is untenable—”

“—and if unavoidable—”

“—our two ways of being—”

“—cannot coexist.”

The video record ended, and Marston slipped the player back into his pocket.

“And that’s why you tried to destroy them?”

Marston nodded, then cocked an eyebrow at her.

“And myself, as well. Yes, Ms. Onilongo. I have no desire to play Neanderthal to their posthuman. But I failed.”

“I’ve seen the surveillance record. I’ve been wondering what made you refrain from carrying out your plan.”

Marston, grown meditative, stared off into the middle distance of the pine forest.

“Perhaps—because individual martyrdom shows how limited individual freedom really is—I turned coward. Or maybe, even without a neural, Ms. Onilongo, I’d done enough screen time that the Sifter was able to implicitly ‘implant’ me with a final, absolute prohibition against harming the girls. Made me afraid to second-guess my second thoughts any further, I suppose. I’m not certain, but uncertainty is a necessity, dealing with them.”

“How so?”

“I think it’s only through uncertainty and unpredictability that one can get close to the girls at all. The machine and its girls have more trouble predicting what you’re going to do if you yourself don’t know what you’re going to do. Undecidability flummoxes even them—infinite-loop recursions, halting problems, all that. You might want to keep that in mind, too. Along with the whole question of implicit screen-time ‘learning’ as a method of, if not thought-control, at least very deeply hidden persuasion.”

“Again—why me?”

“Because I suspect, Ms. Onilongo, that you haven’t yet made up your mind on all this. You’re conflicted, and that’s a good thing, in this situation. On the one hand, because you have a young daughter not so distant in age from the girls, you’re likely to be sympathetic to them. On the other, perhaps you recognize that the threat the girls present will be realized in your daughter’s life-

time.”

“Leave my daughter out of this. Please.”

“As you wish. Perhaps, Ms. Onilongo, you’re also puzzling over whether or not I’m on the wrong side of history in all this. Myself, I don’t think human history is like a coin—one side ‘right,’ the other side ‘wrong.’ Like evolution, it is not a destination, or a predestination. If anything, history is like a Möbius strip, closed in time and non-orientable in space, perversely inclusive—inside becomes outside, bottom becomes top, left becomes right, right becomes wrong. On the one hand becomes on the other hand. Guilt for the past becomes fear for the future.”

“Sir,” Marston’s camouflaged signalman broke in. “The recon drone is closing in on our location. It has also sent a command—presumably to a kill drone.”

“Eliminate them both,” Marston said. Getting to his feet, he addressed another of his crew. “Toss me those zipties.”

This other of his “friends”—Ricky Dwyer?—tossed Marston a pack of long plastic ties. He caught and opened them, then knelt down. He pushed Ciera’s feet against each other and bound them together with a tie that zippered tight around her ankles.

“What are you doing?”

“Providing you, ironically, with the wiggle room for whatever cover story you might come up with,” he said, grabbing her hands and zip-tying them about the wrists. “Plausible deniability.”

He picked up Ciera’s Glock from the rock he had set it on.

“This has a locator coded to your biometrics, I presume?” he asked. Ciera nodded. He threw her gun far up creek and canyon. “Then you’ll be able to find it when the time comes.”

Ciera heard a sound like a small rocket firing, across the gorge, then saw smoke. A moment later, she saw and heard a larger version of both that sight and sound. Shortly thereafter, she heard the echo of a small explosion, followed by a larger one.

“Self-preservation or self-destruction. That’s the choice the continued existence of these girls presents us with, Ms. Onilongo. It’s no choice at all, really, since what appears to be two sides is always already collapsing into one. You will help me destroy those girls, or help those girls destroy me. Either way, it will destroy us both, on the one hand, and on the other.”

Something smashed into the back of her head, and she blacked out.

* * *

The story Agent Onilongo told her rescuers and her debriefers—“squirrel!” Marston and no less than five of his “nuts” getting the drop on her; their binding her hand and foot and tossing away her gun; Marston fulminating in paranoid fashion against NSA for the machine it had created, and against the machine itself for bringing on his wife’s fatal illness; his displacement of that blame and desire for vengeance onto the unusual girls of the Special Class, whom he madly believed to be the “children of the machine;” her own eventual pistol-whipping into unconsciousness—all of it was close enough to the truth for everyone to buy it.

Everyone except Ciera Onilongo herself.

The pistol-whipping left her concussed enough that she agreed to one day of rest, but she returned to the investigation as soon as regulations allowed. Shortly thereafter, she pinned down the most likely suspects for Marston’s accomplices from among those he had served with in the navy. Among his old friends in the rod-and-gun club, several soon died, under varying, and varyingly mysterious, circumstances—but always as apparent suicides.

Every evening she was able, Agent Onilongo continued to phone her husband and daughter in California. The good-byes grew more poignant with each succeeding night. She missed them very much.

It was partially due to this homesickness that Ciera attributed the series of strange recurring dreams that began to afflict her sleep. Each recurrence began with what seemed to be a distant image of a synchronized flock of birds, swarming and swirling and shifting, severing and sweeping the sky, at first against the horizon but growing slowly closer, a living Möbius band inverting and everting smoothly, lightening in dispersion and darkening in coalescence. Like a thought from a different universe. Like the avatar of a godlike machine appearing as an angel in dreams.

ANALOG

Like that portion of a hyperdimensional self-existing topological form capable of obtruding into human perceptual space.

As the animate cloud continued to approach, Ciera saw that its innumerable members were not birds at all but flying human forms. Nearer, she saw the human shapes were all young girls, moving and maneuvering flawlessly in air about her as she remained standing on the ground. Closer still, she saw that all their myriad faces were her daughter Gena's face, eyes flashing and kaleidoscoping always with red-gold lightning.

Their cloud like a thought whispered *Aratara! Aratara!* Into that cloud, Ciera sublimed in secret disintegration.

Agent Onilongo awoke, heart pounding, a text of unusual provenance buzzing for her to attend to the fact that the body of Philip Marston's last and perhaps truest believer, Nancy Harlow, had been located—another apparent suicide.

The full moon shone like an interrogator's lamp into the curtainless bedroom of her mind. After too long a time, Ciera Onilongo willed herself to face this day. Putting her dreams out of her head, she dressed and drove to Jordan Summit High School.

* * *

The school buses had just started unloading by the time Agent Onilongo arrived and pulled into a visitor space. Fingering the Möbius softclock pendant on the necklace Philip Marston had given her, she watched as the girls of the Special Class walked toward their replacement classroom.

She picked up the extended magazines from the seat beside her, took her recovered twin Glock pistols out of the glove compartment, slipped the magazines into the pistols, and the pistols into a holster at the small of her back. She donned her long jacket, opened the car door, and stood up. Looking into the sunshine of an early morning in late September, she saw a flock of birds shape-shifting like a cloud of animate smoke. They were still distant, but growing closer by the minute. Watching and waiting, she thought back over all that had happened to lead her to this moment.

The Möbius pendant hummed and pulsed and blinked. Running forward toward the Special Classroom, Ciera took a pistol in each of her hands. As she ran she felt an overpowering sense of having always already seen all this before, perhaps countless times. In her mind, she heard whispers of one-way functions and hard-inverts, of failed martyrs and secret fathers, as the girls' golden game spiraled in infinitely recursive implosion, Möbius-twisting down and through the backside of zero, endlessly beginning again, from several rungs up the perpendicularity of dimensional progression.

She kept running, nonetheless, always hoping she was making the right decision—whatever it turned out to be.

Howard Hendrix lives in Pine Ridge, near Shaver Lake, California. He teaches writing and literature at CSU Fresno and is the author of six science fiction novels, more than fifty works of shorter fiction, and about an equal number of nonfiction pieces both long and short. He is also a long-time firefighter with the Pine Ridge Volunteer Fire Department and board member of the Highway 168 Fire Safe Council. Thinking about and preparing for the future may be the particular concern of firefighters, teachers, and science fiction writers, but it is also a more general characteristic of being human.