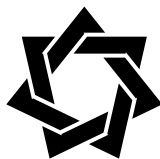


**WWW**

**The End of Time**



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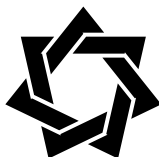
(non-fiction)

# **WWW**

## **The End of Time**

**a novel by**  
**Neal R. Wagner**

**CreateSpace**



## WWW: The End of Time

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To my little sister, whom I hardly knew:

MARTHA ELLEN WAGNER

27 August 1944 – 20 February 1945



And power was given unto [Death] over the fourth part of the earth....

... there followed hail and fire mingled with blood, and ... the third part of trees was burnt up, and all green grass was burnt up.

... a great mountain burning with fire was cast into the sea: and the third part of the sea became blood;

... and the third part of the sun was smitten, and the third part of the moon, and the third part of the stars; so the day shone not for a third part of it, and the night likewise.

... men [shall] seek death, and shall not find it; and shall desire to die, and death shall flee from them.

... and there fell a noisome and grievous sore upon the men which had the mark of the beast....

*The Revelation of St. John the Divine, King James Bible*

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# 0. Downturn

**7 Sep 2021, Washington, DC**

**M**ELISSA WOULD always remember it as the day her finches died. She'd been excited that morning to see her first hawk, flying quite high, but the electronic binoculars let her see it clearly. Her class was at the North Lookout Point of Hawk Mountain Preserve in central Pennsylvania, the best place in North America to see raptors this time of the year.

Someday she wanted to come to Hawk Mountain physically, not a virtual visit. The book said it was a rough one-mile hike along a rocky trail to the lookout point. Too bad schools mostly had to use virtual experiences now. Still, the hawks they were seeing were actually flying past the mountain right then. It wasn't a recording.

The guide's words appeared at the bottom of her viewing field—important for her because she was deaf. Half a dozen deaf students went to her special school, Roosevelt Academy, but none were with her today. Two of them used hearing aids, although all could sign with her. Three of the teachers could sign also, and one, a young man, was on this outing. He couldn't sign well, though. It was annoying to follow his slow and clumsy, and often mistaken signing, and to slow herself down, making baby signs. He didn't make the right facial expressions either.

The guide was a volunteer but had worked at the mountain for years and was familiar with the preserve and its birds. "We used to have total counts for the four-month season of twelve thousand birds sighted. Since 1934 we've been keeping a count of the numbers and kinds of birds that come through. But the last

few seasons the counts have been down, especially with certain species. This season we may have eight thousand or so, which is worrisome because it's part of a downward trend. Also it's distressing to see several species disappear."

The guide, an elderly woman, seemed "distressed" all right, as if she was angry with them personally. The missing birds weren't their fault. Okay, maybe they were. The guide went on: "Experts don't see a single reason for the decline but think the falling numbers result from many factors, like insecticide use, air pollution, loss of habitat."

Melissa's biology class had regular environmental outings, usually one each week on Wednesdays. Even though Mr. Matthews, their teacher, tried not to be negative, the refrain in North America seemed always the same: drastic decreases, especially in the of number of species—the ever-decreasing diversity. He had been going to these places for years, although only recently virtual visits, and Melissa could see how disconcerted he was to see the changes, the losses. One time they had gone to what was billed as a beautiful wetlands area at the shore, but it was gone completely, just missing. Only the cameras were left.

\* \* \*

When Melissa got home from school her mother looked upset.

"What's the matter," she signed to her mother.

"Bad news," her mother signed. "I am really, really sorry. While we were off today, your finches died, all six of them."

"No, no. How could that happen? Let me see them."

"It might have been yesterday or last night. I didn't check this morning."

"I checked early, before I left. They looked fine."

The cage was outdoors still, as long as the weather stayed mild. The finches were all lying on the bottom. Melissa picked up each one separately to make sure it was dead. Raising a special breed of finch, called an owl finch, was a project she was

working on in coordination with the Washington National Zoo. They came from Australia but were commonly bred in America. The project was designed to get children interested in wildlife—not necessary for her, but still she was fascinated with the work and loved her finches. And the breeding had gone very well. She used a special nest box, and from two, she had gotten to six, with two batches of two little eggs, and then little finches, and now back to none.

Her mother was crying but not Melissa, who never cried. Why was it important to show no emotion or weakness to her mother? She didn't know, but inside she felt sick, as if she needed to throw up.

She looked at each bird again with a magnifying glass. Nothing unusual to see. She put them in separate plastic bags and stored them in the refrigerator. From her orientation at the zoo, she knew that for a later necropsy they must be sealed away and kept cold but not frozen. That night she had trouble getting to sleep, thinking about her finches, looking like tiny owls.

\* \* \*

Early the next morning she sent a message to Dr. Ratcliff, the bird specialist and veterinarian she had worked with at the zoo. She briefly stated the problem and asked to computer chat with her. At 10:30 she got the return call from Ratcliff and left the classroom to focus on what might have happened.

On her droid she used the account name “melten,” short for “Melissa-ten,” since she was ten years old, well, almost ten. Ratcliff knew she was deaf and that they would need to type back and forth.

**ratcliff:** Sorry to hear about your finches. Tell me how they died and if you noticed anything special about them, before or after.

**melten:** thanks for answering quickly. during the course of one night, at most 10 hours, they went from looking and acting normal to dead. i looked at each of them and couldn't see anything. i have them refrigerated in plastic bags.

**ratcliff:** Will you feel bad if I speculate about what may have happened? Unlike you, I'm accustomed to animal deaths, and I'm not dealing with my own pets.

**melten:** go ahead and speculate. i'm pretty much ok.

**ratcliff:** Since they all died, and over such a short span and without seeming ill ahead of time, one possible cause is exposure to some toxic substance in your home environment. Like a spray for roaches or other pests, even a deodorant spray, or maybe a toxin in their food or water. With a necropsy we would have a better idea.

**melten:** their cage was outside on the balcony, since it's still pretty warm, so they didn't get any kind of spray inside our apartment. they got the same seeds they always get and the same water mom and i use.

**ratcliff:** Perhaps a disease, then. Another possibility is just our polluted air. It could make them more susceptible to a disease, and once one of them catches something, it would spread to the others. We've had some bird deaths at the zoo that might be due to air quality.

**melten:** have you had many birds die?

**ratcliff:** I need to rely on your not talking about this to the media or friends. If we have a "celebrity" death of a popular animal, we end up with a lot of bad press. To avoid a backlash, we have announced some bird deaths, but we haven't talked about them much. Anyway, we've had an alarming number of deaths similar to yours. We

haven't found much of anything wrong with our birds. The absence of other possible causes may point to respiratory problems. I'll be honest. Normally we wouldn't do a necropsy on pet birds like yours. Our resources are limited. In this case I want to, just to get another sample from outside the zoo with the same illness symptoms. Can you bring your birds to my office? Even today before 5 if that works for you.

**melten:** yes, i can make it, but it may be close to 5.

**ratcliff:** That's fine. Keep them on ice when you bring them here. Thanks.

**melten:** Thanks for your help. i'll see you at 5.

Melissa signed off. She decided not to return to the class she'd left. What a stupid class anyway, just geography. Why were geography classes always worthless?

After school she stopped by the apartment to get the birds, packing them along with ice inside an insulated lunch box. Since her mother wasn't home, she didn't need to argue or listen to cautions about being careful. She caught the Metro at the Rosslyn station, changing at Metro Center, and then going up to the station past the Zoo station, since then you could walk downhill to the zoo instead of uphill. The trip took an extra half-hour due to missed trains, but she had allowed plenty of time. Any more she expected bad service.

Dr. Ratcliff was in her combined office and lab. She put Melissa's birds in a refrigerator. They communicated a bit awkwardly for a few minutes by writing notes to one another. At one point Ratcliff wrote "Canary in a coal mine" on her paper and then wrote that there were canary warnings all over now, everywhere. Already ten years ago there had been the collapses of bee colonies, and the deformed frogs in "fresh" water. Now birds were dying of the air.

Later Melissa looked up records of air quality for the Washington DC area. That data showed a steady degradation for years but with so much variability that it wasn't as startling as it might have been. A lot depended on how the wind was blowing, from local winds to the jet streams. Demand for electricity in the central states west of them was a big influence on pollution. Another major part came through the upper atmosphere from coal-fired power plants in China. In the past few weeks pollution from power plants had been particularly bad, augmented by huge quantities of dust, also from China and from North Africa.

She gripped the edge of the table before her in anger. Her finches were gone, due to human actions, more than any other factor the insatiable demand for electric power, power generated by dirty black coal from under the earth.

## 25 Feb 2022, New York City

I RECOGNIZED THE MAN immediately as he came into the restaurant. I had picked “The Full-gorg’d Falcon” as a place to meet because it was very expensive—anything to make the right impression. Greg Hinman looked older than the picture in the folder Konrad had assembled. That’s all right, though. Many people use pictures of a younger version of themselves. A tired-looking, middle-aged man in a rumpled suit, so certainly not a banker, but you would never guess he was an important computer chip designer. We chose him because he seemed vulnerable, and needy, and angry with his company—a much better prospect than the two employees I had interviewed earlier. If he was a failure we would need a different approach.

I stood up and walked over to him. “You must be Dr. Hinman,” I said. “Glad to meet you.” Yada, yada, the usual stuff. Must not be garrulous (a word I had just learned). Hinman

seemed smart, analytical, watching me carefully.

“Please call me Anton,” I said, “and if I may, I will call you Greg.” Anton Richter was the name I was currently using, for more than a year now.

I invited him to my table. An obscenely large tip had produced a beautiful view of the city. I waved to my new waiter friend, who handed us menus. I suggested a drink to start with, recommending the restaurant’s whole page of martinis. Hinman picked a dreadful-sounding one full of flavored vodka and fruit liqueur. He lived in California, after all. I ordered a similar drink, forgoing my usual cognac; all the sacrifices I make to advance my agendas. We talked through various topics: life in New York City, the horrendous situation in Africa, the huge red bloom in the Caribbean. At my suggestion, we had another round of drinks. Earlier I had settled it with my waiter that my guest’s drinks would have more alcohol than mine.

Essential was to convince him that I was a technical person, one who could almost function as a peer. I also needed to get to the subject of the chip project. I started in with security. “For two years now we’ve been working on a secure operating system. My orientation is more on hardware, but my group includes good software people. We based our OS on the old open source Minix 3.”

“Oh, yes,” he said, “Minix 3. By coincidence I’m familiar with it. I read some of Tanenbaum’s book, from, um, fifteen years ago. Very elegant, minimalist. But they’ve already used it to make a more secure OS. Several companies market what you’re talking about.”

“Of course. But all the work is open source, so instead of starting from scraps, uh, I mean, from *scratch*, we combined features of different projects. And we are pushing ours for general-purpose use instead of small embedded systems.”

I continued this way, as if I were making a real pitch for

my product, as if I cared about it. After describing the system's features, I said, "My people named it 'Minus' as a sort of word play." In fact, they were geeks, living in a closed world where each software system should be a self-referential acronym.

"Uh, Minus? Sorry, but I haven't heard of it. I've been pretty well tied up lately...."

"Trying to get the StackForce line out the door," I said, completing his sentence.

"Some of our PR people would be upset to hear that word. They haven't released the name yet."

"A company I gained partial control of two years ago is working on specialized components for your project, with the usual non-disclosure agreements. So I thought I could throw out the name with *you*."

"Yeah, what do I care," he said. "It's been a tremendous effort, but they're getting closer to a product."

In fact I knew a great deal about their chip: a radical design with a base chip and auxiliary chips stacked above, ultra high-speed vertical optical connections. "It should really shake things up at the high end."

"They hope so," he said, "but it's an extremely competitive market right now 'at the high end' as you say."

"We want to create a system based on our OS and on StackForce. We need the standard stuff: technical specifications, a chip simulator—so we can get preliminary work started. It might be a money maker for us." In truth, the money meant nothing to me, but I wanted to push this hardware.

"You don't need me for that," Hinman said. "It's routine. We have a group getting vendors like your company up to speed. The chip set is complicated to program, but they've got tools to help."

"Yes, I know about that group. I want to pay you personally to help us with StackForce and maybe talk you into doing more



work for us.”

I had already decided on partial honesty. “Greg, I’m going to lay my cards on the table, so to speak. Some of my cards. First of all, I have heard rumors about you. Nothing secret, just facts anyone could find out. I hope you have no objection.”

“I don’t know. Depends on what you found out.”

“That you are one of your company’s best people. That considering your skills and value to the company, you are undervalued and underpaid. Forgive me for bringing up such a sensitive issue.” I knew much more—that he was short of money, because of a divorce and his low pay, and most of all because one of his children had health problems. My people had found out that he resented terribly the way his company and its health bureaucracy had cut him out of certain benefits for his son.

He was working on the third drink and should be feeling mellow, except that I knew he was not a mellow type, even full of alcohol as he was.

“Are you offering me a job?” he said.

“Well, yes, as an occasional consultant to help us use the new chip set. I’ll work on getting your company’s permission, because as you said, they already have people doing this. They’ll do anything to push their hardware. Your CEO would sell drugs to his children or put his own mother into the sex slave trade to help his sales—what a terrible person.”

“You’ve got that right. He’s been all over the news lately.”

I went on about how lucrative the consulting work would be, mentioning an amount of money larger than anything he could have expected.

“You’ll have that as an electronic cashier’s check this very evening, a fee for your, ah, consultation with us today and tomorrow. Everything will be out in the open. You tell your supervisor about the consulting. You don’t tell them how much, but you pay taxes on the fee. Nothing under the table.”

“This all sounds strange. I don’t know....”

“And I want you to do a little more for us than what I have said so far.”

“Well I’m damned. You’re talking about industrial espionage, aren’t you. Why don’t we kill someone while we’re at it?” Not a happy person. “You’ll get me fired, disgraced, in jail, broke. Do you think I’m crazy?”

“No, nothing like that.” I was trying hard for the complaisance of a courtier (more of my study of English).

I finished my own low-alcohol drink and signaled for two more. “It’s simple. You take the fee, talk with me some more, and if you don’t like what I say, go home happy. What about it? I want you to hear me out but in strict confidence. In exchange for the fee, you will tell no one what we discussed. If this works out, there will be many more consultations.”

“Isn’t there some law against conspiracy?” he said.

“Lighten up, Greg, as you people say. It’s only a conspiracy if you seriously consider doing something. We’ll talk only, nothing else.”

After some further persuasion, he agreed to take the fee and to have our further “talk.” This was a step I had not reached with Hinman’s two colleagues when I interviewed them.

I decided to tip-toe in the direction I wanted. “Now that we worry less about software viruses and about worms and trojans, it seems to me one final vulnerability is a weakness hard-wired into the chip, deliberately inserted. Have you heard of anything like this?”

“Well, years ago there were some ‘hack the microprocessor’ experiments. They got a chip to inject firmware into its own memory, firmware that let them get access to the machine using the chip, the hacked chip. That approach wouldn’t be possible with our chip. People also talk about the Grand Opera of attacks, where a virus would attach itself to the computer code

that manufactures a chip, and it would insert a flaw directly into the hardware chip itself. I don't think it could be done now. Even if it could, they'd probably find the flaw in the final chip."

We talked about other matters over more drinks and dessert, an excellent soufflé. At this final moment I was nervous, but what did I have to lose, except the whole game and a lot of time wasted? "Do you think it would be possible to put flawed logic directly into a major chip? Not using a virus, but directly."

"It might be possible, sort of theoretically, but very difficult, even for an insider. Impossible for an outsider. And suppose you could do it. You understand they do lots of testing of these chips. Initially of the high level description. Later testing is mostly for manufacturing defects, but even that might uncover flawed logic."

He continued before I could say anything else. "For years the DoD has been paranoid about deliberate flaws in military chips, say for a weapons system or a satellite. Make a chip that will fail randomly; that wouldn't be so hard. So a satellite lasts only months instead of years. But DoD is worried about actual flawed logic inserted—like a backdoor. It would make a good cartoon for a chip trade magazine: a swarthy middle-easterner, wearing one of those Arab headgears, and carrying a Kalashnikov over his shoulder, marches into a fab plant and changes the instructions for a chip. Good luck with that. And how do they propose to communicate with their special logic? They've got the same paranoia with a commercial chip like ours. It's all preposterous."

He stared at me more intently; I hadn't exactly been subtle. "Let me make my case, and then you can say no, okay?" He just nodded, still focused and staring. "First, why would I want to do this? Because of the challenge. Because I think I can. It would go beyond anything ever done before. I have money and power and influence, but this is a special toy I want."

I paused, and he said nothing. “I admit that you could be found out, but if you help, your exposure will be limited. Separate from you, I have access to part of the chip design, something my group has to submit. We’ve been working on this for more than a year, with preliminary designs submitted. They are placing more functions onto the main chip. They had to farm out some exotic parts, and our group is just transferring established designs as hardware blocks. The main chip group will patch our blocks into the overall chip. There goes your interloper with the AK-47. We put in a unit from outside, at a late stage. And your name won’t be used anywhere. You will only advise us outside your plant.”

“Then why do you need my help?”

“I don’t think we can put it off, um, *pull* it off without an insider. Our blocks will have many millions of gates, though of course just a tiny fraction of the whole chip. Buried inside the final chip will be several thousand gates, perhaps five thousand, and those will have the critical functionality. All the description is at a high level and tested first there. We have the flaw disguised as legitimate logic. But as you said, they will test in sophisticated ways. We need help to pass those tests, along with tests for the unauthorized parts.”

I cut in before he could say no. “You’ll be part of the greatest deception in human history. If we are caught, I personally promise not to give up your name. But nothing will point to you, no evidence at all.

“I’ll not make use of this for years and then for a subtle gain, the use hidden inside a possible software exploit they will blame, even though they cannot see how it could work. You’ll be off on a beautiful white beach when news breaks of an unexplained hack.”

Soon he started asking more-technical questions. Mostly I had answers, though twice I had to put off his question till we

saw a key hardware employee tomorrow. “How will you get a signal into your special circuits?” he said. I explained that it would be like normal signals, but with special parameters triggered by an illegal operation the hardware was asked to perform.

He brought up the issue of trust. How could he trust me? And why would I trust him? We both knew that “trust” is a big deal in computer security. I said he had little reason to tell them about my plans. He had nothing to gain, and they might fire him immediately. This very fact made me more likely to trust him.

As for him trusting me, he would be able to see his own minimal involvement, his name appearing nowhere. Only one other person would know about the extra work he was doing. And I would get nothing out of betraying him. For once I was being honest; I believed in this explanation.

Finally he said, “I just don’t know. I need to think about this overnight. We can meet again tomorrow.”

“I have one more ... card to play. I always intended to offer you this; I’m not just desperate now at the end. But the issue is touchy and private. Please do not take it the wrong way. May I go on with something that is your own personal business?”

“Sure, sure,” he said, “go ahead. You seem to know everything about me anyway.” Now finally I was getting something for the drinks I had pushed into him.

“I know about your dispute with your company and its insurance carrier, how angry you are. I know about your health insurance difficulties involving your younger son. You have gotten to their maximum payment for this year, and they are bleeding you dry, trying to get blood out of you the turnip.” Ah, how I loved the English language. “In addition to the other financial incentives I offered, I can get you supplemental health insurance for your son, starting tomorrow. You just have to be my employee, part-time. This will cover the special therapy that your son needs and your own insurance company refuses to cover.”

He seemed actually stunned. I knew he was in New York to do something about his son's insurance, and he had gotten nowhere. "There's no attempt here to manipulate you. You're going to do something for me, and I can do this for you."

It was painful to see how vulnerable Hinman was on this subject. He twice started talking and each time stopped, trying to get his emotions under control. Finally he said, "Tomorrow I was ... going to say no to your offer. But, I don't know, maybe I could do this, yes, maybe. I wouldn't mind screwing the company over. But with that said, I need ... I need to say something more. Hell, it's not in my interest to tell you this, but ... I think your project is likely to fail, no matter how cleverly you have it arranged already, and no matter what kind of help you can get from me. The chip is unbelievably complicated. True, that will help to hide your special parts, but their automated testing may uncover it. And in the end it may not work as you want. Failure will speak for itself."

"I know, I know. Your understanding of the difficulties is why I want your help. Having you with us increases the chances of success, nothing more. There are no guarantees."

Of course I knew they would test their project from top to bottom. And at best we would have only marginal tests of our critical parts. One huge advantage we had, though, was that they would use our own software to test my company's blocks. And these were not critical for the whole chip, not even as to timing.

"They are under pressure to finish soon," I added. "They'll overlook things. You'll see."

We talked a while longer. He seemed more relaxed, not stressed as he had been.

"Let's get to sleep, both of us," I said. "Tomorrow, the first thing, we will sign you up as an employee and get insurance for your family. Your son should be able to resume his treatments in two or three days."

It had worked. And the flaw would work too. This new chip set was going to be a huge success. In a few years, hundreds of millions of them would be in computers all over the planet, including large, important systems. Hinman did not know how much he would help. Years from now after it is too late, he may realize that I have a special method indeed for communicating with my flawed logic: direct and simultaneous control of those hundreds of millions, obtained without any need for zombies or botnets or worms, which are now harder to arrange than in the old days. Hinman might think it is bad that I will be able to take over any computer I want, not realizing how much worse it is. But his son gets the essential medical care that was withheld by his filthy company; he gets to sabotage that company; and I get fearsome power—the kind that keeps computer people awake at night.

## 9 Apr 2029, Diary Entry

yesterday was the total eclipse—it was so neat, with the dark racing toward us. i had expected a noticeable darkening while the sun was still a thin crescent, but it wasn't like that at all. only in the last instant before totality did it start to look dark. the full eclipse was fantastic, a very dark sky, a pearly light around the black sun, tiny bright orange beads at the edge.

if we hadn't heard about it a few weeks ago, it might have taken us unawares—we are still partly isolated here, but dad says the country sees this eclipse as a marker from the old to the new, a sign of hope and renewal.

i've read that anywhere in the world you'll get an eclipse like this once every five hundred years on the average. in ancient times two armies at war stopped fighting cold because of an eclipse. and isn't it odd that eclipses occur yet are so rare—it's because the sun and the moon are the same size, well, the same apparent size, so things must match up perfectly to get a

total eclipse. but think about it. when i was younger i wrote a science fiction story about this strange coincidence. (hey, maybe it's a message.)

not too hot today and with a breeze so i'm sitting in our shop writing this and watching mom sharpen razors—she's good at it, using the leather strop. the next razor must have needed extra work with a stone. we're the only place nearby for men who still want to shave. i just signed mom if she wanted help but i knew she'd sign back no—for someone not deaf mom signs really well.

mom looks tired, and old now that i think about it—is she happy? life here has been hard for us all, particularly hard for mom, with all the people dying, with matthew dying. a boring place for her, too, when she talks about washington and new york and berlin, about the opera, about museums and concerts. well i've also suffered. i feel that i should suffer without complaint, and i usually manage it. but for me the boredom is often horrible. there are so many things i miss: the whole online world with its connectedness and stimulation. but i've been forced to see more of the natural world, and that helps.

dad seems so calm and patient, never loses his temper and fits in with the town much better than mom or i do—he's liked and respected, and yet there's an edge to the respect, care with how they treat him. for a long time i didn't understand this, but now i think i do. dad is always polite but still people wonder what he would be like if he ever did get mad—almost unfair since there was only the one time and that was with the man who broke into our house—i get a bit of that careful treatment—they think i'm his daughter—yeah, i sort of think that, too.

maybe part of the respect comes from his guard dogs: our huge turkish shepherd dogs that i write so much about—important for the town for sure, and people like having them on account of strangers, but dad is the only one who can handle them. they're afraid of the dogs and he isn't, so that gives them pause. well, i'm not afraid of them either, and i love my



antalya—I was with her when she was born—she'd die before letting anyone hurt me. sometimes i take her with me when i go for a walk, and then people are especially polite.

i barely see water through the window over the forge—the lake, and i can't look at it but to think of little jimmy, sam webster's son—he drowned in that lake last winter—should not have gone out on such a windy day. jimmy with his energy and his good-natured smiles and his face marked up from the smallpox. mom hadn't liked his burial service, any more than matthew's service before his—she misses the old steady traditions even in her religion. both our ministers died a long time ago, one from the red plague and one from an unknown sickness, so when the sweepers came through they included words for jimmy along with their usual strange rites. anyway, these two sweepers, a man and a woman, both young, came on bicycles, carrying next to nothing, spent the night with a sort of revival, and then they were gone.

mom and bethany traded off translating for me during their peculiar evening service. they talked about the parable of the good samaritan, but from the point of view of the victim. for him, help from his enemy the samaritan was a complete surprise. instead of obeying the “love your enemies” command, he should be enjoined to “allow your enemies to love you.” the sweepers gave a new rule: “in the kingdom of god you will find unexpected friends among your enemies.”

and they went on to describe a sort of world they called the kingdom of heaven or the kingdom of god, parallel to our own, but completely different from the regular world, difficult to discern, with everything reversed. in that parallel world the first will be last and the last first. it's a world filled with the poor and the meek and the poor in spirit. they said you can't know what that world is like; if you think you do, then you are wrong. what happens to you will always be a surprise; usually the help you get will be unexpected and sometimes it will be outrageous:

offensive help that comes to you when others less worthy have received the same reward as you. if you grow accustomed to living in that world, then you'll expect to find friends among enemies, and you'll start to treat enemies differently. so you really will find friends and it won't be unexpected. there was a lot more to it, kind of like a magic spell that held me even though i don't believe in christianity anymore, strange as this version is.

and things really are looking up for the town. we just got in a load of screen—good quality galvanized stuff, to help people get through the summers. we have traffic along our road every day now and not always just bicycles. people here, those still left, are waiting for more, for everything to start up again, for water and power, for technology, for computers, for the internet....

but as for me, i feel the world weighing me down. i'm caught in a feedback loop, with thoughts grinding around and around on the same track. no help for it.

# 1. Lowdown

**1 Nov 2024, Washington, DC**

**I**N THE DARKENED ROOM David Warburton seemed ordinary enough—a tall and powerfully built man sitting before a holographic display, large flatscreens on either side. His short-cropped dark hair and square face made him look military or like a police officer. A closer look in the light of the displays showed extensive scarring on the left side of his face, from just below his ear, down his neck and into his shirt. He gestured at bright green letters with his right hand and dragged a portion to the center with a left hand missing two fingers. The liquid letters formed as he dictated:

... on schedule, with no hitches so far. It's like planning a wedding. The German is doing the hacking, I'm not sure how. That shit little Japanese college now has a research department that will detect the radioactive gas. The company had to endow their monitoring station. Your contacts will be ready according to plan. It will all come together. You mentioned the expense, and I won't deny it, but so much money has come in, I have it to piss away now. Carl, I want to get you out of there, to speak to you again in real time, you and Richard and Vasily, all three of you. Just four weeks more.

With voice commands and hand gestures he corrected the text and saved it to be handled like all mail to and from Carl.

Next he sent a voice mail to Asya Lifschitz, his contact at the Federal CISA, telling her he was ready for a review of contract work with the Social Security people. To his surprise she was

online and asked for a realtime voice connection. He was glad she hadn't wanted a video link.

"Ms. Lifschitz, if it's too late for you ...," he said. "I work odd hours—thought you'd answer in the morning when you got to work."

"David, call me Asya, please," she replied. "We've been mailing each other back and forth for months now, after all. I finally forced my daughter off the Internet and to sleep—now I can get a little work done. So you've got something for those nitwits in Social Security?"

Warburton always felt tense when he talked directly with anyone. "Yes ... Asya. I think I've got good recommendations for them. To you I'll say the approach is simpleminded but it should work, and I dressed it up for company. Actually, simple is best for these people."

"You're my best contractor; keep it up. I'll go over the report and probably send another assignment on Monday."

He thanked her and signed off. He finished up the contract work he'd talked about, then switched to Carl's video game product and to a secret project associated with the game. Carl had conceived of a game that was like a soap opera in a more interesting world than most people experienced. The game grew quickly because users created most of it. Carl had outsourced the development work, and the maintenance was still outsourced, but he and Carl had taken over the main networking engine. This engine had also been written by others, and the most challenging technical work Warburton had ever done was to understand and extend the game's networking tasks.

He made a bit of progress, then decided to go online. He put on his helmet, the gloves, the attachments on arms and legs, and transferred to the City he belonged to. Funny how quickly everything had changed: You lived in a city, but you *belonged* to an online City, with a capital "C." And a virtual City could

be anything, from mythological to futuristic—one was even at the Earth-Moon Lagrange L5 point. Computers and connectivity kept getting cheaper, and physical travel more expensive and time-consuming and sometimes impossible, so that ever more activities took place online.

He talked over several ideas, discussed recent events, and generally socialized in the Club until nearly dawn, what was early afternoon in his City. Finally he broke contact, stretched, and walked down a hall with a slight limp, past the weight room to his kitchen for a snack. He looked with satisfaction at all the food on hand, enough for months. The apartment was laid out with obsessive neatness: books, equipment, food, clothes—all in their proper places, often labeled.

Soon it was time for his early morning jog to clear his head. He had tried running in the middle of the night, but people thought it strange, and it could be dangerous. Just before dawn was a better time, when other early joggers were around. Three months ago he'd had to interrupt his routine for a week because of smoke from the terrible fires in the west. The smoke was gone but the whole country was still stirred up to a crazy degree, with checkpoints everywhere and suspicion directed against any foreigner.

His fancy eighth-floor location on Connecticut Avenue made for a short walk to some favorite animals at the Zoo when he was done running, before sleeping all day. He pushed himself with the jogging, ignoring twinges in his leg, and put in a little over four miles on his standard route, which ended on Connecticut at the entrance to the zoo.

He loved the reclusive Pallas's cats, but even early as it was and with few people around they were hiding again. He didn't mind the animals looking at him but he avoided people by reflex. Halloween last year had been painful, when a serious little superhero thought at first he was in costume and then had be-

come frightened. He watched a huge type of praying mantis from Africa for a long while, one that looked like a withered brown leaf. In the wild and not moving, it would be invisible to predators and prey alike.

Invisible. That's what he should have been when he was hit—jammed back into whatever hole was available with as little as possible showing. Instead, he'd also been the computer specialist and was typing at an old-fashioned keyboard right in the midst of combat, not trying hard enough to be invisible.

Months of surgeries and rehabilitation had followed but that was four years ago. After his recovery there was plenty of money but nothing else he really wanted. He'd had fantasies of getting even, revenge on a world that didn't care about him. The anger gave way to boredom and apathy, interspersed with an online life. He long ago realized that his friend Carl had worried about him. Carl dreamed up the networking project for the game partly as a way to involve him in something, give him interesting work. The two of them had a great time planning and arguing, and so it served a kind of rehabilitation goal. But the whole project worked out better than either of them imagined possible, supplying lots of money to their new firm.

Then Carl died in the accident. He took the death hard—his best friend, his only good friend, was gone. Warburton had been mostly done with the four or five stages of grief, depending on who was listing them, and having a problem with resignation or acceptance, when over the course of a week he came to realize that Carl was still alive after all. It was the closest he had ever come to a religious experience: Carl had been dead and yet he was alive.

Now Carl's plight and that of Carl's two friends had really pulled him out of his routine, given him lots more to think about and work on in a orgy of activity. He was going to get the three of them out of that terrible place if he had to stir up half the

globe. Later he would worry about consequences, unintended side effects, problems for him personally....

\* \* \*

He went to sleep and dreamed of being lost—in an oriental city like Tokyo or maybe Shanghai. He was heading to his room in a ten-story hotel. He took an empty elevator up, but missed his stop and kept going upward. And there was no top floor—the elevator car just leveled out and continued horizontally, as if the hotel had been built at the base of a cliff. Through windows in the car he could see a strange landscape: vaulted hangars, mysterious constructions, tracks and other cars. He stayed in the car for a while but it was just getting ever farther from his room. So he got off, hoping to take a car back, but he found a maze of tracks with cars on them, none going back. He wandered lost among the tracks.

## 1 Nov 2024, Arlington, Virginia

ASYA LIFSCHITZ WALKED through her small apartment to the back bedroom to make sure her daughter had finally gotten to sleep. Melissa seemed beautiful and innocent lying there. Asya had taken her trick-or-treating in their building with the Williams' girl. It was just a joke the two girls enjoyed, but for once Melissa wasn't expected to say anything. Later, after she was online, it was hard to get her off. Asya wondered if this was one more thing to worry about: a daughter addicted to the Internet.

The humidifier hummed in the background as a fine mist drifted out to help Melissa with her asthma. Asya was in awe of her own daughter, sometimes afraid of her. Her little girl was a prodigy, so very smart and quick to learn—and only thirteen

years old a month ago. Melissa seemed to have a perfect memory, a true photographic memory. Why had she never checked to see how good her daughter's memory was? Asya sometimes felt guilty about how she had pushed Melissa intellectually, but what choice did she have? Melissa was deaf after all, and early on Asya learned that the deaf often have poor language skills. She had decided that sign language was not enough—her daughter needed to master written English. At least in this Asya was successful, as the little girl started reading when she turned three years old.

All Asya wanted was a normal, healthy child, but the reality of Melissa's deafness was such a shock that Asya went half crazy in those early years. It destroyed her marriage, and now from the perspective of ten years she could see that much of it was her fault and not Robert's. Two years or so after Melissa's birth, well after it became clear the girl was deaf, they proceeded with an operation to restore partial hearing. The operation didn't seem to work, but maybe she hadn't tried hard enough, with getting her daughter to hear and with the marriage itself.

Asya and Robert had fought constantly: let her use sign language and grow up deaf, or operate again and try to get her to adjust to an implant so they could mainstream her. Before the issue of implants became contentious with Robert, Asya learned ASL—American Sign Language—in a frenzy of effort. Later she hired a deaf baby sitter to teach Melissa to sign ASL properly.

Asya studied the subject of implants carefully and solicited endless advice. Far from helping, this overload of confusing and often contradictory information paralyzed and terrified her as she tried to decide what they should do. Even without the implant some people said that Melissa could learn to talk and be understood, while others said that course was nonsense and would destroy her daughter. In the end they never tried to get her



to speak, and she seldom made any sounds at all.

Robert didn't have the time or inclination to learn to sign, so in the first few years, before they divorced, he remained resentful with no good way to communicate with his daughter. But that was a long time ago. Lately now, Melissa mailed her father almost every day.

Asya closed the bedroom door most of the way and returned to her computer. That strange contractor David Warburton was right then sending her mail, what one used to call email. He did good work so she wanted to encourage him. After talking with him briefly she answered mail from her brother, who lived in Berlin. No real news from Alex but she set up a time to "meet" with him later that night.

Now time for entertainment even late as it was, since she could sleep in tomorrow. Asya got out the virtual reality helmet she'd bought a year ago. The market provided many devices, constantly improving, but this one was popular now and a good compromise between expense and functionality. Melissa had begged for it, so Asya bought two of them. She carefully fit it over her head. Of course they belonged to a City. Several years ago she had signed up with Lagrange L5, the City at the vertex of an equilateral triangle with the earth and moon at the other vertices—a virtual City, even if there were cameras at the L5 point. As a gimmick to promote themselves, they gave dwellers access to the entire universe—*virtual* access, but still you could visit the planets, and the stars, and even distant galaxies. This was interesting at first, but then it grew boring.

Last year Melissa had picked out a new City for them: Atlantis, the largest and fanciest of them all. One attraction was a Club for the Deaf. She hounded her mother until they were signed up. Along with the helmet, Melissa could wear special long gloves that picked up hand and arm and shoulder locations used for signing, plus the helmet relayed her facial expressions.

The signing was as fluid for her as doing it face-to-face.

The process of entering the mythical city was automated with several complicated layers of security to go through. Asya paid for the best which meant using the Sealand installation—the smallest sovereign country on earth—an old off-shore platform that just last year had once again become the data conduit of choice for those wanting good security. Atlantis wasn't anywhere really, but it pretended to be just to the west of the Strait of Gibraltar in the Atlantic Ocean. For convenience they used European time, six hours ahead of the east coast time in Washington.

Asya stepped through a “door,” a portal, and went by rapid transit to the main entrance. The developers of Atlantis were sticklers for consistency and detail: You couldn't walk through someone or through a wall, and all parts of the City appeared with amazing clarity. Initially the City had followed its mythological descriptions, with Poseidon's Temple in the center of a series of circles. At first you could only enter Atlantis using a ten-kilometer channel from the Atlantic. That proved too bothersome, and now there were any number of ways to enter. The City itself had grown like a real city, adding sections until it was far too complex for any one person to be familiar with it all. Parts of Atlantis now had amazing fanciful displays: huge waterfalls and active volcanoes—anything that an individual artist or a group of artists might create.

Like all the Cities now, Atlantis had many users who only wanted the services without any illusion of a City, and some of them even used an old-fashioned 2-dimensional interface. For impatient users like these, there were shortcuts into the City and no requirement to go through visual entrances as Asya enjoyed doing. Atlantis had many games and quests inside as well as every other imaginable activity, all accessible from the City, but again some users went directly to a game or to an activity. You

could take in any kind of musical performance or play or sporting event, and you could get perfect seats with your friends beside you. You could go to public discussions or debates, to legislative bodies, court sessions, the list was endless.

Of course Atlantis also had its own money, recently changed to a uniform currency used across all the Cities. With this virtual money you could buy or rent land, purchase goods of every variety, and purchase many of the services. Atlantis had capitalists who bought land to subdivide it for rent or resale, or they sold the virtual goods and the virtual services. In this way some became wealthy even in the real world. Asya used just a few of the services and bought almost nothing,

Asya “walked” down the main street, crowded with people even early in the morning Atlantis time. Eight months ago she’d been invited to join a special Club—called SubMarine, with a second capital letter in the name—one among tens of thousands of such Clubs in Atlantis itself, including Melissa’s Deaf Club, and one of millions in the whole virtual landscape. The invitation promoted the SubMarine Club as emphasizing technology, particularly involving computers. The Club members were anonymous, so that well-known people could say what they wanted. Such anonymity was once common but most users didn’t want to go to the trouble anymore. The five hundred or so people in SubMarine were indeed technologically oriented, and Asya felt right at home that way, but from the beginning the members had seemed interested in issues at a high level. She had never learned the reason for her invitation to join. Only later did she realize that while most Clubs let anyone in, SubMarine was very exclusive indeed, with many wealthy and powerful members, and others wanting to join who were rebuffed. In particular, the founders and owners of Atlantis itself, a multi-billion dollar enterprise, belonged, and discussions often centered on additions and changes to the City.

You needed a persona, an “avatar,” in the Club, which could be any person or creature at all, historical or fanciful. Members used special software to transform faces and voices, leaving the expressions and the words but altering them enough to preserve the anonymity. Asya had originally called herself “Catwoman,” with a suitable virtual black costume, one she’d had to purchase using virtual money. She had come to regret her choice and had settled instead on Helen, the mythical Helen of Troy, trading her dark hair and eyes for the blond hair and blue eyes of her version of Helen.

She entered the Club’s beautiful lobby. It was late in America but early Friday morning in Europe. Even so, a reasonable crowd of members milled around. She walked over to a small gathering that included two friends, the two “Josephs” in the Club.

Joseph K., looking like pictures of his creator Franz Kafka, turned his thin, intense face to her. “About time you showed up, Helen. We’ve been having too much dull shop talk.” He gestured toward the underwater views on all sides. “And no sea life around right now.” The club used actual cameras in the Atlantic Ocean—a nice touch but not as dramatic as a simulated ocean would have been.

The other Joseph was Joseph Goebbels, modeled after the Nazi propaganda chief—in some ways looking similar to his twin Joseph K. “My dear,” he said, with his slight German accent, perhaps filtered from German through translation software, “I have not seen you for a week. Where have you been?” Whoever created this character had included a limping right leg just as with the real Goebbels’ clubfoot. The accent sounded authentic but one never knew in this place. It was unusual to employ such a reprehensible figure as one’s avatar. For this reason she liked to call him “Joseph G.” She had to admit that talking with “Joseph Goebbels,” the king of despicable propaganda and killer

of his own six beautiful children, was harder than talking with, say, “Eleanor Roosevelt.”

“I’ve been busy but I’m here now,” Asya said as Helen. “Tell me something new, something interesting.”

“Well,” said Goebbels, making it sound like “Vell,” “the German firm Sentient GmbH is going public and promoting their new semantics engine. It should be revolutionary.”

“Should I buy the stock?” Helen asked. “For years now the favorite word has been ‘semantics.’”

“Yes, buy. Why do you think I mention it? If enough people buy, I make more money.” Goebbels cast a prospectus to her. She opened and saved it, but she knew she couldn’t afford to buy the stock.

Another person came up to their group, someone Asya didn’t often meet in the club: Grace Hopper, that is, *Admiral* Hopper, the mid-Twentieth Century software pioneer who had famously been a high-ranking naval officer. Her creator portrayed Hopper as a very old woman, another unusual touch. Whoever used this avatar was a software guru, but was also fanatical about environmental issues. Asya and her friends all thought these issues were terribly important, but it had gotten boring listening to Hopper talk about them as if her viewpoint was the only one.

“Have you seen the latest Change Index value?” Hopper asked.

“You are fixated on your ‘Change Index.’ It is a number only,” Goebbels said.

“We made it a single number to grab attention, as you know. A big batch of statistics is too much for most people but you can always review the data behind the index. In the last three days the index went down two-tenths of a point to seventeen point six.”

Hopper must have been involved in this environmental measure, the Change Index, but a number of people were. The value

was supposed to signify how quickly the environment was improving or degrading. A zero meant the world was in a quick spiral to uninhabitability, while the top value, one hundred, meant a speedy change to perfection, to the Garden of Eden. The Change Index was coupled with another value, called the Status Index, that indicated how the world was doing at that instant, never mind how it was changing. For this index a zero meant uninhabitability was achieved, Hell on earth, while one hundred meant you were already in the Garden of Eden. The current Change Index was much lower than the Status Index, meaning that however bad the world seemed to be, even more significant was how fast it was getting worse, a death march to oblivion.

A coalition of groups with their own views and agendas supported the indexes and maintained a huge database. Other groups didn't agree at all with the conclusions.

"Two-tenths is a huge change," Hopper said. "New data on several giant ocean blooms came in and may be the biggest factors, but other scary changes are occurring also. I tell you, we're going down the toilet. Each year is worse than the one before. Ecosystems dying out, biodiversity disappearing, species going extinct, oceans and lakes dying, ocean levels rising. And after all, this is the Year of Hunger, with several hundred million starved so far. It can't go on for much longer."

"Yes," said Joseph G. "You have said all this before, and I believe it. But other people do not agree. With the present world situation, I cannot see any way toward an agreement."

"Well, here's something I haven't said before. Just this past week the IACC reported that 'with high probability,' we are falling into a major tipping point, a finding that isn't yet incorporated into the Change Index."

Joseph G. gave one of his phony-sounding laughs. "'Tipping point!' Everything is a tipping point for those people and for you, too. You should stop preaching to us."

Hopper ignored him. “The release of methane from frozen tundra is their concern. Soon it will be self-reinforcing and self-sustaining.”

The discussion went on about what they could do, but they discussed this every time Hopper was around. Asya felt that there weren’t any real answers.

After a while Asya decided to check on mail from Johnny. She went over to a special display that looked like an old-fashioned terminal. Here you could get mail from and send mail to the person whose avatar was John von Neumann—“Johnny” they called him—the twentieth century mathematician known as the father of the modern computer. In a way similar to the secure “cubbies” with two people in them, here only one person at a time could use the display.

Asya retrieved the mail sent to her in reply to her questions from three days ago. After saying hello and such, Johnny had several suggestions related to Asya’s software problems. He was clever and seemed on the cutting edge; she always welcomed his suggestions. Along with gossip about SubMarine, they talked about many issues and joked back and forth.

This time, Johnny’s mail went on, “Helen, I want to have your baby! I mean an actual biological human being with no electronic parts. Just give me an address and I’ll express snail-mail frozen sperm. Then it’s up to you.” He was often just crazy this way. The mail continued, “I’m counting on this. I want a son to carry on the name. A daughter would work, too.”

Soon she composed an answer and sent it off. Johnny’s mail was unique because you could only read it if you were in the Club, only at the special “terminal,” and you never got a quick answer to a message—always a delay of many hours or even days, and never any real-time communication.

Asya turned to face the Josephs. “This setup reminds me of a science fiction book I read a long time ago.”

“Yes,” said Joseph K., “Johnny told us he’d gotten the idea from a novel.”

“In that case,” Asya said, “Johnny can’t talk with us in real time, *either* because he’s an alien creature who lives many light minutes away from the Earth, *or* he’s an AI entity that can’t think fast enough for real-time interaction. Those were the two reasons in the book—the first was what they thought it was and the second was the actual reason.”

“My dear, I am sure you have gotten it, one or the other,” said Joseph G. “Certainly not a simple explanation about someone who does not want to be bothered or interrupted in his work. Either the distant alien or the slow AI entity.”

Asya kept talking until it was time to meet Alex. By this time the two Josephs were deep in conversation with Hopper. When Asya did see Hopper, one or both Josephs were usually buzzing around.

Atlantis had endless connections to the real world, and that was where Asya wanted to meet her brother. There were locations to visit all over the world—many of the standard places one might reach by plane or on a cruise ship. But air travel was too expensive for most people now, and of course there were no more large cruise ships—several attacks and sinkings had seen to that. A real-time virtual visit let you see things as they actually were at that instant, including clouds, the moon, rain (which wouldn’t get you wet), and a view of buildings, trees, of the crowds. Ordinary pedestrians could walk along, intermingling, but without special goggles or some VR headpiece they couldn’t see the ghostly visitors.

So she headed off, carefully dropping her avatar’s identity by going through a Confounding Portal. You didn’t want to change from your avatar to your real appearance where someone could see the transformation. The way Asya did the change wasn’t very secure, but she didn’t care much about her anonymity any-



way. Finally she went through a portal to the street *Unter den Linden* in Berlin. A large section of the sidewalks and street, half a kilometer long, was accessible to users in a number of Cities, as well as to ordinary people walking on that street in Berlin. For real-world visitors, clever lasers flashed around, demarcating the edges, the barriers that virtual visitors couldn't pass beyond.

She'd arranged with Alex to meet at *Pariser Platz*, the square in front of the *Akademie der Künste*, and there he was, with goggles so he could see her too. They talked about all that was happening in their lives, until Asya begged off to drop back to her apartment to go to sleep.

Asya logged off, stretched, and started her routine of getting ready for bed. Then she noticed that Melissa's door was closed. Melissa hated being disturbed when she was online, so she had developed a private code with her mother: a closed bedroom door was a do-not-disturb sign, while a slightly cracked door was the opposite. Melissa had put forward two more rules: throw open the door in an emergency, and use the flickering lights that the doorbell triggered to signal an event like a visitor calling. Asya knew that Melissa often stayed up late at night, but she would complain later, not right now. Besides, she was exhausted and needed some sleep.

\* \* \*

Elsewhere and thirty hours later the person they knew of as "Johnny" read through his mail, smiling when he got to what "Helen" sent. Then he pulled up a picture, not of a blond Helen, but of the dark-haired face with dark eyes of Asya as she actually looked. Very pretty, he thought, even really striking. He stared at the picture for a long time.

## 1 Nov 2024, Berlin

**A**HMMAD HASSUM WOKE to a softly chiming alarm. Everything was soft in this culture—soft towels and soft beds. The Germans had not gone quite as far as Americans, who used toilet paper so soft it fell apart in your hands, as if there were no better ways to clean oneself.

It was a matter of discipline, and what a paradox that he had first seen real discipline in a Russian, an atheist. Hassum had been just a boy in Syria, and the Russian had come to supervise the building of a dam—one expert engineer and all the rest local workers. He came to build his dam, and nothing else—not all the available drink or ready entertainment had any attraction for him. Hassum had greatly admired him—a man with an iron will, and he needed it; the workers were a rowdy, lazy group. When it was finished, they had celebrated, and the Russian drank with them once that last day, before he left.

And here he was, getting help and financing from these German computer experts. All his life he had known hard people who could kill at need. But here in Berlin the person in charge, this Wieland, was ... what? A pig? A demon from Hell? He was only glad to be leaving soon, in two more days.

\* \* \*

Hartmut Wieland stretched after a comfortable sleep. He'd recently chosen a pretentious and ridiculous name to use, but people around him didn't seem to notice or care. He thought how much he would miss that sanctimonious little shit, Hassum. It had been endlessly entertaining to disgust Hassum, to drive him crazy. The man was a killer, a terrorist, insofar as the term had any meaning, but he couldn't stand anything weird involving sex. As soon as Wieland realized this, and also understood that Hassum didn't want to refuse going with him for "entertainment," Wieland started dragging the little man off to shows, each

more degenerate than the previous one. First were strip shows, and then mud wrestling, women wearing next to nothing fighting in tubs of different liquids and gelatinous solids. That was fun. Then on to sex on the stage, man with woman, people with animals, all sorts of animals. Wieland was stretching what the Berlin area had to offer.

Wieland had decided to work at it harder, to let his imagination run free. Germans often made trips into the Czech Republic for prostitutes, although he'd never done it. So he told Hassum they were going to "see some girls near the German border, have some fun." They went to the small German town Sebnitz and crossed the border to visit a tiny Czech town named Dolni Poustevna. Several girls were on the street despite the cold. He picked up an especially nice-looking prospect. She said her name was Eliska and told him which tavern to drive to. Wieland winked at Hassum and said, "These girls will do anything for money."

Hassum didn't look like he wanted to go inside, but he evidently didn't want to stay alone in the car either. In the tavern, Wieland got a drink, and then another one, acting increasingly rowdy with Eliska, slapping her on the rear end, pushing her around. Suddenly he pulled her forcibly into a back room. Loud noises came out at first, and then actual screams. Wieland came dragging her out by the hair into the hall and then into the tavern proper, with her screaming and with him shouting and laughing at her, kicking her, slapping her. Hassum looked actually white. It was delightful. At some point, Wieland hit her in the nose and it started bleeding. She moved as if to try an escape, and even the manager seemed concerned. Hassum kept looking around at the few other people present, maybe hoping someone would intervene. Wieland whispered to her, wiped some blood away with a handkerchief, but then smacked her again. On it went: drag her, punch her, kick her, throw her down the corridor and

back into the room. More screams finally dying away.

Hassum was very quiet on the way back, while Wieland talked about how relaxing it was to “unwind.” Wieland hadn’t had this much fun in a long time. “My God, my dear dead God, it doesn’t get any better than this,” he muttered to himself.

And except for the bloody nose it had all been acting, arranged the day before with the Czech people. He’d scouted around across the border, as always with two of his people along to act as guards. He was looking for somebody smart, who could handle an unusual request. He tried out three girls in a tavern, settling on a very pretty one—she could be a teenager. He paid them quite a bit of money—quite a bit to them, nothing to him—with the promise of more when he came again the next day. He told them it was just a joke on a friend. The blood had been a bonus, but she was ready to give up the game until he promised her yet more money to stick it out: “*Noch vierzig Euro, vierzig Euro dazu.*” And she understood well enough.

\* \* \*

In Wieland’s favorite part of Nietzsche the subject was *der letzte Mensch*, roughly translated as “the last man,” or “the final man,” at the end of time. The last man’s goal is to be comfortable, not to exert himself, not to create stress or difficulties. All men should be equal and all happy, no leaders and no followers, no rich or poor. And people regularly should take a little poison to promote pleasant dreams, and finally a lot of poison for a pleasant death.

Wieland saw these attitudes everywhere—a degenerate society, a degenerate world, where people no longer had a will to live, a will to triumph over difficulties. It was time for a new bloodletting.

Wieland wasn’t racist like his Nazi ancestors. In fact, it was hilarious that no German had National Socialists in their family tree, truncated and sanitized as the trees were. Science was quite

clear now that all humans were genetically almost identical. But most people were simply stupid and lazy, not looking out for their own interests and the interests of humans as a species.

His friend David had given him an interesting assignment: stir up nuclear reactors in the world—make it look as if a number of them were under computer attack and make sure people knew. Even David was surprised as the extent of the virtual chaos Wieland proposed, along with some real chaos, and the relatively small fee considering that few people could carry out this task. David knew his past work and believed his claims of what he would do. He had given David a demonstration, showing his ability to generate news feeds, along with his contacts to workers at reactors. In fact, he could probably create an actual reactor disaster—very difficult because of the many hardware safety systems, but David did not want that—just virtual events to scare the hell out of people. David was going to get his money's worth, a real bargain.

\* \* \*

Just after noon later that day Hassum went to Friday prayers in a nice Arabic-based mosque near his hotel. Before prayers, the Imam started by reciting from the words of the Prophet Muhammad ("peace be upon him" came unbidden to Hassum's lips), words that translated from the Arabic as:

*O People, lend me an attentive ear, for I know not whether after this year I shall ever be amongst you again. Therefore listen to what I am saying very carefully and take these words to those who could not be present here today.*

For Hassum, this familiar quote was startlingly predictive, foreshadowing what was to come. Of course, it was important to recite the words in Arabic; no translation could capture the full

subtleties of the original. The recitation went on through all thirteen parts, each part so well-known to him that the words resonated in his brain. Finally there came one additional saying:

*This day the disbelievers despair of prevailing against your religion, so fear them not, but fear Me! This day have I perfected for you your religion and fulfilled My favor unto you, and it hath been My good pleasure to choose Islam for you as your religion.*

Then the Imam started the actual sermon, talking about the sin of suicide. For a Muslim, their religious belief and its practice were all-important in helping them overcome the draw of emotional despair toward suicide. They need to pray to Allah for support, he enjoined, during their time of darkness. They should also get help from religious leaders, from family and friends, and then to Hassum's surprise, the Imam included help from health care professionals. If you are a believer, then you should not think of suicide as a solution to problems, since after the suicide you will have a much larger problem: eternal damnation in hell. The Imam talked about the large increase in the number of suicides in their community, about the need to recognize your problems, to confront your depression, to seek your own spiritual solution. Hassum felt it was all standard stuff, but well-presented and important to say to younger people.

Of course the Imam said nothing about suicide *bombing*. Hassum was used to this, avoiding the issue. Still, some intellectuals taught that a suicide bombing, or any other such mission where one expected to die, was the same sin as regular suicide. That attitude infuriated him. The very term "suicide bomber" was just a propaganda tool of the enemy. People who used a bomb strapped to them to kill were like any other soldier willing to die as part of the battle. Hassum himself might soon be in that position, but sitting beside an enormously more powerful bomb....

Wieland had given him an exact time and date when he was to bring a nuclear reactor down in Syria—nothing more than an emergency warning that would shut off the power, not any kind of damaging accident. Hassum had a contact who worked in the reactor, and he was set to provide this emergency for pay.

Two days before, Hassum had received a strange, anonymous mail that encouraged him to take advantage of possible “chaos” at the time he was to arrange for the reactor shutdown and for a few days following it. He didn’t know what to make of the mail, since his work with the reactor was supposed to be absolutely secret. What agendas did the sender have? Could Wieland himself be the source, recommending an action in a way that he could later deny? He would have to see what others in his group thought.

Hassum hated the circumstances that had forced them into the terrible goals, the goals of killing and tearing down. At the same time, part of him looked forward to what they were going to do. Not for the martyrdom, not for some perceived advantage in this life or the next, but simply from the satisfaction of taking strong action, making a decisive move.

## 4 Nov 2024, Arlington, Virginia

**W**HO ARE YOU?” came a message from a systems person on the university computer, one of several Melissa was working on as she poked through a maze of data.

“i am the inquisitive one,” she typed, followed by: “just kidding. i’m only a student who borrowed an account from a friend. i’ll get right off.” It was rare for her to be noticed at all, and she didn’t like it. She quickly deleted two files and a log entry and dropped off. The sysadmin would probably forget about it. If

not, she hoped they wouldn't be able to trace her.

Melissa tried not to lie openly and directly to her mother. Instead she would give a vague response that didn't actually say anything, or an answer she could justify on a technicality. Her mother had a night shift at least twice a week, and this was one of those precious times when Melissa could stay up all night working on projects and having fun. In the morning she would go off to her special school, Roosevelt Academy, before her mother got home. Her schoolwork was easy enough that she could miss most of it and still do well, so on those nights when she didn't sleep she would have a "headache" the next morning—one that could only be cured with a pain killer, which she didn't take, and a three-hour nap, which was the whole idea.

The school had a special section for deaf students. "Don't worry mother about the headaches," she would sign to her adviser. "She already has enough worries." In fact her mother did worry, but only about trivial things: "Did you take your asthma medication? Are you sure you know the Metro stop? What if someone asks you a question? Do you have your special droid with you?" Better for her mother not to know what she was really doing.

Right then Melissa was staring at high-resolution photographs of Niue Island in the Pacific, old ones side by side with recent ones. The old were easy to get, but recent ones weren't readily available. She had pretended to be an investor, looking for property on some Pacific island, and had purchased dozens of photos, although she only wanted the ones of Niue; she didn't want to leave a record of any special interest in Niue. A few years ago the north side of the island was undeveloped, but massive development had gone on recently: new roads, large buildings, a port, a runway, two helicopter pads, the works.

People denied that anything was happening on Niue, and if pressed, they admitted that several new tourist facilities were go-



ing up, a sort of resort for the wealthy. In fact, far more than any single resort was in the pictures. A resort for the ultra-wealthy? More than that, too.

Melissa had started with an investigation into a mystery, focusing on a specific wealthy individual, worth a billion dollars—no, plural, billions. She was patient and persistent. When she had finally identified the actual person behind the various avatars, she had named him Fat Man, after the bomb that had destroyed Nagasaki, and because in the real world he was overweight, weight-challenged one said.

Pinning down his real identity had been the hardest part. But what was he doing with hundreds of millions of dollars invested on Niue? This was far more, ten times more, than the whole island's GDP, more than everything else on the island was worth. There were others, too, with similar amounts invested. Maybe several billion dollars had flowed into Niue. But why? She was beginning to see and would uncover the details eventually. Right now Fat Man was in one of the porno dives in Atlantis, one that let adults do “things” with children. In another age this would be illegal, but here it was like the video about ducks with a disclaimer at the end: no actual ducks were harmed in making this film. With virtual pornography they could now say that no children at all were involved. The porno palaces were set up for the user to have special equipment at his workstation,

Intellectually she could understand that he had a genetic drive to copulate, an instinct to keep the human race going. She was less sure how this translated into a need to molest children, but at least here he was sticking with a virtual kid, groping a little rubber girl while getting an enhanced display. Someday she might use it to blackmail him, but she already had more-incriminating material to use.

\* \* \*

When Melissa was ten, she had become struck with how slow

everyone seemed to be, slow to understand, slow to react, with faulty memories. Even her mother, who was pretty smart, often took forever to get the implications of a situation, if at all. At that time Melissa had decided she was a mutation—one mostly superior, although she couldn't hear like the "normals," the poor ordinary humans. Even so she didn't feel handicapped. They couldn't sign; she couldn't speak. But software let her speak while they would never sign. This reminded her of the apocryphal Churchill story: "Yes madam, I am drunk. And you are ugly. Tomorrow I will be sober, but you will still be ugly."

And besides, when the normals talked and listened it was pretty much the same as writing and reading, a formal and limiting way to communicate—not at all like signing, which was intimate and expressive, revealing your inner being, revealing almost too much.

In her secret self she kept hold of the view of being a superior mutation, but she did realize it probably wasn't true. And now that she was thirteen, people had only gotten slower, denser, often disappointing.

And these slow, dense people were the ones who were supposed to be smart. The bulk of humanity, the vast majority, was so stupid as to seem like another species altogether. Especially in the US, where anti-intellectualism in general and anti-scientific attitudes in particular were widespread, more than half the population didn't believe in evolution, and a significant minority believed the earth was created a few thousand years ago and thought dinosaurs roamed the earth along with early humans, who were all descendants of Adam and Eve. No one would mistake these people for actual thinking human beings.

How had she gotten such a poor opinion of her own kind? Perhaps when she first mingled with people in public, at age six or so. They were frequently impatient, often nasty. If they saw her signing, their eyes would bug out. Sometimes they would say

outrageous things, referring to her as a “dummy,” not realizing that she could lip-read to catch lots of words. Even the ones who tried to be nice were patronizing to the point of insult: “You poor little girl. We can’t expect you to do much.”

So what was it like to think the way the normals did? Even the smart normals? She knew quite a bit about it with no way to understand. Supposedly they carried on an “interior monologue”—using an imagined voice to help with thought processes, sometimes an actual muttered voice. This mumbling and muttering was for them even more important than visualizing images, the way she did much of her own thinking. The very words “mutter” and “mumble” evidently sounded like the actual activity they represented. She knew that when they counted, they would say the numbers one after the other, either out loud or subvocally with articulation. It seemed so crude. When she counted, she visualized each number in turn, usually the printed number, and not the ASL sign. When she wanted to create a sentence in English, she could see the words and the whole sentence in her mind, while the normals would mutter the sentence. A gulf spread out between them, unbridgeable, but theirs was the crazy way, having to pretend speech in order to think.

Then came music—another murky subject for her. She believed that music held great beauty and enjoyment. The hearing people grouped art and literature and music together as equally worthwhile. She even understood music notation, and she could feel the rhythmic vibrations, often with a powerful and exciting beat, but somehow there was much more. It was the old “explain colors to a blind man” problem, as with a blind friend at her school. He was very smart, born blind, and he knew all about colors and nothing about colors. They communicated in text, and he had told her that until a year ago he had always been sure that a grapefruit was purple. Why the hell else would they call it a *grape* fruit?

\* \* \*

Melissa went elsewhere in Atlantis to meet someone regarding a project, her work on identity recognition. She wasn't going to visit the Deaf Club, but instead would interact with a person who didn't know she was deaf.

"Ah, here you are, my dear," her friend said. She couldn't hear this at all; she didn't even have speakers in her room. All the sound went into customized voice recognition software, with the results displayed as a transcript for her to read. In some ways this step was the hardest part, but a huge effort by others had gone into the problem, an effort that produced mostly good machine-readable English. She had a simpler voice recognition system on her droid, with correspondingly poorer results, but usually good enough to understand what people said to her.

Now came the hard part for her. She had to generate spoken English. "Yes," Melissa's system said, "sorry I'm late. A student here needed help with a programming assignment. I've made another little improvement to the identity project." She had tried a number of approaches, but most of them, such as the translation software deaf people used to turn sign language into English, were too slow and shaky, with poor quality.

In order for her to say something, she typed the response in English, but with her own system of shortcuts. She used a standard keyboard with special meanings attached to many keys and to multiple keys. This let her produce text much faster than by normal typing.

The first two sentences she just "said" were the result of two multi-key presses, followed by a shorthand typing of the last sentence. She had key codes for endlessly many polite phrases, and even meaningless random noise phrases. She felt she must be the best in the world at generating high-quality English text in real time. She would also prepare ahead by typing many of the sentences she wanted to say, just like someone making notes for

an interview.

This was the step she couldn't do on her droid, at least not fast enough to pass for a normal speaker. Afterwards the text had to be converted into spoken English, and here again Melissa used custom software, easier than the other direction, but still with imperfect results regarding emphasis and the smooth flow of English from a native speaker.

She could also use one of the Turing AI conversation engines to keep talking politely and more or less sensibly. People could recognize these, though, and their use was considered a social faux pas.

"You know we have to be careful with changes."

"Sure, I know," Melissa answered. "I changed my linguistic profile, which would be a big deal except that it's backwards compatible." These LPs were her own babies, and she was proud of them like any other parent. Given an English text, her software carried out a linguistic analysis and attached a sort of report to it. The goal was to match up texts from the same source. She used a standard machine-learning software platform that she did not herself understand, but she'd harnessed it to this task.

A few months ago, Melissa had vastly increased her at-home processing power and storage, but that was just raindrops on a window compared with the waterfall of half a trillion LPs they now had, and the processors that handled all the data, the web crawlers and scanners and microphones that searched and watched and listened throughout the world. She had done much of the conceptual design and set up a demonstration system for her friend, while he carried out a world-wide search, looking for people hiding in an ocean of text.

At the simplest level, many words and phrases were seldom used—think of "iconoclast" or "brouhaha." Thirty years ago the Unabomber—that anti-technologist who'd sent letter bombs for many years as a way of protesting—had betrayed himself when

he wrote “eat your cake and have it too” in two separate texts, instead of the almost exclusive current (and illogical) American version: “have your cake and eat it too.” The software refined that idea in the extreme.

“OK,” her friend said. “Forward your software patch to my people in the usual way.”

She went on through the night, from project to project, with people from all over the world. Another special favorite of hers was the old Korean mathematician she worked with. He often made strange or paradoxical statements: “We seek the hidden secrets of nature, the mysteries,” or “I know there is an elegant solution—I sense it, I feel it,” and sure enough they would end up with a lovely short formula or explanation for the phenomenon they were studying. Melissa knew she was no mathematician, though she could often fake a mathematical analysis, and computers made it ever easier to solve a problem algebraically, or to simulate the problem rather than solving it. Her Korean friend was weak at the programming end, so she would check his hypotheses by computer.

Of course she spent time on *the* project, the only one that counted. She often felt a volley of powerful emotions, new to her because of their strength: excitement and anticipation, along with the fears—of failure and even of success. And like her Korean friend, she could feel that she was close to some resolution.

## 6 Nov 2024, Alexandria, Virginia

**C**HARLIE MARINO finished putting away the mower and edger—the last time he would need them until Spring. He locked the storeroom carefully—after the thefts last year he had to be more careful. He went through the plantings

and around the covered-over swimming pool that he was also responsible for, finally reaching his apartment: very small but a nice place, and his maintenance job paid part of the rent. He quickly showered and changed to a white shirt and black pants. Around his neck he added a chain with a wooden cross proclaiming “Jesus Triumphant!” Then he shut down his ancient computer and turned off the power. He was late, late, running to barely catch the bus across to Alexandria.

At his stop he had two blocks of fast walking to the run-down former factory that housed their church. The elders had erected a sign since last Sunday, with large letters saying: “Church of the New Jerusalem.” Below that were four lines:

*I will not cease from Mental Fight,  
Nor shall my sword sleep in my hand:  
Till we have built Jerusalem,  
In England's green & pleasant Land.*

Inside, under exposed steel beams and high windows, were some hundred people, a good turnout for Wednesday including several newcomers scattered around—only about one-third blacks, but Charlie had always felt comfortable around white people. They were all standing with arms raised and singing a hymn as Charlie slid in front of an unoccupied folding chair next to John Turner, a friend he'd known for six months. Because they couldn't afford much of a heating bill, it was cold inside. He kept his coat on and smiled at John, then joined the singing. On Wednesdays they just used a piano, but Sundays he and John often played guitars.

Charlie thought Brother Jesse, the Pastor, looked to be in a barn burning mood, ready to turn loose the Spirit on this crowd. “How many of you are glad to be in the house of Christ right now?” Jesse shouted, getting the expected response. “And who is your pastor? Who is your leader?”

Various calls like: “You are ... Brother Jesse ... Brother Strickland.”

“No,” Jesse rebuked them firmly. “Jesus Christ is our pastor. If I fall dead right here and now, another one of you good people would come forward to continue in Christ’s name. Never forget: you think you need some charismatic leader? You have the ultimate charismatic leader in Christ Jesus. You only need the Lord.”

The service continued: bible readings, singing, taking of the offering. Charlie was active throughout, often with his arms high and calling out Amen. Finally it was time for the sermon.

Brother Jesse started quietly. “Brothers and sisters, I have spent three days in thought, straight through from Sunday, with no sleep at all last night. And I have asked Christ to give me wisdom. I’ve been up on the mountain, and I’m filled with a new fire. We all know these troubled times, with the prospect of the Tribulation always right before us, with all the troubles in the middle-east and throughout the world. Three months ago the Lord God Almighty really woke us up with a warning to fall to our knees before Him. The terrible fires in the west gave a mighty call right out of Revelation: *The third part of trees was burnt up, and all green grass was burnt up.* And the smoke that followed, drifting around the world: *And the third part of the sun was smitten, and the third part of the moon, and the third part of the stars; so the day shone not for a third part of it, and the night likewise.*

“These thoughts have been much on my mind. But last Monday as I heard talk of the World Wide Web on a news program, I got to thinking about it. ‘WWW’ they call it, as many of you know, the new way people have of connecting, of interacting without really getting together, of doing business and buying things.” Charlie and the rest of the audience were listening attentively, but where was the fire? “I thought about ‘WWW’ all through Monday and through Tuesday, and I heard laughter, derisive and cunning laughter. Last night I finally saw through the



glass, my vision cleared. We have been looking for the Mark of the Beast—like a tattoo on a hand or forehead. Now I know. Listen good people.” His voice rose to fill their hall, echoing in the height above: “This ‘WWW’ is the Mark of the Beast we have been seeking. Satan’s latest trick and we see it everywhere. The letter ‘W’ looks almost like ‘VI,’ a Roman numeral six. ‘WWW’ is ‘666.’ All the talk of ‘World Wide Webs’ and ‘Internets’ and other computer names, these are ways Satan is using to lead people straight to Hell, to the lake of burning sulfur, to eternal damnation. Now I see everything linked together—all the troubles in the world, and so many leading squarely back to computers, the way computers and the Internet are taking over everywhere, and the huge problems this has caused. It’s all coming to fruition very rapidly now. Satan hardly bothered with a subtle disguise, just his ‘WWW’ in place of ‘666.’ ”

Charlie was shocked more than he would have thought possible, it was so unexpected. He used the Internet all the time, every day, as part of his computer music, good Christian music. He exchanged music with friends all over the world. Charlie sat as if made of stone, no longer adding to the tentative chorus of Amens. Could it be, could the computers themselves really be evil? He felt numb, an observer viewing the service from far away.

Brother Jesse had paused for breath and for a sip of water. “And now my friends let us please read God’s Word starting with Revelation, Chapter 13, Verse 16.”

Again they read together: *“And he causeth all, both small and great, rich and poor, free and bond, to receive a mark in their right hand, or in their foreheads: And that no man might buy or sell, save he that had the mark, or the name of the beast, or the number of his name. Here is wisdom. Let him that hath understanding count the number of the beast: for it is the number of a man; and his number is Six hundred and sixty and six.”*

“Amen,” Jesse said loudly to stop the reading. “Think about what this says: you’ll need the Mark to buy or sell, and on the World Wide Web these days I hear that more and more goods are for sale. Satan will enslave everyone to these computer sales, so that you won’t be able to use actual money for a purchase. They are using your fingerprints and retina and who knows what else to keep track of everyone with computers. This electronic marketing of goods, following everybody’s activities, this is the final fulfillment of the prophesy, and proof that computers are wholly evil. Very soon we will have computer chips implanted in our hands, you’ll see.

“And I will make another prophesy,” Jesse continued. “Aside from Jerusalem, the other center, the other nexus of activity is going to be the town where I grew up, Topeka, Kansas. Here the Evil One is mocking us, he makes it so clear. The Zip Code for Topeka is ‘666,’ and my friends and I used to laugh at that in school. Well I’m not laughing now. Topeka was the birthplace of the charismatic movement, on New Year’s Eve of nineteen hundred, when a lady first spoke in tongues, the first modern Baptism of the Holy Spirit. For many years Topeka had a well-known fundamentalist at war with the immoral establishment across the whole of America, and even across the world. And Topeka once housed a Satan-inspired and atheistic psychiatric foundation. Mark my words, an important part of the final battle will come in Topeka.

“Make no mistake,” Jesse went on, “those involved with the World Wide Web, those using these computers, why they are involved with evil, but that does not make the individuals evil. Satan has used his greatest tricks to tempt God’s people, and Satan even mocked us in following the prophesy to provide a mark. But the people using these computers aren’t necessarily evil; they need to be saved. Many of you here use this tool of Satan, many of you here have this mark, this ‘WWW’ on your fore-

heads. You, Brother Stanley, I see it there clearly.” He pointed to the middle of the third row. “It may be hard, it may be a sacrifice, but you must give up these machines, and—anyone with two ears ought to listen: above all, you must stay away from this web, this ‘WWW.’ The time is coming, the end days are almost upon us, when the computers will stop working, and all the prophecies will be fulfilled. The mighty fires in August turned the sky dark; the terrible blooms in the Gulf of Mexico and those elsewhere are turning the sea red as with blood. The Antichrist will emerge and show himself, and he will not look like evil at first. He will preach peace and justice and love. And on it will go, as the marked ones start the Tribulation.” He lifted his voice. “And what will we start?”

“The rapture,” various people cried.

“Amen,” shouted Jesse. “You will all be changed and lifted up to the seat of God, to commune with Jesus Himself. Now you know Satan’s main device. He marked it for us, and I’m surprised it’s taken so long to see. By this mark shall you know them, the spawn of Satan, by the mark of the computers, by the ‘WWW.’”

Charlie stumbled through the remainder of the service, then said a wooden good-bye to friends. He skipped his bus and walked all the way home instead, a long and cold hour and a half, deep in thought. Could all this be true? He didn’t trust the computers himself, and even less did he trust the government that used them to keep track of him. To *enslave* him, he started to think. Some of his ancestors had been slaves, and they would make him one again....

## 15 Aug 2028, Diary Entry

two hours ago, as i walked home from our shop, i saw a huge spiderweb in among branches of a tree. it was the work of what

they call an “orb” spider, whose web was a beautiful and nearly perfect spiral, perhaps two feet across. nearby another spider of the same kind was right then working on the final portion of his, oops, i mean *her* own web, so i could compare the finished one with the one under construction. the early feats of engineering were already complete, to get the supporting lines into place. that itself seemed nearly impossible, since the support points must have been six feet apart. i was observing the final work, where my spider was laying out the main spiral, from the outside inward. the spider’s own weight distorted the web nearby so much that the strands where she was standing were bent completely out of shape, yet when she moved on, the web sprang back into shape, and the distance between each part of the spiral was somehow perfectly measured.

i went home to get bethany and showed her the web i’d discovered. the spider was still working on it, with about half the spiral complete. as i expected, bethany was fascinated even more than i had been. she wanted to stay until the web was finished, but we needed to get to the bush’s house for lunch. (no relation to the american presidents.) two other families and ours all eat at the house of amanda and donald bush. a lot of communal living goes on now in the town—in this case it’s too much work for each family to fix separate meals, particularly when some families have special work within the town. we are an extreme example because dad is the blacksmith and works with the guard dogs, while mom is the main health officer, so she’s busier than dad. bethany and i work with the large sewing group in town, all women. we also help mom out in her clinic, and sometimes we even help dad in his shop.

the meal itself was interesting socially, but the food is always plain—a limited selection of different kinds: meat and fish, although bethany and i don’t eat these. vegetables and salad. some fruit. especially nice are the berries a little later in the season. eggs fairly often. honey from wild bees. thank god

for hugh barnes, who finds bee hives and raids them for honey. we also get special treats of “old” food from cans and jars.

several times i watched hugh get his honey, with a net over his head and a smoke generator. i helped carry it back into town. he had taken a ladder with him to reach a hive up in a tree, one of several he raids over and over. i carried buckets for the honey, as well as for the honeycomb, which is just beeswax, with its many uses. honey is one of our few food sources that keeps indefinitely, so we always have some of it around. i like hugh; he’s nice to me, but some people complain, saying how he fetches honey and wax but doesn’t do anything else. that’s true, i guess, but he gets quite a bit of honey and wax, enough that people often eat honey with meals. he has partly switched to hives of his own now, instead of the wild ones. of course we use the wax for candles, since many of the alternatives have given out—well, we still have hand- and solar-powered lighting.

anyway, for all the complaints about hugh, a number of people in town make no contribution at all. some are just lazy, always giving excuses, but others are zombies: completely weirded out by all the changes, the deaths, the primitive lifestyle. old mrs. hunter, long since widowed now, just sits in her house, trying to keep from going outside. bethany has taken her on as a project and checks up on her every day.

and some people kill themselves. tragically, this is still going on here in our town and in the world at large. people decide on suicide who can’t adjust or don’t like the new world as it is. others have terrible physical ailments or unsolvable problems, many of which were easy to take care of before.

this reminds me that hugh also helps grow the town’s marijuana, more important than i would ever have expected. the town was full of addicts—tobacco, alcohol, every kind of hard drug, and lots of stuff i’d never heard of. marijuana is about all we have now for these people, and it helps many of them. mom says we’d be in bad shape without our marijuana.

## 2. Slowdown

**7 Nov 2024, Washington, DC**

**D**AVID Warburton had agreed to call his friend, a wealthy German computer expert, at exactly 15:00 European time. Warburton had known him a long time, and he trusted him, though perhaps his loyalty was misguided. In spite of all their security, they were putting in yet an extra level of end-to-end encryption, and even so it made Warburton nervous.

“Is that you? ‘Wieland,’ really? You call yourself ‘Hartmut Wieland’ now? That’s a good joke.”

“Yes, it is I, or as you people say so ungrammatically, it’s me. I want to discuss our plans. I still find it hard to believe that the three of them, famous scientists—two physicists and a computer specialist, did not really die in a freak accident, a rock slide while they were vacationing. One of the physicists was, and now once again *is*, a very good friend. I mourned for him, after my fashion. I hope we can get all three out.”

“There are no guarantees. I wish there was some way with better chances of success. This was the best I could think of.”

“It is way too late now, I know,” said Wieland, “but did you think about trying to pull them out by force?”

“Sure I thought about it. In a way that’s what I plan to do: create a distraction, help them escape, and retrieve them afterward. But a direct assault on the site and pulling them out just wouldn’t work. This is a major government project, a prestige thing. They’re afraid that the Russians might raid them, and they’ve tried to be prepared even for that. If I had all the resources of the US government, I don’t think we could pull it off.

The location is really remote.”

“Okay,” Wieland said, “and did you think about using a bribe? You are going to spend a great amount of money with what you plan. You could have spent all that money on bribes.”

“Yes, of course. Mongolia is still the land of bribes. They can’t be so open about it anymore, but everyone is out for a bribe. I talked with a contact in the country—not someone who could actually set up such a bribe, but someone who knows the score. You know what he said? ‘If you have enough money for bribes, I could arrange for you to sleep with the President’s daughter. You could have an affair with the Prime Minister’s wife. You could get into museums and pee on our national treasures. But this project is big, really big. I have my own guesses, but no one is saying anything about it, or even admitting the project exists. No possible bribe would work, of course not through me, but no matter how well-connected a local person you could find.’”

“But you’re making me nervous,” Warburton continued. “We’re just four weeks away. Why are you talking about force and bribes?”

“I’m not backing out. Everything is moving along. My results will appear according to the exact timings that you specified. Already it is late to abort completely. At least one reactor will go off-line when you want it to. The news feeds will report on a number of other incidents that are not occurring. There will be strategic power failures. You will have a bigger bang than you realize, a big *virtual* bang. And you said you had found a way to get weapons into their hands?”

“Yeah, I did. The site needs lots of hardware, even computer hardware. Carl convinced them they needed extra hard drives, flash drives, all kinds of stuff. Of course we communicate with him. It took months, but we sabotaged many of their orders, eventually forcing them to use our suppliers some of the time. The items delivered actually work properly, but they also have

additional, uh, features—several are anesthesia dart guns, there are GPS and communication devices, smoke bombs, extra strong tear gas bombs, you name it. The darts are pretty dangerous with humans, but people usually survive.”

“That is funny. I like it. Do you not worry about someone else getting one of these parts?”

“Well, each part works in its intended fashion. The special stuff is mostly buried in epoxy resin, and the dart gun has to be armed; you have to remove a pin.”

Warburton paused, and then changed the subject. “You know that I started with the Japanese site, getting the external stuff ready. But I couldn’t crack any site at all, and I couldn’t break into the news feeds. I wasn’t even close. Then I talked with you, after hearing that you might be able to do it. But how? The news sites are really tough. You demonstrated your control of them, I guess to get my ‘business.’ But how did you do it?”

“I have my tricks of the trade. Even to you personally, all I will say is that it is very tricky indeed. The extra touches in Japan are nice, the ones you put in before I came onboard. I haven’t done anything like that elsewhere. Too expensive and too much trouble.”

Wieland went on: “Even given the chaos you plan to sow at their site, and even given their weapons and other devices, I cannot see how that will be enough. I cannot picture them escaping.”

Warburton went over the plans in some detail, plans for exploiting confusion and uncertainty. He finished with, “And remember, for those at the site it will be a terrifying time right at three in the morning.”

“When or if they get out alive,” Wieland said, “you have said nothing about what happens then. They are in the middle of nowhere, the middle of *freezing* nowhere.”

“Well, you’re right about them being in the middle of



nowhere. Did you know that in English ‘Outer Mongolia’ is sometimes used for the most remote place imaginable? And it will indeed be very cold. Anyway, I have two groups that will try to meet up with them in the open desert. That’s all set up now, with the timing and with their cover story. If they meet up, they still have to get out of the country.”

“Who could you possibly get to meet them in Outer Mongolia, as you say?”

“I’m getting some adventurers from New Zealand to rescue them. A joke, I’m joking. Russians, of course. Who else could get there and deal with the cold and local conditions? And in spite of what I said about bribes, they will have lots of money to pay out if it’s needed. If they have problems, they may be dealing with local, low-level officials—eminently bribable”

“It might work, and it will certainly be interesting. You are going to get more than you expect. The whole planet is still crazy after the fires in your western states. Everyone is paranoid, especially Americans. If anyone discovers your or my involvement, they will nail us to the wall. I do not have much ... exposure, not as much as I think you have. You are not worried about getting caught?”

“I’ve really covered my tracks, and all we’re doing is shutting down one reactor, causing a few power outages, and spreading a lot of fake news stories, creating a virtual crisis. With luck nobody gets killed, nobody even hurt, except maybe in Mongolia.”

“You are knocking down a wasp’s nest,” said Wieland. “Afterward you need to pull your head into your shell. I will be hiding and hard to find, but you may be vulnerable.”

“I’m going to do it anyway. My best friend is in there; I’ll worry afterward.”

“We will see, we will see....”

Warburton broke the connection. Yes, the fires, the horrendous fires last summer. Because of climate change some areas were drier than they had ever been historically, and so across the world more fires broke out, even in places that had never known fires before. Part of him had to admire the perverse planning and cunning to create a terrorist event that cost next to nothing and caused so much harm.

During an unprecedented dry wildfire season across the Rocky Mountains and over to the west coast, two people had rented a plane in Los Angeles. Mid-August it was, three months ago, a terrible time of record-breaking heat and drought, with frantic warnings against fires and hundreds of small fires already burning. Only one person, the pilot, had needed to show any identification: his fancy pilot's license, with its anti-counterfeiting measures, yet faked nonetheless. He was a native English speaker who seemed perfectly legitimate. God knows where they had gotten a pilot who looked and talked like an everyday American—not a minority, not foreign looking, without any particular accent. The pair chose the top-of-the-line plane available for rent: the Swiss Pilatus PC-12, a plane with range and speed and room to spare. The cover story was good—about a company that had hired him to pick up six executives in Oakland, run them up to Portland for the day, and at the end bring them back to Los Angeles. He had reserved a plane two weeks ahead of the flight. The rental agency was cautious, as all private companies that catered to air travel were supposed to be after the 2001 attacks. They checked him and they checked his story. It was all faked, but seemed to check out.

Afterward, investigators followed their tracks backward, but never found out who they were. Their plan was so simple and inexpensive: even the plane rental was placed on a stolen credit card. Onto the plane they loaded a huge number of what are called “fusees,” flares that police or truckers use to warn of a

highway accident. After lighting one, a fusee burns hot for fifteen minutes or so. They flew the plane north, zigzagging along the California mountains, lighting them and tossing them out, several per minute, maybe a thousand altogether. In Oregon, they turned south and flew further east, still tossing out the fusees. In the end, the plane landed in Mexico and the pair disappeared. They had filed a flight plan from Los Angeles that they didn't follow, and this was noted, but not acted on until too late. They must have parachuted a transponder into northern California, one that squawked the assigned code, as if the plane landed there or even crashed without destroying the transponder.

A second pair tried the same thing, with a smaller, slower plane, heading south and just west of the greater Denver region, but they were delayed, starting a couple of hours later. Fire and security authorities were too slow to figure out what was happening in the west, looking for a plane in northern California when it was heading into Mexico. But the Colorado strike was delayed enough that they shot that plane down, though not until it too had set a huge number of fires, from the area way north of Denver south past Colorado Springs. The fuel and fusees on board the plane made a fierce fire, and the forest itself burned around the plane, so there wasn't much left to investigate.

Both sets of fires combined burned over huge regions for weeks, far worse than had ever happened before. Millions of houses, larger buildings, whole cities, all burned up. Large parts of San Diego, Los Angeles, Denver gone. Smoke and ash drifted across America, and on around the world, making skies in America dark for days and lowering August temperatures.

After all the investigations, they never uncovered much of anything. They couldn't locate the pair in Mexico and the burned up plane took care of the other pair. In the end, the rental company in Los Angeles even got their plane back in perfect condition.

## 8 Nov 2024, Washington, DC

FOR HER SIX-MONTH performance review, Asya waited alone in a small conference room that she hadn't seen before. Windowless, like a prison, but luxurious also, with dark wood paneling, and large soft chairs, the room was not what you would expect in a federal agency. In front of the chairs were low tables. At one end was a wet bar. How could they justify the expense of fancy wood trim? And a wet bar?

She had not expected such an early review, but her work was going well, as far as she knew. Still, as always, she was nervous by nature. She kept repeating a mantra: stay calm, breathe slowly. She was trying to get into the mood where they could accuse her of bestiality, could cut off her index finger with pruning clippers, and she would thank them.

This job had come out of nowhere. Seven months ago she'd been working for a small security company, when a contact came from the CISA, asking if she wanted to interview. She already had the clearances that were needed. Later after various checks they had made a job offer giving her substantially more money. The working hours were irregular, but in some ways that was better for her because of Melissa. As a bonus, she liked the new job better than the old one.

Finally, her supervisor, Joe Puentes, came in, followed by his supervisor, Ralph Lambert, and one other person. She liked Puentes, didn't really know Lambert, and had never met this third person, but she recognized him because she had twice seen him staring at her. He looked slimy, somehow repellent.

"Ms. Lifschitz," said Puentes. "I think you know Ralph Lambert, here." Puentes turned to the third man. "And this is Tom Giesbrecht, our performance review coordinator. He sits in on most reviews." They all sat down and made small talk about their problems with the heightened security everywhere, check points on highways and on transit systems.

Puentes finally got down to business. “I’d like to use first names here if that’s all right. So, Asya, first I need to explain that we want to give new employees an early indication of their performance. Today’s interview is no big deal, really, so you should just sit back and relax.”

Asya sat back, but didn’t relax. They asked several general questions, until Giesbrecht suddenly said: “You’ve been working with one contractor more than the others—this guy Warburton. What do you know about him?”

Asya tended to panic with questions like this. In fact, she *had* looked up Warburton and asked people about this particular contractor. She still knew only a few details about him: that he was wounded, ex-military, and now something of a recluse. But should she have looked into his past? Should she admit to knowing anything personal about him?

“I don’t know that much about him,” Asya said carefully. “Mostly just that he’s done good work on the projects I’ve assigned.”

“How did you get his name?” Giesbrecht asked.

“The office gave me a list of projects and a list of available contractors. There was quite a bit of information about these contractors, what they’d done for this agency before, their resumes, all kinds of stuff. Mostly I kept the same contractors that had already been working on projects. Warburton was new. His resume seemed to fit several new projects, so I tried him out first with small tasks, and built up from that. He’s been quite reliable. Is there some problem with him?” Asya was worried that she’d been informal with Warburton, even sarcastic sometimes about a project and what was expected. Had they found this out? Were they trying to trip her up?

Before Giesbrecht could continue, a young woman opened the door at the end of the room and started to come in. She was carrying a tray of glasses, perhaps to restock the bar.

“Oh, I’m sorry,” she said. “I didn’t know a meeting was in progress here.”

She started to leave, when Puentes said, “It’s okay. You can drop off your glasses, no problem.”

The woman went around the table, past Asya, to the bar. Asya turned to look back just in time to see the whole tray tip over, dumping glasses everywhere, on the bar and on stools, with many of them breaking and with a tremendous crash. Asya thought it was funny, but she didn’t dare laugh.

The young woman looked really upset, but the men in the room immediately started making soothing statements, that it was all right, they would clean up later, and so forth. They finally talked her into leaving.

“Whew! When I said ‘drop off the glasses,’ I didn’t mean literally,” said Puentes. “Remind me to call housekeeping when we finish here.” Then to Asya, he said, “We just have a few more questions.” He cleared his throat. “Asya, I think it’s important to let an employee know when there have been complaints. One of your co-workers said that you had been missing from work sometimes when you were supposed to be there.”

“But ... Joe...” Asya had to force herself to use his first name, and she repeated “stay calm” again to herself. “We went over this when I hired on. I said I had to be gone once in a while because of my daughter. I work some from home. I’ve put in considerably more hours than are expected, and I’ve gotten all my work done. That complaint isn’t fair.”

“Yes, I know, I agree. I just wanted to tell you of the complaint. You need to be careful that you’re covered, that’s all.”

In the end they gave her some more advice, along with a performance rating of “excellent,” and let her get out of there, much to her relief.

\* \* \*

The three men stayed in the conference room.

“Shall I have the broken glass cleaned up?” Puentes asked.

“No,” said Lambert. “Let’s finish up here first.” He turned on a projector and dimmed the lights. “Here’s a display of the data from the Chair.”

On the screen in front of them were sets of wiggly graphs and small multi-colored pictures that looked like slices through a brain, with a labeled timeline across the bottom.

Lambert started in like an academic lecturer. “As you know, my group recommended hiring Ms. Lifschitz. She was one of the few people we knew of who had been recruited into that notorious Club named SubMarine in Atlantis. We already have two people in the Club, but one is not very active or useful, and the other has been compromised—they openly make fun of him. Through her we hope to get more information.”

“How did you find out she was a member?” Puentes asked.

Lambert made an impatient wave with his hand. “That doesn’t matter now. We have a bug in her apartment, video and audio. So far we haven’t found out much, but we hope this interview will help.” He paused. “This subject was unusually nervous, which itself is suspicious, since this was supposed to be a simple performance review.” He put a dot of light up on the screen. “If you look at the third from the top scan, you see several plots of her cognitive functions. Now right here is when Warburton was brought up.” The dot pointed to a slice especially lit up in one area, not matched in the other slices. “She reacted far too strongly for there to be nothing going on, and her statement that she didn’t know much about him is clearly a lie. She knows all about him. So far they haven’t had any physical contact that we know of, though that might happen soon.”

“Yeah,” said Giesbrecht. “I’d like to have physical contact with her. I had a hard-on the whole interview.”

“For Christ’s sake, Tom, this is serious.”

“I am serious. That’s one sexy woman.” He said in graphic

detail what he'd like to do with her. "She wants it, too; you can tell."

Lambert was getting irritated. "You're married, and she has a thirteen-year-old daughter. I hope you're just kidding, because you can torpedo your career with stuff like this."

"Jesus, yes, Tom, calm down," Puentes said. "And I'm not so sure it's obvious that she's involved with Warburton and with some conspiracy. So far, she's seemed straightforward to me."

"That's just because you don't have training with the Chair," Lambert said. "We're now able to get scans using very low magnetic fields, so we can get brain data without worrying that the subject might have a piece of metal on them. No one can control their brain data if they also respond to questions. All the Chairs in this room are wired up, just in case. Tom's Chair would have trashed the meter if we'd recorded it. Anyway, look at her reaction here when we broke the glass. She should have completely freaked out, nervous as she was, but instead she was relatively calm, very much in control. When I said there had been a complaint, the reaction was stronger, but it had the signature of anger. Those two events help us get a baseline for comparisons—essential for one-shot analysis. The deception signature with Warburton is unmistakable. Overall her nervousness is actually good, since that means there are more emotions to read."

"And what if she knew about the Chair?" Puentes asked. "What if the agency's little secret is getting out?"

"So far it hasn't. I've been to interviews of people who knew, and usually they react quite a bit different from the subject today. It was before your time, but when we started we just had one big padded Chair. We often lost the game at the start. 'Sit in *that* chair, all the way back, and hold on tight to the arm rests.' That was a stupid time, before we developed the cover of the CISA for our agency."

Giesbrecht started in saying something, but Lambert glared



him into silence. “We want to find out more about SubMarine. It’s full of cybercriminals. Especially the one who styles himself as Goebbels. He has quite a sense of humor to use the Nazi propaganda chief as his avatar. We think this is a wealthy individual living in Berlin, and we’re in contact with German Intelligence about him. The main person, ‘Johnny’ or ‘John von Neumann’ isn’t even accessible except through non-realtime mail, and that only from inside the Club. Communication with him is never like texting. There’s always a long delay. Bizarre. He’s in deep cover. We know nothing about him, though today’s subject, Lifschitz, often contacts him. Also, Lifschitz has a brother living in Berlin, actually in the same area as the Goebbels guy, the *Kreuzberg* section of Berlin. He’s employed with a bank, but in his spare time he’s a Marxist political activist, radical type. We want to look into connections with him. Finally, the Club has a software wizard, who uses Grace Hopper as her alias. She works with ‘Goebbels,’ and she also often contacts the ‘Johnny’ person.”

“Who’s Grace Hopper?” Giesbrecht asked.

“*Admiral Grace Murray Hopper*,” said Lambert. “She was a big-time woman programmer early on. She invented COBOL, I think. Was in the Navy, too. What’s interesting about this alias—this *avatar*—is that Hopper is often pictured as an old woman, and the person using the alias also projects a very old woman.”

“So what?” said Giesbrecht.

“It’s unusual, that’s all. When have you heard of a little old lady as an avatar? It might give us a clue as to the identity of this person. Anyway, we haven’t been able to break into Lifschitz’s computer, so I want you to have a physical bug inserted into her machine, one that will tell us everything that she does online. I plan to get a tap on Warburton, too, but that may be tough—a risky operation.”

“What’s the problem?” said Puentes.

“Well, Warburton is ex-military, as you know. You should see his file. Lots of covert work and field experience, considering that he’s a computer expert too. He has an apartment that’s kind of walled off on the top floor. We can bug it, but we have to be careful to time it for when he’s away. We have an inside with the security alarm company he uses, so getting in will be easy. Still, I’ll tell them to use someone experienced. We don’t want one of our people compromised or, um, killed.”

Lambert paused. “I guess I should tell you the rest. Warburton has powerful contacts, friends from the old times. But we no longer think he can be trusted.” He cleared his throat. “Warburton also appears to have a connection with a new company, FLOPS, that sells online computer cycles. In itself that wouldn’t be noteworthy, but the company sells vast numbers of cycles and underbids everyone. Their stupid motto is: ‘Petaflops for pennies, exaflops for Euros.’ It looks to be illegal as hell. They claim they buy up unused computer time, and they *do* actually buy such time, but it isn’t enough. NSA did a classified study I’m not supposed to know about. They gave FLOPS a problem they knew the answer to. FLOPS provided the answer, and they gave the answer back too fast. There was no way they could get it without performing a known sequence of calculations, and they couldn’t have had legal access to that much computer power—or if you like, we don’t know how they could have. It’s a big mystery.”

“Can’t you trace how they distribute their work?” Giesbrecht said. “Find out where it’s done,”

“They’ve tried to do that, but it all leads offshore through that damned Sealand site. We haven’t been able to break into it, and Sealand is so busy that even traffic analysis gives nothing. NSA will keep working on it.”

Lambert gestured to Puentes and Giesbrecht. “I want the two of you to study all the data we have about this SubMarine

Club, and all the data on the people we know or suspect are in the Club. Let's get on this. We need to make some headway. And before you go, Joe, do send housekeeping in to clean things up."

"Are you following these leads because Guzman wants it?" Giesbrecht asked.

Lambert answered quickly. "Don't mention that name, not at all. Of course we're following these leads because a certain person wants it. In the end we're going to come out of this way ahead, but we have to be discreet. The Feds aren't going to give us any big payback, understand? *He's* the one with all the money. We can justify this investigation; these really are criminals. Let's just say it's a coincidence that *someone* suggested looking at this group." The other two made no reply.

Lambert downloaded the data from the Chair, deleted the local copy, and then gathered up papers and left the room. Giesbrecht talked as if to an empty room, although Puentes was still there: "I'm going to find a way to get to that woman. I feel like a teenager again."

"You sound like an idiot," Puentes said. "If you do anything stupid, don't expect Lambert or me to support you." Puentes dialed housekeeping, and then went off muttering, leaving Giesbrecht to his fantasies.

## 9 Nov 2024, Bavaria

IT WAS NICE BEING in the south of Bavaria, way below Munich near the Austrian border, even cold as it was. Wieland and his colleagues had expanded an unnamed village, south of the *Tegernsee* lake, and even south of the tiny town *Kreuth*, adding buildings until there were a dozen new structures, fitted out to work more like a fortress than a village. Everything

was on the side of the highway away from the river. The buildings were nestled against steep hills, making them difficult to approach or attack except from the front, and that direction had an extra rock wall that gave a second line of defense.

He had talked two good friends into managing the operation, Gustav and Anna—"Gustav," a delightfully old-fashioned German name. "No one uses this name any more," Gustav had told him. Anna was Gustav's wife, an Italian who spoke excellent German. Until recently they had lived in Berlin. Other locals from Bavaria also lived and worked there, making it a special sort of community, including bodyguards, technical people, and several relatives. Just no Austrians. Wieland, like others from South Germany, thought of Austrians as sort of slow, or stupid even. You wouldn't want to rely on them.

Wieland's trip was mostly to check up on the complex one last time. Enormous batches of supplies had come in during the fall, from food to weapons and everything in between. He wanted a place to stay during the bad times he was expecting soon. Countries like New Zealand or Canada, maybe Finland, might be better, but various candidates were either too hard to get to, too cold, or too unstable. This area was reasonably stable, with bribable officials. In extreme need they could also retreat across the nearby Austrian border, to find more easily bribable officials—this time stupid ones from Austria.

Wieland relaxed for a bit after a nice Bavarian meal. He needed to get back online and work, maybe all night, but it was so nice to have a warm fire from a special stove in the fireplace. All the buildings were well-built, with extreme insulation and efficient wood-burning stoves to give lots of heat without waste. He was pleased at how well his "redoubt" was doing—and he kept working on his English. Soon he would return to Berlin for the endgame with Warburton's project. David really had no idea what a delicate state of balance the world was in now and how

little it would take, just a nudge, to tip it over into chaos.

\* \* \*

Wieland had started his trip two days before with a morning visit to one of the ethnic restaurants in his *Kreuzberg* neighborhood of Berlin. Many different groups served up their native food. That morning he went to the eatery whose name was an ethnic slur: *Speedy Gonzales*. The owners probably didn't know the name was a problem. He had often eaten Mexican food in the US, so he knew that the food served here was fake—prepared by Indians and resembling Mexican food, it nevertheless tasted of curry and other Indian seasonings. Even so, he liked it.

He could mostly move through Berlin freely without being recognized, but still he always had two employees discreetly following—more than bodyguards, they would go with him to live in Bavaria. The intelligence services knew him, but they would find him anyway if they wanted, and otherwise his was not a familiar face.

He finished his “burrito” with plenty of time to catch the flight to Munich. He still missed the Tempelhof Airport, gone now for many years. It was such a huge, magnificent collection of buildings, and had become more friendly without its swastikas. At least they hadn't torn it down. He could have walked to it if planes still flew there. Instead they had to drive southeast to the new Berlin Brandenburg Airport.

He'd been told that Tempelhof itself, and much of the surrounding area, had survived the bombs of World War II because the enemies of Germany wanted to use the airport after the war ended.

In Munich, he and his two companions were met by two others with a car—an older Mercedes in excellent condition—*Wagen des Führers* they used to call it.

They drove south, dropping him off in Kreuth to visit his mother, while the remaining four drove twenty kilometers fur-

ther to the compound. His mother lived by herself—his father had died just a few years ago in the Middle East, and his younger sister lived in Rome. Oh, of course his mother had several people to help—her favorite cook, and others to clean and maintain her small estate. The family had residences in Munich, but she didn't like big cities anymore. With likely difficult times ahead, he would have had to extract her from Munich.

Naturally his *Muadda* was glad to see him. She put a lot of the Bavarian dialect into her speech, and soon he was thrown back to the days of his youth, spending summers in this small town south of Munich—the rich child who lived in what to the locals seemed a huge house. Several people in his family had raised horses in the town, and he did a lot of riding and training when he was young. Horses were still around; they could be useful during hard times—used for work or transportation, and if necessary, for food.

In Berlin if he was careful, he could pass for a kind of Berliner, though not sounding quite like someone born there. Here he could always convince south Germans that he was born in Bavaria, and this often came in handy. He was one of them, not an outsider—another reason for picking this spot as his place to survive.

For the next day's main meal his mother had bought what they called *Wild*: wild venison meat, since she knew he loved it. Hunters killed the deer and sold them in local markets. Then in the early afternoon his people picked him up and drove the short way south to the compound.

His ancestors were industrialists and businessmen, very wealthy. They became good Nazis during the run-up to the war, and made even more money before and during the war. The really funny part was that after the war they kept most of their money. He had gone a technical route in his studies, which hadn't pleased all the uncles, but still he had remained in the

family business. Now the winds of war and chaos were blowing again.

He and Gustav had much to discuss: running and organizing the compound, taking care of all the new supplies, preparing for a collapse in the near future. It was all going very well. He enjoined Gustav to make everyone feel as if they were on the same team, with shared sacrifices and shared rewards. They also needed to understand the drastic changes he anticipated.

First he had to overcome Gustav's skepticism. "What makes you so sure things are going to fall apart right away?" Gustav had asked, sitting with him beside the fire. It was nice for a change to be away from his Club and speak in German. "The world's in terrible shape, on all fronts, but nothing says 'right now,' with no delay."

"I'm not sure, it's just one possibility. But in four weeks or so several ... events will occur, and they may be destabilizing. You're right about the world being in bad shape, but even worse, the world is unstable. We are driving along a narrow path beside a cliff. These damned Christians always see the future foreshadowed in their Bible, but for me the future is right out of Nietzsche, with a time coming when only the strong survive.

"I'll tell you in confidence—you must not tell anyone else, not even Anna—that a friend and I are going to knock down one small wasp's nest, as I phrased it to him, well, and then poke the nest a bit, get them really worked up. How many wasp stings does it take to get a driver to veer off a cliff? Also, it's good to have a safe house. If it doesn't happen next month, maybe the month after that. There is fear in the air, you can smell it in many countries.

"For us here in the mountains, even as prepared as we are trying to be, the times may prove challenging. That's another reason it's so important that we be a team, all working on the same side. We will need to trust one another. Also, we need to

be a microcosm of society. That's why I've assembled a group including couples, even children."

"All right," Gustav said, "things fall apart. What happens to us here? In detail."

"Impossible to say. But it won't happen all in one day. And I don't think Germany itself will be hit with any nuclear weapons."

"Nuclear weapons!"

"Yes, of course, what did you think? I expect lots of nuclear explosions, along with biological agents released, and a great deal of conventional fighting. The world economy may collapse. And we may have very angry people, or desperate people, attacking us from the north. Whether we can hold out and survive, time will tell. Also dissension within our group is a big potential problem. Again, the people here have few ties elsewhere. I'm going back to Berlin for four weeks, what I call the endgame. If I don't make it back, just carry on, survive, keep the race going."

Sitting beside the fire, he and Gustav drank several more bottles of the excellent Bavarian beer till he headed off to go online and work, work, work.

## 10 Nov 2024, Arlington, Virginia

MELISSA WAS doing an online chat with her Uncle Alex in Berlin. Aside from her mother he was the only relative who had always been sensible in dealing with her as a deaf person. Particularly her grandparents on her mother's side had been annoying to distraction. They shouted at her, got impatient with her, even pitied her, but they didn't like writing notes. Later when she used her droid they still didn't want to communicate. They were ashamed of her.

And they talked about her with Asya in a way that Melissa



often understood, since she could partially lip-read and fill in gaps. “Why don’t you fix her, cure her, make her hear?” they would say, and her mother explained that they had tried a cochlear implant, but it hadn’t worked out. Her grandmother begged her mother to have another child, a “normal” one, while her mother just gritted her teeth. Visiting them at their apartment in New York City was always a burden; a visit by herself was horrible.

Alex was cool, fun to contact, but she didn’t want him to know about her secret life of speech, so she used text. He had sent a policy statement from his leftist political group and asked for her input. She wrote back:

my ideas may be a waste of your time because of differences in our viewpoints. like you, i and many others regard capitalism as the ultimate destructive ideology, promoting a poisonous exploitation of all resources in the name of profit: environmental, human, created resources, even knowledge.

consider the capitalist ideal of 3 percent growth. i understand the economics in a simple way: with this growth, markets keep expanding, wealth keeps growing—good for everyone. but 3 percent per year is *exponential* growth, with a doubling time of 23.45 years, let’s say 25. so in 25 years, everything is twice as big. but 25 years later, things have doubled again. in 100 years, everything has grown by a factor of 16. i know economists argue that *wealth* can double, without population or environmental exploitation doubling, but in practice these also increase. such growth is self-limiting, and we are pushing against the limit right now. (i don’t mean to patronize you here. i just get worked up.)

thus i’m absolutely an anti-capitalist. i could support a marxist solution as you do, but i see other approaches to our problems as well, other forms of government. for

example, i would like to see us better control the activities of people. just the phrase “controlled human behavior” is almost forbidden now, but in practice we always are controlling behavior—just often doing a bad job of it.

the excesses of the wealthy, and to some extent of me personally, are obscene and unacceptable. if we did away with these excesses, we would have a much better world. nevertheless, i can’t agree with your sentence: ‘oppression has a long tradition, but today we have the technological prerequisites for all people to live a comfortable life.’

my big issues are environmental sustainability, and the essential population control and energy policies that go with it. for example, we are seeing that humankind simply does not have the will or ability to limit greenhouse gases, and even the necessary technical prerequisites are still missing. so all related graphs are heading along the worst-case lines. even with strict population limits, billions are going to die. recently i saw pictures of a starving african woman who could no longer feed her 10 children. such a birthrate would overwhelm any enlightened food policy.

my other grievance is the lack of planning by society. humanity is doing no planning to speak of right now. nothing long range at all. planning distinguishes us from the animals. i’d like to see your policies include more emphasis on these topics.

Her uncle Alex typed back:

the lack of planning is for us a matter of course, a *Selbstverständlichkeit*. the capitalist system is based on competing capitalists trying to increase their capital as fast as possible, what we call “the endless accumulation of capital”. planning cannot take place in this system—or only in extremely limited forms, when the well-being of the

entire capitalist class is at stake. that's why Marxists usually refer to "market anarchy". for us, the possibility of economic planning is based on smashing capitalist relationships of production and the states that defend them.

as for the question of population, i would encourage you to be more specific about what needs to be done. if you don't, you risk sounding like a Darwinist capitalist shouting "kill the poor!" you need to think of alternatives to "billions dying".

the question of overpopulation is primarily a social question. look at how in the advanced, imperialist countries, the birthrate has dropped well below 2. why is this? because people have some kind of social net to care for them in old age, and don't need 10 children to work in the family business.

so i think, firstly, that we need to guarantee a decent standard of living for all people into old age. secondly, we need to modernize agricultural production, because there are still millions of people in the world working with wooden tools, etc. thirdly, if we want to reduce the earth's population (if humanity consciously decides to in a free society!), we can rely on billions dying from old age. i don't think a famine or similar is necessary, only a reduction in the birthrate which could be achieved by eliminating poverty.

Melissa typed:

we disagree only on two points—not so significant really. first, the capitalist societies (and others) have done so much harm to our natural world that it's impossible to imagine. the destruction is everywhere, amazing in its extent: mountains, lakes, waterways, oceans, forests, farmland, the atmosphere itself—all have suffered tremendous damage, grievous harm that they won't

naturally recover from for hundreds or thousands of years.

in addition, because of climate change and related problems, the world has ever less arable land, ever more droughts and floods, ever more land swallowed up by the sea. we face a catastrophe right away.

and we are running short on most key resources, creating unsolvable problems. the availability of these resources is all intertwined: energy, water, food, minerals. the fact that we actually do have enough iron ore and coal and shale oil to last a long while will not be remotely enough. and burning the coal or the shale oil leads to more climate change; recovering the shale oil leads to a tremendous demand for water.

we also disagree about the current population and its continued growth: there are too many people. even if we could reduce the birthrate, that alone will not save us in the short run. it's too late for that. again, too many people. all countries depend on a lopsided age distribution in their population, with lots of young people and few elderly. *growth* is what creates this distribution.

in summary, i would say this: i wish you were more concerned with overpopulation. this topic has been a big one for hundreds of years, but now it's been downgraded. they will only say we need new and better sources of energy, more sources of everything, without giving overpopulation as the reason.

Later Alex asked:

what about nuclear energy? we are for the environment, but only secondarily, and not necessarily against a partial nuclear solution.

Melissa replied:

still, you should be against nuclear energy. it's basically evil, creating more problems than it solves. and

it's an environmental disaster. think about it: nuclear energy requires huge inputs of non-renewable resources, and not just the mined uranium. key scarce metals are needed to create the reactors. also vast amounts of water are needed. finally, the disposal of radioactive byproducts has never been solved.

a long ago i saw a cartoon with four panels, showing little creatures bringing energy to the king. the first creature said, "i bring you energy from the earth," and he was labeled "coal and oil." "too dirty," said the king. similarly, the king dismissed the water creature as impractical, and the wind and solar creature as too expensive. finally, a glowing creature with an atom painted on him said, "i bring you energy straight from hell." "now that's more like it," the king said.

why don't you emphasize conservation for your group? the bulk of world-wide energy use is wasted, even after all our efforts to save energy.

He said he would think about her comments, but it was clear that they had areas of disagreement. Then he had to go off with a client for lunch.

## 10 Nov 2024, Queens, NYC

**O**N SUNDAY morning Charlie Marino dutifully went to Catholic mass in Queens with his mother, Margaret Marino. She thought he was still a good Catholic boy, attending mass every week in Washington. She was a perfect example of the convert who takes a religion more seriously than someone born to a faith. She converted when she married and never missed any of her obligations. Charlie didn't have the nerve to tell her he no longer thought of himself as a Catholic

and never went to mass except with her.

His mother had been an unusual young Black woman from Ohio, who went to Manhattan to work as a librarian in the Chinatown branch library. Charlie didn't know how she met his father, but he was an older Italian, an economist, who met and married his mother. Charlie never heard directly, but it must have been contentious when she moved into the family household, with her husband's two parents, with two unmarried brothers, and with other relatives close by, all Italian Americans. Then Larry Marino brought home a Black bride. By the time Charlie was old enough to remember the family, his mother had become an accepted member, who spoke Italian, who was smart, witty—the reasons his father had been attracted to her. It was a crazy group of Italians. Charlie remembered large Sunday dinners with everybody talking at once.

His father had died fifteen years ago. He had grown up with grandparents who spoke no English, but they were educated immigrants who talked with him in Italian. He was grateful to them that he could speak Italian like a native. And the Italian had made Spanish easy to learn.

Over the years all the older people but his mother and his Uncle Joseph had died, while the children moved away, so that now his mother took care of herself and a nearly blind old man. Charlie worried about her and tried to visit every few weeks.

\* \* \*

His trip had started at nine in the morning the day before, with a polluting old bus from Arlington to Union Station in Washington. They'd raised the Metro fares again, and he wanted to save money where he could. For years now you needed to pay a fee just to get past a Metro entrance; the Metro was for the wealthy in Washington. As usual on a midday Saturday quite a crowd was waiting at Union Station for a train. Many people couldn't afford a car anymore, so to travel they had to take a bus or train.

When his train for New York arrived, Charlie looked at it with disapproval: it was old and dirty, and soon it was crammed with people. He didn't try to sit down.

Charlie dressed to avoid attracting attention. Nothing fancy or new, but nothing dirty or too old either. The gangs were always a problem, and not all his martial arts skills would make much difference—usually several gang members were together, often armed. So he tried not to look like a target with much money, or one that might be a pushover. He looked black enough to pass for Black if he needed to, and with the rare gang including Italians he could speak the language, although they often couldn't themselves. With a Hispanic gang he could use his Spanish, or try to look like an addle-brained foreigner who hardly spoke English. Today, though, apparently no one was going to bother him.

Leaving Philadelphia, the train lumbered past dreary burned-out buildings, followed by a gray landscape of pollution and trash. Charlie thought of a passage from Jeremiah: *It will be made a wasteland, parched and desolate before me; the whole land will be laid waste because there is no one who cares.* A forlorn young mother carrying a small child came into his car. Charlie was the only one who gave her money, and standing out in this way made him nervous. Another group came through selling one of the comics with only pictures, for those who couldn't read. Charlie bought one of those, too. It was hard to explain, but he felt compelled to *affirm* those on the train, to bless them, so to speak, at least those who looked needy and asked for something. He didn't think of this as a Christian act but more as an act of humanity, the common need of each person for everyone else. The train continued through wretched areas of the "Garden State" of New Jersey, and on underground into Manhattan.

The new Penn Station had been replaced by a makeshift station. He walked a few blocks north and took the Broadway sub-

way south and connected to the the ancient Jamaica Avenue El that had been running his whole life—just barely running now. The past month had seen many more religious people on the street, carrying placards calling for repentance in preparation for the end times, what his pastor Brother Jesse was waiting for. He was startled to see his pastor’s own message from four days ago on a sign, with ”WWW” overwritten by ”666,” carried by people not from his church. They got onto the subway with Charlie, along with so many asking for money, performing for money, and trying somehow to extract money, that Charlie gave up giving out any more. It was like feeding pigeons in the park; you could end up inside a hungry swarm.

Charlie got off at 104th Street and walked to his mother’s house, where he was born. The church they had gone to was within walking distance, even for his mother.

\* \* \*

Charlie usually found the Catholic mass boring, and this one was no exception—part of the reason he had given up on Catholicism. The priest spoke perfect English with a British accent, but still Charlie thought he was foreign, maybe Eastern European, perhaps Polish. The priest said he was using a very old sermon of a famous poet, but Charlie was dozing and missed this.

The sermon started out talking about God’s infinite power and concern for all aspects of every person’s life. The world was full of the bounty and providence of God, all of benefit to mankind. The sun and rain, animals and vegetables, birds and flowers and fruits, stone and timber and metal. “Search the whole world,” the priest said, “and you will find it a million-million fold contrivance of providence planned for our use and patterned for our admiration.

“But yet this providence is imperfect, plainly imperfect. Droughts and floods come, diseases and poisons, rebellious beasts. Explosions, fires, and outbreaks of sudden death. The



sea has storms and wrecks, the snow has avalanches, the earth landslides. Often we fight a losing battle, never a triumphant one. Everything,” he said, louder than before, “is full of fault, flaw, imperfection, shortcoming—a shattered frame and a broken web.

“Yet there is good in such a flawed world; for if we were not forced from time to time to feel our need of God and our dependence on him, we should most of us cease to pray to him and to thank him.”

Charlie was perking up; the sermon was taking an odd turn. The priest now said, “But there is one great means God has provided for every one of us to make up for the shortcomings of his providence: the giving each of us his guardian angel. *For he will command his angels concerning you to guard you in all your ways*, scripture says in the Psalms. And we learn from what our Lord said to his disciples that every human being, however low, is given in charge to a blessed and heavenly spirit, a guardian angel: *See that you do not look down on one of these little ones*, said Jesus in Matthew. *For I tell you that their angels always see the face of my Father in heaven.*”

He explained this as a wonderful honor. “How much does God make of us when he will have his very courtiers, those who are about his throne, to look after us men, even the lowest amongst us.”

Then he dwelt on the problem of the evil remaining in the world, wickedness and death and suffering. We are not in paradise, but in a fallen state, free to choose folly and take the consequences. And ills come to us through the evil of others. “God never meant that our guardian angels should make us proof against all the ills that flesh is heir to, for that would have been to put us back into the state of paradise which we have lost. But they help us here and there, in different ways, toward a better world.”

Eventually our eyes will be opened, but, he said, “in the meantime God’s providence is dark and we cannot hope to know the why and wherefore of all that is allowed to befall us. Meanwhile, our angels help us as they can, and we should heed them.”

There was much more, including all the ways that angels give help, and a prayer from each person to their own guardian angel.

Charlie took communion, feeling strange about it, since he hadn’t in such a long time. Finally the service was over, and the few people who had come straggled out. He told his mother how much he’d liked the sermon, that it really struck a chord in him, but it had seemed a little old-fashioned.

“Didn’t you hear him?” she said. “He told us it wasn’t his sermon. He’d taken it from a famous person. What was the name? Something like ‘Hodgkins.’”

He escorted his mother home. She was nagging him as usual. “Are you taking care of yourself? You look skinny—are you eating enough?” And then the biggie: “When are you going to get married and have some children?” That was pretty funny, but of course he didn’t laugh. The previous evening they’d talked about old times, about people now long gone. It had been fun; but more, he’d learned things about his relatives he’d never heard before.

But now he had to get out of there and head back to Washington. He wanted to make it before dark, and it was getting dark earlier. Fortunately, he’d looked over the house last night, checking storm windows, and the small furnace. He’d long ago fixed up the house so that most of it wasn’t heated anymore, which was tricky, because frozen water pipes would break. It had to be done, though; it cost too much to heat more than a couple of rooms. They used a combination of kitchen and living room, along with a small bedroom for Joseph, and a small bathroom. His mother slept in a room without heat, using a down

comforter, but his frail Uncle Joseph needed the heat. Finally, he made all sorts of promises he had no intention of keeping, hugged his mother, and headed out.

The trip back was supposed to be a reversal of what he had done on Saturday. But during the walk to Penn Station, a group of boys came toward him, moving out from store entrances to position themselves in front and behind him, boxing him in. They were young Blacks, none of them very big or heavy, but still there were five boys almost the size of men. Charlie looked around and saw very few people, considering it was a Sunday afternoon. No one seemed likely to help him. He was scared that he might be hurt and scared that he might hurt some of them. He saw they had knives, but not guns. Sweet Jesus, they looked like they were used to holding the knives. He had never actually fought against a knife, but he had practiced with wooden knives. Years ago he had learned in a class how to slip a knife, break the hold on it, and disarm an attacker. Now it was second nature to him. But his Aikido master told them that disarming techniques for knives work fine in sparring or in the movies; they were never to do it in real life except when there were no alternatives.

Charlie tried to look unconcerned with this group. He addressed them with: "What's up?" One of them answered, but he didn't catch what was said. Maybe it was, "You are." It bothered him irrationally—here he was more-or-less Black himself, and he couldn't understand these Black youths. They closed in quickly—what he wanted for an Aikido move. Only three had knives, so he was able to grab one who had no knife, flip him, and throw him against two of the others. Then he ran through the space opened up. It became just a matter of keeping ahead of them. He was in good condition, but two of them seemed in damned good condition also. He really exerted himself, lengthened the gap, and they gave up. In spite of his fears of gangs, nothing before had been quite this bad, where they might have

killed him.

When he got to Penn Station, he watched carefully to see if the gang had followed him, or anticipated where he would go, but there was no sign of them. He was thankful that the train trip home was uneventful and less crowded.

He hated even the idea of actual fighting, rather than sparing, the formal Aikido attack and defense. His master had taught techniques to avoid hurting the opponent, and he taught the same way in his own classes. This idea of “defense while protecting the attacker from injury” had attracted him to Aikido initially.

He decided he had to avoid these trips if possible. His mother was a smart woman, but not savvy with computers. Still, he had set her up so that they could do video chats, and that helped a lot when he couldn't get to New York. There would be necessary trips to take care of the house, but this trip had made him a nervous wreck. And the next group he might encounter was going to have a gun with them.

He felt that he had not measured up to what he should expect of himself. He had given in to fear. What if he had calmly engaged the youths somehow? He just wasn't strong enough for that, not committed enough to non-violence. He wondered if he couldn't find a technological fix, a non-lethal equalizer that might work in an extreme circumstance like the one today.

## 18 Mar 2028, Diary Entry

ok, i'm having trouble writing this. last night was scary enough, but thinking about it the next day is worse. bethany and i still sleep in the same room. it takes quite a bit to wake her, but last night right in our house a gun went off, and that did the trick. of course i didn't hear it, but bethany is my alarm, and she woke me up, just terrified. we both ran into the dark and narrow hallway outside the bedroom—what we should never have done,

and there was dad, carrying his crank-up flashlight and looking sort of ... distraught. mom came up and looked even worse if anything. dad signed to us to go back to bed; they would explain in the morning. he had to sign it again to make us go. we stayed awake, and using my droid for a dim light, i watched as bethany reported on voices and noises, from others besides just mom and dad. eventually it all quieted down.

the next morning mom told us that bob langstrom had broken into our house; she didn't know why. he's one of the men who hunts mostly, with a large pack of dogs, some of the best in the town. i didn't like him but really knew little about him. i asked what had happened, and she replied that he was dead. "but that's no answer," i signed, "what happened?" she said that my dad must have dealt with him out in the house somehow. she didn't know. bethany and i were not to bother dad with questions about what had gone on.

from a few reactions today, with people giving me a strange look, i think those in our town are a little more afraid of dad as a result of the break-in and its aftermath. yeah, respect as well as fear. i mean, after all, langstrom came in with a gun and fired a shot, but he ended up dead with no obvious cause, just bruises on him as i found out later. and dad wasn't hurt.

i asked bethany if she'd heard any of our dogs barking before the gunshot, and she said she hadn't. several times langstrom tried to make friends with our dogs, but i still don't understand. maybe they made just enough noise to wake dad up and not bethany.

of course there was nothing like an autopsy—we don't do that, we can't, but there must have been a meeting of the committee that runs the town—of which dad is a member, now that i think about it.

+ + +

well, the weekend has come and gone now. funny to think of a "weekend" here, but we do keep track of the days of the week—

for many people it's important to know when sunday comes. i always know the date from my internal mental calendar, and lots of us have solar powered clocks and watches and droids.

like the weekend, two people from that religious group the sweepers have also come and gone. bethany helped me with what they said saturday night, and with her help again i talked with them on sunday. it was hard for her to communicate abstractions back and forth from sign; we did a lot of fingerspelling. i won't show any of that in this diary entry.

they talked about work—the work we do as part of our lives. in the disordered time before the collapse (they said), people commonly believed they should be selfish in their work, that selfishness would lead to a better life and a better society. as if all work should be a zero-sum game with winners balanced by losers. of course we know that our biological nature leads us to be selfish, working to accumulate and dominate, to triumph and reproduce. they said that this is a source of our current plight, the natural animal greed and competitiveness.

this selfish work, the work that doesn't create, work that is not needed, is the opposite of the work we should be doing: the great work, the work of evolution or creativity in the universe. they said that our work should be a "sacrament"—a word that i didn't (and don't) understand. i mean, i know a dictionary definition—it's a religious ceremony that bestows grace. and grace is the favor of god. i guess it marks a change mediated by god. anyway, with our work we should bestow sacraments on each other: sacraments of relationship, of healing, of reconciliation, sacraments of food and initiation, of welcoming and leadership. (that was their exact list.)

i give here only a small part of what they said. for me, their idea of work means pride and craftsmanship, work that does no harm but helps others as it helps ourselves, work that improves the species and improves the universe. would it be possible to imagine a society where all activity was work of this sort?

# 3. Countdown

10 Nov 2024, Washington, DC

WARBURTON ARRANGED FOR the latest batch of mail to go off to Carl, with some news for the two physicists, Richard and Vasily. They had long since automated the process of gathering several pieces of mail together, encrypting and hiding them inside images, then including them as “answers” on an online technical discussion group. Eventually Carl would download the answer, and then decode and reassemble the individual mail items. Warburton was the main conduit, and he carefully controlled their access, since this was protecting their lives. He and Carl conspired to keep the other two from knowing how easily they could communicate with the outside world. “I don’t trust them to be discreet,” Carl had written. “They would let out the secret, and then we might be killed or at least severely held in check.”

Only gradually had Warburton learned that Carl Rosen was still alive, and many details were never cleared up. First came black grief that his good friend had died in a rock slide, along with his two companions, both well-known physicists, though Warburton had never met them. The story was widely told but not dwelt on beyond a couple of days. And why not? Well, it was an *accident*, not some terrible crime, just “one of those things,” part of the condition of life. They had gone to a rugged, remote, even dangerous, area of Mongolia for adventure and had had an accident. The Mongolian authorities provided a great deal of coverage, including access to the site by news media. After a rock slide their bodies had been crushed and then burned beyond any recognition by inspection or autopsy, but DNA samples gave

the identities of all three men. Two native guides also died.

Warburton was thrown into an actual depression; Carl had been his life-line, his point of stability in an empty life. Then several months later, a coincidence came along, of a type that would be too unlikely for fiction, but still possible in the world. He was reading an online forum about critical realtime programming, looking at various answers and the questions that gave birth to them. One question used an idea from his and Carl's work on the networking engine of their game. This immediately brought him up short; it was almost as if Carl himself were trying to communicate with him. He rejected this idea, but still stayed with the discussion thread through many days, and always the one participant seemed to be Carl, talking just to him. Warburton began making ever more explicit references to the game, and soon he knew for sure: it was his friend Carl, not dead but alive and asking questions in real time.

He could tell that Carl was in trouble—only allowed to communicate technical questions. Carl hinted at other forums, and soon they were exchanging information, though slowly. As a big step forward, Carl sent in a question including an image file. For the first time he could communicate his predicament clearly, using text hidden in the image. Over time they got much better at the covert communications, particularly after Warburton set up a fake discussion forum for their use.

There really had been a rock slide accident, and after a confusing time, Carl woke up in a military hospital. He and Richard weren't badly injured, but Vasily, the Russian turned Englishman, had a crushed leg. He recovered most of the use of his leg, but that was much later. They had only local visitors: a physics student who spoke English passably could talk with both Richard and Vasily, while several Mongolian physicists could speak Russian quite well—Vasily could talk with them. Another person, a programmer, managed to talk with Carl in broken En-



glish. Eventually Carl got the sick feeling that they were isolated and not allowed to leave.

Carl didn't give many details. Later he did get to talk with one of the upper-level decision makers, but before then the three of them forced the issue, demanding to return home. The physics student, Batukhan was his name, became their contact to the faceless bureaucracy outside the small circle of people they saw. He told them that they were going to be well taken care of, but not allowed to leave. Their only choice was to work on the Mongolian atomic energy program. He himself was in the army and also had no choice.

From the beginning they understood that "atomic energy" meant "nuclear weapons." Mongolia had been changing rapidly, with a new Prime Minister determined to exploit their mineral wealth better. Years ago they'd added nuclear power; now a top secret push was for nuclear weapons to stave off threats from their two gigantic neighbors. But they faced a harsh reality: they didn't have the necessary native expertise, and for this project they couldn't hire foreigners. Someone high in the military realized the possibilities of two internationally known nuclear physicists who had been injured in an accident and could "die" in that same accident. And that was the story put out to the media. Long before the trio knew their plight, blood and tissue samples identified their own "bodies," which were terribly mangled and burned in the accident.

They said their abilities had been misunderstood. They were theoreticians, not the practical nuclear engineers who could help a developing program. This excuse was rejected; anyone could look them up on the Internet—they were obviously top experts. They refused to work on the project. This was also rejected; they had no choice. The three went through a period of pushing back and forth, threats back and forth.

All along they were well cared for—food, accommodations,

and even outings to relieve the boredom of a military site, but security was tight and the location was remote. The situation had settled down somewhat by the time Warburton established contact with Carl. From the beginning he and Carl realized that they could only acknowledge to the other two that a tiny thread of communication linked Carl to the outside.

The original Mongolian expectations had been high—the top-level officials, none of them knowing any science, had expected rapid progress toward a bomb. But they had no library, hardly any physics books. Part of their faked cooperation was to rail against the impossibilities inherent in their current isolated environment. The government scientists, such as they were, had amassed a great deal of information about bomb-making, much of it dated and incomplete, but still the standard materials that circulated through clandestine channels, including one very thorough set of plans for a plutonium explosive-compression type of fission bomb. This was much more than either of the physicists had ever seen: plans recently used by several of the new nuclear powers. The three of them said they had to have information from the Internet, of course data of many kinds, but also answers to explicit questions. Otherwise progress would be impossible.

At this point, before Warburton had contacted Carl, they finally had a decisive interview with the army official responsible for their predicament. From the start they realized that this man—“just address me as ‘Colonel,’” he had said—was much more formidable than anyone they had talked with before. He spoke English well, and unlike the others, did not employ euphemisms. Carl gave quotes from this man, roughly as he remembered them, minus the accent and some grammatical errors.

“Let me be clear,” he had said. “Two of you are physicists. As far as I am concerned, one of the two can be a spare part. You will do what we tell you, and no nonsense. In exchange we are going to take good care of you. If you lie to us, pretend to

work and make progress, but actually insinuate deliberate errors and mistakes into our work, in that case the good treatment will stop. You have said you must use the Internet, must even pose questions to other experts. We might allow that, but it will be carefully controlled and monitored. Still, I can imagine that you might signal somehow that you are here and alive. If you manage that, we will simply kill the three of you and deny everything.”

He held up his hand to keep them from talking. “Let me finish first. I can imagine how you feel. You think that you will work here for us for years, and then be killed anyway. You think there is no way out of this trap. But that is not at all the truth. We want our nuclear program to succeed. In a few years, after we have a successful test, and after other events work out, there will naturally be changes at the top of our country. At some point the politicians can ‘discover’ that you three have been kept here without their knowledge. We can then apologize and release you. Your work here will not be terribly hard, and in a measurable time we will give you your freedom. But I will not pretend that you have a choice. You have no choice.”

The Colonel went on to explain that from the reports he had received he knew they weren’t trying. They were pretending difficulties of understanding, difficulties with the documentation. “You will continue to work through Batukhan, but we have others who know physics much better than he does. You are going to have to make these others understand, convince them that progress is being made.” He said that he knew they had heard from “fools” who expected a bomb in a few months. That was stupid; he and others knew better. The Colonel turned to Carl. “And you. We know you are an exceptionally capable applied mathematician and computer specialist. You are going to help with the weapons development, but starting now you will also help with other computer tasks, such as the computer controls on our nuclear reactors.” And on it went, depressing for Carl

and especially for Richard and Vasily because they really didn't think the project could succeed, in spite of an impressive complex constructed in the desert.

Later, when Warburton could text back and forth with Carl, and indirectly communicate with the other two, he agreed with all three of them that the whole idea was just shy of ridiculous. Charitably one could say that it wasn't quite absurd, but there were too many missing parts. They were spending a fountain of money, but still it was nothing compared with what was needed.

Warburton was especially worried about the Colonel. He seemed very smart, willing to admit they needed expert help to complete their bomb, and smart enough to know that their own physicists weren't up to the task of pushing such a project through. In the end, Warburton recommended to them that they work diligently on the project, not just appear to work. Completion would be a long time away, even with their best efforts. Lately the Colonel had demanded a project plan from the scientists: What did they have? What did they need? What were the key steps and hurdles ahead? And so forth.

All this had occurred over a year ago, and the group in Mongolia had settled into a routine, with Carl the least depressed because he had regular contacts through his hidden mail contacts—he even kept up with the gossip in SubMarine. Early on, Warburton needed help from an actual nuclear engineer in answering questions. He knew a retired man of considerable stature, and told him much of the story, swearing him to secrecy. This step had been essential; the Mongolian scientists were making real progress in their understanding, so they couldn't use fake questions with fake answers.

A few months ago the game had taken a perverse turn, to Warburton's dismay. Carl held himself responsible for it. He had again underestimated how clever the Colonel was. From the beginning they had been housed in a hospital-like facility. This

was the only decent housing, as many of the workers and soldiers stayed and slept in Mongolian “gers,” sort of like round tents, only sturdier. (“And don’t call them ‘yurts,’” Carl said he learned early on.) There were hospital personnel around all the time, including women, some of them young and attractive. One of these confided to Carl that she was also essentially captive, and ... lonely. He was not so young anymore himself, and he hadn’t thought of her in that way at all. Now he looked at her and saw a very good-looking young woman. This was no random nurse assigned to duty here. Instead she had been recruited as a temptation for the scientists, forced into it or perhaps even a volunteer. Carl had gently rebuffed her, but he had a sick feeling about the other two, both younger than he. He was right; they had already been compromised without his knowing it, and were each carrying on a relationship, an affair, with a pretty Mongolian “nurse.” Carl was upset. In months the three of them were going to attempt an escape, but would it still be three? What about the women? Were they loyal to their lovers or to the state? Was it possible that one or the other physicist would want to stay? Carl thought that in the tense moments of escape, if it got that far, the women would have to make up their minds—perhaps even one of the men. Now that they were discussing escape plans, he had at least managed to tell the two men they must not hint at such plans to their new companions until the last minute. For a change he was really forceful with them. Talking was always a problem, since they assumed everything was recorded, so shouting and carrying on was impossible, but he had quietly told them he would kill them if they screwed up the escape.

Warburton hadn’t mentioned this additional difficulty to Wieland, who would have found it hilarious. Their escape was a keystone cops affair anyway, and the prospect of dragging along two mistresses wasn’t going to help. At least Warburton had told the contacts that they might have to pick up as many as

six people—six because he didn’t entirely trust Carl to keep his hands off his own “nurse.”

One advantage they had: it would be terribly cold, and the location was remote and isolated, a forsaken land of low hills and steppes, with no resources. The Mongolians would think that if they ran off, they would get lost and die—death would come soon from exposure. But that was all changed by their GPS devices and radio equipment, along with two groups with vehicles and access to a plane.

## 11 Nov 2024, Arlington, Virginia

**A**SYA HAD GOTTEN off work from her Sunday night shift. Heading home, the Metro got her most of the way, and the rest was not too cold a walk for a change. They lived in a modern apartment complex, with all the latest ways to save energy. Underneath the building was a huge hole which held ice that was generated all winter long. For much of the summer that ice helped cool the complex.

On the way up the stairs she almost ran into someone. “Oops, sorry, Charlie. I didn’t see you there.” She liked Charlie, a young student who also worked part-time as a handyman at the complex. She thought he was nice, but perhaps also some kind of religious fundamentalist.

“No problem, Ms. Lifschitz,” Charlie said. “I’m changing out windows, putting in the heavy storm versions for winter. A little late, but...”

Asya went on into her apartment. Melissa was off at her school. She grabbed her droid to pay bills, check d-mail, see if the world still existed. Later Asya wandered off to the kitchen, and then looked in at Melissa’s room. She glanced at the work-station, and noticed extra cables looping into a cupboard beneath

the desk. She mostly left Melissa alone in her room, not snooping, but she didn't remember these cables. What could they be for? The door to the cupboard wouldn't open, but Asya could open the door beside it and look inside. It was dark in the back, so she used the flashlight mode on her droid. One of the renegade cables went into an odd-looking red and white box. Somehow it looked familiar. Ah, the bright red name on the box was IAS-10.

She found the name online right away: "Replace your cluster with our desktop supercomputer," with a picture of a giant rack of boards beside one small box on a table. Model 10 was the top of the line. "The State of the Art, using the new Stackforce chip set. Call for price." She remembered reading about it now. You could carry out a major research program with that machine. How had Melissa bought it? It was the sort of computer that a government agency or university department would want.

Asya almost felt dizzy—what was going on here? The IAS-10 was very expensive, not affordable by an individual, and certainly not by Melissa. And difficult to use. What could she be doing with such a powerful machine? Asya looked further back, behind the computer, and saw two huge optical storage devices, and other equipment on beyond.

For nearly two years Melissa had been able to access her own funds. Now and then she bought clothes and such for herself. She'd told Asya that she was making some money online, no big deal. She said she wanted to send in a separate tax statement, and have her mom not count her as a dependent anymore. She would do everything about taxes on her own. Asya had let all that go without seeing any figures or paperwork. It was all part of her attempt at a low-stress existence, as well as giving Melissa a feeling of independence.

Asya stood a long time in thought. She'd known that Melissa was very active online. But a lot of it was supposed to be at her Deaf Club. Asya looked around the room—very neat, simple,

uncluttered. A dresser against one wall had several pieces of jewelry on it. She saw Melissa's yellow earrings, ones she'd gotten at the mall ... when? Months ago, at least. Each had a simple large yellow stone, mounted for a pierced ear. Obvious cheap costume jewelry. Melissa looked at them carefully. Were they cheap earrings? She took them out into strong natural light and looked at them with a magnifying app on her droid. Nice-looking gold-colored mountings, and the stones were pretty. What kind of stones were yellow? Yellow glass? She didn't know.

Asya phoned a jewelry store she knew of. Could they appraise earrings. The answer was yes, but it would take three days. After two more tries, she talked with a woman who said she would do an informal, verbal appraisal for free and with no delay, or a formal one, with a special certificate, in two days for fifty dollars. Asya told the lady she would be right in.

At the store, Asya thought about the one previous time she had done this, with her engagement ring—Robert had bought her a nice ring, so long ago now. At that time she was recently divorced and needed money badly. The appraisal was all in a back room out of sight. In this case a young, well-dressed woman did everything right in front of Asya.

"Ah, here they are," the woman said. She started muttering and looking and measuring, working with several mysterious instruments. After quite a while, she looked up from the earrings, ready to give an answer. "I would call these exquisite stones, what are termed 'vivid' yellow diamonds, matched, and each about 1.45 carats, exceptionally clear. These are almost certainly artificial diamonds. If I had these, I wouldn't make earrings out of them and wait for that 'special customer,' but instead make two engagement rings, or other rings, maybe adding several smaller white diamonds to them. We usually gild the lily, so to speak. Yellow diamonds occur naturally, too, but I would need



special equipment to be sure. If they were natural, they would be extremely expensive, but you almost never see this clarity with the natural ones. Even the artificial ones are quite expensive.”

“So, how much are they worth?”

“You should understand that the price of stones like these varies a great deal depending on whether a jeweler is buying them or selling them. Also colored diamonds are more variable than white ones, and the price depends greatly on the market and on fads and fashion.”

She could evidently tell that Asya was getting impatient. “I’m not an expert on colored diamonds, but I’ve had some experience. If I were going to sell these, I’d price them at, um, perhaps four thousand dollars for the pair, but I’d expect to have trouble selling them. If you want to turn these into cash, I’d be happy to work with you, as long as you realize that the price I quoted is to buy them retail. But reworked as rings, I think I could get you quite a bit of money. They’re beautiful diamonds.”

Asya sat in front of the counter, stunned, and mute like her daughter. She couldn’t help herself—she actually stuttered: “f-four th-thousand dollars?” It felt like one of her panic attacks from long ago.

The young woman looked at her for a bit, and then said, “From your reaction, I’d guess that you didn’t realize these were that valuable, or even valuable at all. Well that’s your good luck.”

Asya found herself admitting that it was “a bit of a surprise,” while she was trying to get out of the store as soon as possible.

Back in her apartment, Asya sat still, calming herself. Melissa evidently had a good source of money. Enough to casually buy earrings for thousands of dollars, and hardware for at least tens of thousands. Lots of young people made money online. Some of them huge amounts. And, Asya shuddered at the thought, others stole money. Probably Melissa was not stealing, and she was apparently paying taxes on her income. After a

long time, Asya decided she didn't want to confront her daughter right then. She wasn't proud of the idea, but she would be able to avoid thinking about this as a problem if she ignored it. Put it off for now, till later.

Asya put the earrings back exactly as she had found them. She looked around the room. Had she changed anything else? Her gaze strayed to Melissa's framed picture on the wall, a small odd-looking head in black with traces of color, an elegant design with strange long hair on the face. She didn't remember when it had appeared. Asya took it down and looked at it with her magnifying app. The paper was old, with clear raised impressions of the picture. At the left on the bottom was "II/IV" in pencil, and on the right was a crude signature in red pencil. An original print, and all of a sudden she recognized the signature: Picasso. She seated the print back on the wall, and quickly left the room.

## 13 Nov 2024, Atlantis

**G**OEBBELS SAW HELEN come into the club in mid afternoon. First she went to Johnny's terminal and stayed quite a while, evidently reading his previous mail contact and generating a new one. Of course she had no reason to wait for a reply.

As soon as she finished, he limped over to say hello. In theory, there was a metal support extending his right leg by about thirty centimeters, but even for the historical Goebbels that only showed up as a limp. He had to admit that he enjoyed being arguably the nastiest figure in human history. He often detected a reaction from people, even friends who knew him well, as with Helen's slight frown.

"Good to see you today, my dear," Goebbels said. They chat-

ted about several recent worsening energy problems, when he changed the subject.

“I have been wondering just who uses the ‘Grace Hopper’ avatar in here. It is a riddle because no one ever uses a very old avatar, except maybe when one is to be an aged wizard. She is in fact one of our software wizards, and since Hopper was the, uh, grandmother of all programmers, maybe that explains it.”

“Oh, I don’t know,” Helen said. “I don’t see her or talk with her very often so I don’t have much of an opinion.”

“Well, I am thinking of what Joseph K. said the other day. He and I often try little tests to check on a person’s identity. I am really proud of my English, but I know that I stand out as a non-native English speaker now and again, especially if someone like K. arranges a test. He threw ‘kerfuffle’ at me the other day, just to prove there were words I did not know.” He became concerned that she was getting bored. “Bear with me, as you people say; there is a point to all this. K. tried out an extended experiment on Hopper to see if she had native fluency—a test I of course could not carry out.”

“You see,” Goebbels went on, “Hopper’s responses are often a little strange, a little delayed, almost as if she is feeding a foreign language through one of the translation programs. But the results are very good if that is the case. It remained a puzzle.

“So K. assembled special subject material and managed to throw out unexpected topics, with unusual vocabulary. In the end, the answers had refinements and little attachments that he felt proved she was a native English speaker who was crafting responses in real time.”

Helen didn’t look especially interested, didn’t even seem to be paying very close attention, until he added: “And yet still there were slight pauses, more than some little network delay, and small glitches, or discontinuities, in the speech. K. thought it was almost as if a native speaker was nevertheless feeding text

through software before it was ‘spoken’ here in Atlantis—as if it were someone who could generate perfect English but had trouble speaking it.”

Helen stopped still, and he could see her replaying the last sentence in her mind. He knew the question she was asking herself: “What kind of a person could create English text like a native, but couldn’t speak it?” And of course the answer would be: someone who could not talk, someone like ... *Melissa*, her own daughter. Her reaction was even stronger than he had expected. After all, Hopper had been in SubMarine for quite a while, well before she herself was admitted, and they really did refer to her as their software wizard. Even through all the layers of software, she actually looked ill. In the end she muttered words he did not understand and wandered off in a daze.

\* \* \*

Much later, Goebbels and Joseph K. got together.

“I told her,” Goebbels said to K. “As we agreed, I did not do it directly, but in order to get her to realize the truth, I had to ... what is the phrase? ... ‘rub her nose in it.’ It was clear that she had finally figured it out.”

“Thank’s for doing this. I thought we ought to do something. Her kid is out of control, sniffing around where she’ll get into serious trouble. It may be too late already.”

“Yes,” said Goebbels. “The ‘Churchill’ character has his sights on her. Do not worry, I will follow this carefully.”

\* \* \*

He had his own reasons to shelter Grace/Melissa. With her help, he’d developed ways to track individuals across the world—methods that worked better than what his opponents used. Hijacked computers processed a world full of data, looking for subtle linguistic signs of certain people of interest to him. The original idea came from Melissa almost two years ago, when she was

barely eleven years old. She had helped him implement it, and now he did all the heavy lifting.

But another recent project was a gold mine for him. He had known an associate was selling information, but he didn't know which of several hundred employees was doing it. A huge amount of data was involved. He and Melissa had worked to create software that would insert subtle variations into this data before it was available: minor additions and deletions, and even small changes in the actual data itself. The changes inserted were unique to each employee who could access the data—he called the changes *fingerprints*. When some of that data appeared online, a statistical analysis of the residual fingerprints identified the single employee who had processed it and passed it on. After transferring that employee, the leak stopped immediately.

How funny it was: Melissa thought he was paying her too much, when the pay was tiny in comparison to what her services had saved him. Yes, he must give her another bonus.

## 14 Nov 2024, Arlington, Virginia

MELISSA LOOKED over the book she was working on. Her tentative title was “Blinded Giants”—a phrase that expressed her contempt for humanity’s trajectory on its only world. Her image for the book and its cover was *Polyphemus*, the Cyclops of Greek mythology, one of Homer’s great stars—a gigantic creature, all arrogance and power. He had cunning, but not foresight or insight, and his single eye made it easier to blind him—his power wasted because he did not realize his vulnerability. She thought it a perfect metaphor for her disdain and indignation, her hatred of the mess humans were making of their world.

It was fun to write as an angry rant—after all, humans dirty their own nest. For personal gain they’ll do anything—ruin their lives, destroy their future, blight the planet they live on, kill the plants and animals they depend on. Not just polluting streams or lakes, but the ocean itself. Not just digging a mine, but making a hole the size of a mountain for mining.

She was also writing about the capitalist drive for the “endless accumulation of capital,” as her uncle had stated. The unlimited exploitation of resources, starting when humans first began cutting down their forests. Their greed to gather every possible resource was unimaginable, and not just the natural ones: there were humans to be exploited as working resources, made into slaves, children worked to death.

Then came her private outrage at the scholars, the academics, the scientists, the engineers, with their desire for the endless accumulation of knowledge. Her friends thought she was crazy to say this. Who could possibly argue against knowledge? Scholars liked to use the fabulous benefits from knowledge to justify its endless accumulation. But even the best benefits came with unintended side effects, came with strings attached. The knowledge often made things worse, and even the chase for it continued the spiral of ruin and destruction.

\* \* \*

She stopped working to think about G’s recent warning to her. Well, not a warning exactly but more of a caution, that she had too much “visibility.” It was a concern because he’d never talked that way before. In fact, a long time ago he’d helped her with just this problem. He paid a lot for her services, actually an amazing amount. And when he had started paying her, he got her to realize that she needed to pay income tax on the money. He had helped her set up an anonymous shadow account, used to pay and be paid without either side knowing the identity of the other—a fairly common practice. It was all years ago now when

she'd convinced her mother to let her file a tax form herself, without being monitored. More recently she got money from many sources.

Maybe the problem came from recent foolish purchases. She looked around her room. It wasn't hard to buy things with her money, although picking items up was a problem, and it had to be something that her mother wouldn't see or wouldn't notice—such as her earrings over on her dresser. They were made from matched diamonds of exceptional quality, astonishingly expensive (more than she would have thought possible), so of course her mom still thought they were cheap costume jewelry. She wondered if an expert could tell their value just by looking from a short distance. Buying them had been a kind of sinful treat, completely against her anti-capitalistic and anti-materialistic philosophy, and she felt guilty about the problems caused by the diamond trade. Even though hers were manufactured, their purchase still helped keep up the value of mined diamonds.

She'd bought other items as well: a beautiful little cloisonné vase, and a striking print that she loved. Right then she was deciding that it had been stupid to buy such expensive objects—perhaps part of the visibility that her friend talked about. But it was so delightfully evil to have a print on her wall that cost what the instructors at her school made in a year.

## 17 Nov 2024, Severn, Maryland

**C**HARLIE, HIS FRIEND John Turner, and three other musicians were on their way to play for a wedding. John was the only one of the five who owned a car—an old crossover minivan. The day's work would pay good money, so he and John had needed to hire extras—the three others in the

car, whom John had immediately christened Larry, Moe, and Curly. Charlie found it hard to believe that the three newcomers had embraced the names and stuck with them consistently.

Charlie played the guitar, piano, and keyboard. He was also the computer person. John played the guitar and sang. The other three included a drummer, a sax, and another guitar. Charlie would have preferred a different mixture.

They were heading for Severn, Maryland, the “city with nothing in it.” For entertainment in Severn, you could go into Baltimore, or go to the ancient Arundel Mills Mall, or go look at the outside of the National Security Agency. Or go to a wedding. Until a month ago there had been checkpoints on the highways, as the country compulsively checked everything, looking for more terrorists.

Heading up the old 295—not in good shape at all now—they saw flashing lights behind.

“Shit,” said John. “Shit, a cop.”

“Were you speeding?” Charlie asked.

“Yeah, yeah, I was, just a little, but enough.”

It was the state police, with two officers, one black and one white, a bad combination, or at least a bad omen. The police talked some, and sympathized with the need to get to a wedding, but finally demanded two hundred dollars. They didn’t have that kind of money; the wedding was going to supply money. It was amazing, but in the end the two cops settled for the hundred dollars that they scraped together. The police were bargaining for what they could get. Outrageous. By the time they got to the community center, John was in a foul mood. A chunk of their day’s money was already gone, and he would have to pay for gas when they got back.

The wedding itself and a reception after would both be at the same tired-looking center. Charlie was to play the keyboard for the wedding music, while the whole band would play later. Two



people were around getting the place organized: the bride's sister and another person, a man, who was never introduced.

Charlie brought a fancy 3D camera to produce streaming video of the ceremony and its aftermath. Anyone could catch the wedding in real time or afterward. One could also go to a virtual viewing room to watch and to converse with any others who were watching. In this way you didn't have to travel to take in a wedding. For more money and in a fancier location, they could have had a screen to watch the virtual visitors.

The wedding went off pretty well at first—and at least they did get married in the end. Instead of a dull civil ceremony, they used a minister and an actual religious service, some kind of protestant flavor, but any touch of religion was better than none. Charlie approved. And the minister gave a homily that started out well: saying marriage was a sacrament before God, and how marriage was difficult; the man and wife had to be prepared to work at it and compromise. Standard stuff, but good anyway. Then Charlie groaned inwardly as the sermon veered in another direction. “You as Christians are guaranteed an abundant life,” the minister said. “In the Gospel of John, Jesus says, *‘I am come that they might have life, and that they might have it more abundantly.’*”

“There's no reason to settle for second best. I hear people with an old clunker of a car praying to God that the car will run long enough to get them to work. That's silly. God will hear you and will help you if you're sincere, so pray for a new car and for the money to keep it running.” He went on to talk about the church he ran nearby, how if they came they should expect health and wealth, as a basic right. If they gave regular money, their money would be multiplied like the loaves and fishes were for Jesus, and returned to them many times over. “Ecclesiastes says: *‘Cast thy bread upon the waters: for thou shalt find it after many days.’*”

Charlie couldn't believe it, he couldn't stand it. Prosperity Christianity, and shameless self-advertising. He wanted to scream out: no, no, not material wealth, but the abundance of creation that is ours for free, God's abundant love and grace and blessing, the blessing of life itself.

Of course he said nothing. They needed the money, and making a scene wouldn't help in any way. Just suck it up and get ready to give them some good music.

But then the music they asked for wasn't any good either. Later, during a break in the music, Charlie wandered over to talk with the bride. He felt sorry for her because she was kind of plain, and the wedding itself was also not exactly glamorous. Act positive even if you have to lie. He said he thought it was "a very nice wedding." She thanked him for the beautiful music; she could lie too.

Her mother made a point to talk with him, about her daughter, how smart she was, gifted, and throwing her life away with the person she was marrying. Charlie seldom felt so disheartened. What kind of a mother would complain about her daughter's husband, right after the wedding, to a complete stranger? It was too much.

Maybe they should give up on music gigs. Too much stress, too depressing. They were on their way back, the wedding over, but he was still dispirited.

## 13 Dec 2027, Diary Entry

it's been a very difficult day for my mom, and for dad and me also, of course. after an illness of just three days, not seeming too bad at first, matthew died early this morning. he was only fourteen months old, but starting to get active, following everything, interested in everything, starting to talk quite a bit. my brother, well, my half brother. i had become more fond of

him than i expected. long ago he starting making lots of signs, i mean, asl signs; he communicated much better in sign than by speaking. bethany is more upset than i am. we just didn't expect it. mom doesn't think it was one of the new terrible illnesses, but only a standard respiratory infection, one that spread quickly to his whole system.

for a long time we've buried the dead the same day they die—important to help contain the diseases. so dad crafted a simple coffin. two others helped him dig a grave in our cemetery while i watched. they worked hard because the ground was frozen—a cold and windy day. when the time came, mom read a service from the book of common prayer while a group of townspeople stood silently by. she had shortened the readings so that people wouldn't have to stay out so long. except for the four of us left in our family, it wasn't as emotional as you might expect, since we've all seen so much dying and death and burial. several years ago, during the terrible times, we couldn't keep up with the dead. something had to be done, though, and they ended up using two mass shallow graves, along with a huge fire for simultaneous cremation.

sooner or later, two of the sweepers will come by, and we'll have a service with them. even now these services are usually for more than one person.

+ + +

the next day now. i've been talking with dad. we use a complicated mixture for communicating: some sign language, fingerspelled words, writing stuff down. dad signs pretty well, but i don't think he realizes that i've let a sort of private language develop with the two of us. it's asl but with lots of private signs, much more than the normal "home" signs, and with many other signs made incorrectly but consistently. (bethany is so smart she quickly mastered this "dialect" herself.)

he's in a bleak mood today, without the solace of religion that

may help mom—well, it may help her later. i told him that it was sudden and unexpected. he said it was just a random event. randomness rules our world, he said, and many people, especially religious ones, are terrified of the random, or if not terrified, they deny it exists. it's sort of funny—i shouldn't say funny—but *curious* that the religious people believe in god, but not in the random, while someone like dad believes in the random, but not in god.

dad was kind of lecturing me that randomness is the great source of organization in our world, since out of random variations, successful ones survive, with natural selection leading to better organisms. i knew all this, of course, standard darwinian theory. i don't see why religious people can't let their god make use of randomness, of random events, along with evolution to change and improve species. actually, even "improve" is the wrong word, since it's all relative. but the religious can only see "blind, godless evolution" proceeding without divine guidance, a watch without a watchmaker.

dad went on about how randomness is everywhere, from events at the quantum level to the chaos in the universe at large. and how we once used, and will again use randomness in computer algorithms and systems. i think dad partly forgets how much i already know of what he says, but i always like talking with him about almost anything.

for dad, random events are a challenge to us as individuals, and to our tribe, and our nation, and our species, to adapt to them as best we can and go on with our lives. people die, he said, and the world goes on; you have to pick yourself up and go on. he said my mom will be all right, that she's a brave person, much braver than he is. as for him, he has seen too much dying, before these hard times and during, and he's gotten tired of it. it was all very bleak, depressing, even frightening to see dad talk this way when i think of him as a rock of stability, a rock that helped us survive all this time.

i need to pay more attention to bethany, help support her and keep her spirits up. after mom, bethany doted on matthew all the time. she couldn't get enough of him, played with him and took care of him. i hadn't thought this before, but she seems somehow too good to be true—a little girl with no hatred or flaws or bad disposition. a person initially mute like me, almost as if she was crafted *for* me. but that's crazy talk. she's been a big support for me. that's why it bothers me so to see her sad, and even with her sadness she's mostly concerned about how mom and dad are taking this, and concerned about me too i guess. we've never learned where she came from or why she was where we found her. she doesn't remember much of anything herself from before we met up with her. dad used to call her a stray cat. i don't quite know how to say this, but it seems sometimes like she picked us up rather than the other way around.

once i wanted to understand everything, but i've learned that there are mysteries in the world that you never figure out.

# 4. Showdown

**18 Nov 2024, Washington, DC**

**W**ARBURTON GOT BACK to his apartment about 9 pm. He keyed in the alarm code and let himself in through a heavy steel door. The alarm system showed nothing, but a few subtle clues in the entryway made his heart race. He'd only been gone half an hour, so someone might still be in the apartment. Warburton had designed his entryway with this scenario in mind; he quietly closed and locked a second steel door that had been set in against the wall. He found himself in a small entry room that was proof against any normal handgun. He also had access to a small digital surveillance camera. The video showed grainy and blurred images of a person of medium height. First the intruder was messing around with the surveillance system provided by the alarm company, perhaps disabling it and not knowing about the camera Warburton was using. This person had appeared to duck into a closet off the long hallway when he heard someone come in. That's what it looked like. Warburton weighed how desperate the person might be—probably not enough to take big risks. He really hoped so. He should just call the police, but he wanted information about a sophisticated intruder who could bypass the alarm system. The downside was that it could be very dangerous; who knew what resources this intruder had brought with him.

He scolded himself: he should have put one of their “ultras” inside the apartment, one that he could control from out here. Stupid, but no help for it now, maybe the next time....

Warburton decided to take on this opponent, very carefully. The surveillance videos seemed to show him still in the closet,

so it should be safe. But what if he had brought a stun grenade, or something worse? And what if he wasn't in the closet?

Warburton opened the inner door, positioning himself so that he was mostly out of view behind a corner, fortunately a corner made of plaster over brick. He decided to sound authoritative and menacing, rather than angry and deranged. "I know you're in the closet," he said. "You have very little time to give yourself up. I'm well-positioned out here. I'll count down from five, and then start putting rounds through the door. Knock on the door to give up. Quick now! Five-four-three-two-one-zero...."

Shit, he had called the bluff. Warburton didn't want to wound him, let alone kill him. He aimed high and to one side, firing into the closet. He had a weird vision of his colleague Marcel as the person in the closet. Marcel would scream as if hit, cut himself so that actual blood came out from under the door, and wait to storm out of the closet. Or else Marcel would let his opponent shoot up the closet and would have managed to cram himself into the top corner somehow. Or else Marcel wouldn't be in the closet at all.

Warburton doubted that this man was as dangerous as Marcel had been, and even Marcel had died in the end. He should know, since he had killed him. Marcel the risk taker, had put Warburton in an impossible position, counting on their "friendship." What a terrible time that had been.

Only a few seconds had passed. "I'm counting again, and then I'll shoot off another round. Knock to give yourself up. Five-four-three-two...."

It was a tremendous relief to hear rapping on the door, but still the situation was potentially very dangerous. "You probably know who I am," Warburton said. "I've killed lots of people before. You'll just be one more. *Very* carefully, get on your hands and knees, open the door, and crawl out slowly. As soon as you get out, spread your arms and legs flat on the floor like a

starfish. Now, do it!"

The door opened, and a nondescript man came out. Thank God he was following the orders. The man started to say something, but Warburton interrupted. "Not a word, not a sound, just on the floor like a starfish."

Still, Warburton kept back while the man complied. You could never be too cautious, too careful. Lots of people who took chances died, and even the careful ones died sometimes. "Here are the rules," Warburton said. "I ask questions, and you answer just the question, and nothing more. I can still kill you and tell the police later that I caught you and had to shoot. Do you understand?"

"Yes," the man said. Good, he had some discipline.

"I swear, if I find out you're lying, holding out, screwing around, I'm going to kill you. Understand?"

Another "Yes."

"What weapons do you have on you or with you?"

"Nothing. No weapons."

"No weapons?" Actually it made sense for a professional. Carrying any kind of gun was very dangerous.

"No, I don't have anything. If I could just explain ...," the man tried to say.

You had to keep pushing them. "Explanations soon enough. You'd better not have a gun anywhere with you."

This was going well. "Stand up, feet spread way out. Good. Now bend over. Do it now!"

It was an cumbersome position for the guy. Warburton was able to approach him and pat him down. "What did you bring with you?"

"A tool kit."

"Now we can have explanations. What are you doing here? And don't give me crap about working for my alarm company." A pause. "A quick answer, and the truth, right now!"



Long sigh from the man. "I'm just a contractor for several US government agencies. I put in bugs, that's all. Your bugs are in the bag over there. Nice tiny wireless jobbies."

"Who do you work for? Who sent you?"

"I don't know." He must have seen from Warburton's face that this wasn't a happy answer. "Really, that's the way they do business with me. I was in the military, and then I worked for a private security firm. But now this is much better, the pay, the hours, more interesting, better until now."

Warburton just looked at him, keeping up the pressure.

"My cover is that I work for the security firm that you use. They are set to verify that. If there's any trouble, I'm supposed to say that we got an alarm and were checking the system."

"Why didn't you try your standard excuse with me?"

The man stared at the floor. "Jesus, I'm a technician. I'm not trying to save the world. Anybody who pulls a gun on me can have anything they want."

"OK, so how do you get your orders? And what's your name, anyway? Pull out some ID."

The man handed over a driver's license. "That's my real name, Joe Barnhill. Like I said, I'm a private contractor. One of several people contact me about jobs. My checks come from the security firm that I supposedly work for." Joe was babbling now. "They said I had at least an hour. Put two bugs in the apartment, one in a phone since you have a land line, one in a computer if I can manage it."

Joe paused to wipe sweat off his forehead. "This was not a good assignment. I wanted to bug the place just drilling down from the roof, and putting a bug on the phone line outside your place, but they wanted something on the computer, too."

"OK, Joe, take it easy now. You're going to put the bugs on the apartment and the phone as they asked, and report that the computer had a hardened case with a lock, so you had to stick

a sensor next to the main computer cable near the modem. You had no difficulties and met no one.”

“I can’t do that. I’d get in big trouble.”

“You’re in big trouble with me, right now.” The man said nothing. “Joe, let me ask you. You don’t know who you work for. So how do you know it’s an American company?”

“Sure it’s American. The security company is American.”

“Think about it. You don’t know; that’s what you’re saying. What kind of trouble would you have if you got caught and it turned out you worked for a foreign country?”

“No, that’s not possible. They talked about that on the phone—somebody did. I have a number I’m to call if I get caught or get taken off to jail.”

“Joe, think! You have a phone number. That’s just great. Do you think these people care if you get killed?” Pause. “The answer is ‘no.’ I say that because *I do* know who you work for.”

Warburton pecked away at a notebook. “Here you are. I know who you are, and I can find you. Now get to work putting those bugs in. I want to see exactly where they are.”

“What do I say if they find out?”

“Tell them I threatened you and your family. Trust me, they’ll believe that. But Joe, take my advice: quit this job, right now. It’s not worth the pay—more dangerous than you can imagine. Don’t quit with no reason, but say you have health problems, can’t take the stress. Then immediately move a long ways from here. A small town in the midwest or Canada, whatever. Do it today, tomorrow, soon.”

\* \* \*

Later that night Warburton had another dream. He was back in the house where he grew up, only it was far larger than it should have been—rooms the size of basketball courts. He watched a workman remove strange temporary additions—extra angled

sides to walls and even a sloping uneven surface above the regular floor. The painted constructions were tarted up with garish colors and bizarre designs, adorned with unintelligible language and other odd markings. The windows were completely covered. He knew why all this had been added: his mother had rented the house to a small religious sect for a few weeks, and they had made the changes for their rituals. It must have been raining outside because the roof of the room he was in leaked with a steady drip-drip. He was searching for someone besides the workmen, going from room to room, and there were many more rooms than he remembered from his youth. Why had his mother rented their house to this sect? There were no more workers to be seen now, but only endless rooms. He was also anxious about the water leaking in, steady streams, making a further mess of the house.

## 20 Nov 2024, Washington, DC

EVERY OTHER WEEK or so Asya took Melissa to a church in Washington. Asya had found an Episcopal church which on Wednesday evenings gave a service with a signing interpreter. Asya had grown to like the church, relatively small as it was, and “standing in the shadow” of the giant Washington National Cathedral. The Cathedral was also Episcopalian, but Asya had never bothered to figure out why a separate Episcopal church was located so close to it. The small church was intimate and friendly. They also came on Sundays sometimes, and then Asya acted as an informal interpreter, or else Melissa used her droid.

Melissa was so sophisticated now and so cynical, that Asya didn’t know for sure what she thought about religion. Still, the Episcopal Church was on the cerebral side, and Melissa didn’t suffer without complaint, although she had no choice but to suf-

fer in silence.

But now Asya was confronting what seemed like a whole new daughter—one who was the center of attention in her secret online life, who spent huge amounts of money on frivolous purchases. What else was she doing in cyberspace? Already as “Grace Hopper” she was an important figure and supposedly worked on exotic projects. She put these thoughts aside, as she often did when she dealt with her daughter.

Asya liked the priest who presided over the evening service. He was young for a priest, with boyish good looks. For the first time she thought Melissa might be attracted to him. Was Melissa old enough for that? She hoped not.

A nice crowd was on hand, including several deaf people whom Melissa greeted too swiftly for Asya to catch what she had signed. Out of this group, one person who must have been hearing went to the front to sign for the service. Asya could follow the signing fairly well, but from Melissa’s frown she guessed that it was not as fluent as that of a regular deaf person.

Asya had heard this service many times, and her thoughts drifted back to the time before she was married....

\* \* \*

When she was young, Asya liked the idea of being attractive. As she became a teenager, the interest of boys in her made her feel special. At the time she understood that some boys would be nervous around an especially pretty girl, but the reality was worse. It all seemed to go bad, and her good looks became more of a liability. The boys who wanted to go out with her seemed mostly interested in sex.

One boy named Michael had briefly dated her and then stopped without explanation. Later they became “just good friends” after he’d gotten a steady girl friend, Frances. Over coffee one day Asya forced herself to ask him why he’d stopped dating her. Was he scared of her?

Michael looked horrified and refused at first to discuss the subject, but finally said, “Well, I wasn’t exactly scared. I thought I was out of my league with you.”

“‘Out of your league?’ What does that mean?”

“This is why I didn’t want to answer. It sounds so lame. I guess it’s a kind of an inferiority complex, that someone like you wouldn’t want to be with someone like me.”

She started to respond, but Michael kept talking. “The two times we went out, I could see a reaction from guys we encountered. They seemed to be thinking, ‘Look at that hot girl. And look at the doofus with her. Can’t she do better than that?’”

“Why should you care what other people think when you’re with me?”

“I knew this was going to sound ridiculous, but it’s a fact. With your looks I thought I wouldn’t be able to measure up. Now that we’re friends, I’m comfortable with you, but even now it’s because I don’t have to worry about expectations. I’m happier with Frances, because I picture her happier with an ordinary guy like me. A doofus.”

Of course, what he had said seemed almost obvious to her, but it always seemed the same with the boys, and then the men, that she would meet.

Later, when she was still young, she finally found someone willing to marry her, but perversely the same problem came up in unexpected ways. Even Robert had wanted to impress her in bed, as if he had something to prove. Maybe all men were like this? And there was that really weird time. Robert knew she’d been a nurse’s aide as a teenager, and one day he ran across her old uniform in the closet, what they called a “candy stripper” uniform. It was crazy that she still had it. He had wanted her to wear the uniform, and no makeup, as a prelude to lovemaking. He said he wanted a candy *stripper*. She’d gone along, but the whole experience wasn’t pleasant for her. If she was supposed

to be so pretty, why wasn't that enough?

She now thought Robert was fundamentally a good man, that she should have worked harder to keep the marriage alive. They'd often had good times together. Maybe this was a sub-conscious reason for her choice of Helen of Troy as her avatar. Helen, supposedly the most beautiful woman of all time, cursed with her beauty, a destroyer of cities, seducer of men.

In the years after Robert left she had gone out with men on occasion, but she selected for men who only wanted her company and certainly no sex. For two years she went to any number of concerts and galas with an especially good-looking gay man, Marshall. It started out simple, but over time they got to dressing elegantly and grooming carefully, so that they looked the part of Hollywood stars, rousing a fuss as they arrived or entered a room. Asya was the first to make up an outrageous lie during small talk with people: that they had a vacation house on Majorca Island. Her friend picked up on this immediately and added a "small apartment in Zürich" when they needed to be "in the heart of Europe." Asya spoke German fluently, a gift from her parents, and Marshall spoke Spanish and some French, so they could act the part of expatriates. It was a happy time for her. In private they enjoyed being together because they could be completely open, without tension and misunderstandings. He had moved to the Seattle area, but she still kept in touch.

\* \* \*

Asya came back to the service with a jar. The young Priest was starting his sermon. The service leaflet gave the title as "Freedom."

"Today I want to talk about the ideas associated with *freedom*." He made a long pause. "And what does freedom mean? Here is the definition of the philosopher Leibniz: 'The power to do what one wants to do.' What do you think? Is this the freedom that we have or should have? That you can do anything you

want?" Another long pause, during which several people said "No."

"That's right," the Priest said. "Of course we as Christians can't do just anything we want. For starters, we have the Ten Commandments. But Jesus set a much higher standard."

The Priest went on with several standard biblical examples that Asya had heard many times. She mostly tuned him out. It was standard stuff.

She started listening again as he was almost shouting. "Jesus's freedom makes us free from the terrible torment of sin. And I don't mean the torment in Hell that is the wages of sin; anyway, many Christians no longer believe in this kind of Hell. No, I mean torment in this life. For the happy and unrepentant sinner will sooner or later either repent and let Christ take the burden of sin from his shoulders, or he will die in despair in this life and perhaps damnation in the next. The burden of his sin will build up until without help it will crush him."

Yeah, yeah, she was thinking. Let's finish this up.

"And Christ will not only free you from the burdens of your pride and lust and greed and the other sins. He also frees you from guilt and worry and fear. Many good people and some not so good walk around with these needless burdens. But you don't have to.

"Now I want to tell a parable. You may have seen dogs who seemed to be fenced in with no fence visible. This is a high-tech fence that uses a buried electrical line and special shocking collars on the dogs. The dogs get a shock if they try to cross the buried line. Seeing such dogs led me to my *Parable of the Invisible Fence*." The Priest read carefully and slowly from the sheet on his pulpit.

A man had three dogs. They helped him with the work of herding and guarding on his farm. He wanted to keep the dogs from running off. Instead of fencing in the farm, he

enclosed it with an electric line and put three special collars on the dogs. If they came too close to the line, they got a shock. Soon they became accustomed to this “invisible fence,” and always stayed within its boundaries.

Later the man’s son took over the farm. The son felt sorry for the dogs and wanted to give them their freedom, even though he still needed their help with the farm. So the son disconnected the electric fence and turned off the collars of the dogs.

The first dog, the youngest, immediately went into the wilderness, became lost, and perished. The second dog cautiously investigated the lands beyond the farm and loved to roam about, yet he always came back to do his work. But the third dog, the oldest, never crossed the old fence, and he spent the rest of his life inside the farm without visiting the world outside.

She decided she liked his parable; at least it wasn’t standard. He gave a final prayer and then asked them to greet one another, followed by announcements. After that the priest started the Eucharist. Asya couldn’t help herself, again her mind wandered off to another part of her life...

\* \* \*

After Robert left, Asya went through a bad time. She was short of money and worried about Melissa, who at age four didn’t seem to be adjusting well to a life without hearing. Asya began having what she called panic attacks—rapid breathing and pulse, a generalized fear that everything was falling apart, difficulty sleeping. She had always taken an occasional drink, but she started drinking more. The drinking helped with the panic, but the worry about drinking created more panic, so it was a self-reinforcing cycle.

At some point a co-worker, Nancy, had forced the facts from her at a bar. She later learned that Nancy never went to bars, but



did that one time to be with Asya. Asya's parents were Jews by Hitler's racial definition, but even *their* parents had given up any religion, while her own parents had become active in the Episcopal Church, in which Asya and her brother were raised. When Asya left home she dropped out and hadn't been to a service in years. Nancy belonged to what was called a "charismatic" Episcopal Church; Asya didn't know such a thing existed. Nancy talked her friend into coming along for a special Wednesday night healing service, in spite of misgivings on Asya's part. What happened there became a mystery for Asya because she couldn't clearly remember the events. Emotions overpowered her with the strange service, part familiar and part foreign. But she had sincerely confessed her powerlessness and had a clear feeling of difficulties lifted from her. It was not intellectual at all and thus completely unlike anything she'd experienced before. Later she'd told Nancy of her sense of relief and renewal.

"Asya," Nancy said, "don't you know? You've been born again, that's all, or rather, that's everything. You're a new person, a new creation."

Asya didn't know what to say.

"But you've got to come again," Nancy said. "Not just a one night stand—it doesn't work that way. You've got to keep it up, to keep the spirit within you, to help others get what you've received."

So Asya went to that church with Nancy for several years, and the later reinforcement might have been important, but she felt that it had all happened in that first confusing time of loud prayer and open emotion. She didn't believe in physical miracles at all, nor in any kind of faith healing, and yet ... something had worked for her. Maybe it was all psychological, a placebo effect. Later Nancy moved across the country, and Asya switched churches partly for the signed service. She also wanted Melissa exposed to a more traditional service, not quite so strange, with-

out the calls for physical healing and the speaking in tongues that the charismatic service had. She saw the hypocrisy in this, since she herself had been helped by such a service, but she made the change anyway.

\* \* \*

Now it was time for communion, the bread and the wine, which Asya took with Melissa. Soon the service was over. As usual they stayed around to talk with people, Melissa communicating with help from the interpreter. Again the idea stole into Asya's mind that Melissa might have some sort of crush on the young priest—she was alternately watching him and the interpreter with rapt attention.

Fortunately the trip home was uneventful. She and Melissa were signing “small” to one another, furtively so as not to attract attention. There were often cretins in public places who wouldn't just stare but would point and laugh and mimic them. Far fewer weird people rode the subway these days, though. Asya thought perhaps they couldn't afford it anymore. One young man on their car was carrying an old-fashioned airplane propeller that was awkwardly large, perhaps two meters long. Melissa wondered why he might carry such a strange object with him. All Asya could imagine was that the man used it as a prop, an attention-getting device, something to start conversations. It seemed to be working for him, too: as they got off he was talking with a young woman.

## 22 Nov 2024, Atlantis

JOSEPH G. WAS GLAD to find his friend Grace Hopper in the Club. They chatted briefly, while he thought over what he would tell her. He just had to get on with it. As was common in the Club, he asked her to go with him to a secure

“cubby” to talk. These were protected by an extra security layer and were considered safe.

“I have bad news for you,” he started out. He might as well be direct. “You have attracted attention from a powerful individual—the person involved with a Pacific island, the one you call ‘Fat Man.’ You know who I mean.”

“Hey,” said Hopper. “I’ve looked at nothing but public records.”

“That does not matter. He thinks all their activities have been secret. He is wrong about that, but you are in trouble anyway.”

“‘In trouble!’ What does that mean?”

“There is no way to talk around this. He knows who you are, as I do too, of course. The way you got into SubMarine betrayed you to insiders like me. I did not leak your identity, but you have not been careful enough. *He* didn’t have much trouble finding you out. I am sorry to have to say this, but you are in danger, actual physical danger in the world as Melissa Collins: in your apartment, on the street, in your school. It would be stupid of him to try anything directly against you, but I cannot rule that out.”

Melissa, still looking like a very old lady, paused to absorb this information. She was used to absolute anonymity, as well as feeling powerful and resourceful. “I’m not afraid,” she said. “I have backup plans. But what do you think I should do?”

“I think you should be afraid ... because he’s extremely wealthy, if for no other reason. So he has many resources and options, but he’s also vulnerable in a number of ways. I want to tell him you are no threat, that you will leave him alone.”

“Well, sure, I’ll let him be. It was sort of a hobby anyway, tracing him down and seeing what he and his group were doing on that island. But I don’t like being pushed around. I could ruin him, ruin his operation on Niue, force him to leave the US.”

“I know some of what you are talking about, but I am the

one who needs to talk with him. If he thought his only danger came from you, it's possible that he might get rid of you. I'm serious"

"I'd like to see him try. You see, my information is set to be released to media and elsewhere if I don't *prevent* the release each week."

"Grace, think," he said. "This only works as a deterrent if he knows about it ahead of time. You are too bold, not careful enough. I will tell him as part of my threats and negotiations. What do you have besides information to give to New Zealand about Niue?"

"I have video that should get him charged with sex crimes in the US."

"Very dangerous stuff," said G. "A danger to you personally. I need to talk with him, convince him that his best option is to leave us alone and that we will do the same. And more is going on than you imagine. Your mother has been tracked and investigated by federal agents at his urging. She does not realize this. Your Uncle Alex was tossed into a German jail. She has not yet heard of this either."

"Son of a bitch!" Melissa said. "I'm taking him down."

"No, no, you must let me talk with him. You are suggesting a lose-lose game. Surely you do not care what he does on Niue. This is not just a threat against you, but against your mother and against your uncle, too. You must leave this to me."

In her apartment, she was shaking from reaction, but her avatar looked calm.

"Do not make any moves on your own. You did not know, but you have several powerful friends to look out for you. And you can trust me that I can give *him* pause. He does not realize how vulnerable he is. He will know it when I am done. But we must not emphasize his vulnerability to *you*. That is far too dangerous for you."

“And one more thing,” Joseph G. continued. “I’m going to send a special piece of hardware directly to your apartment. It looks like a large and expensive floor lamp, but it will also give you more secure internet access.”

“I’ve worked on secure access. I don’t need this, whatever it is.”

“You will get it anyway. Delivery men will bring it soon, at most an hour from now, before your mother gets home from work. They will set it up, but they know nothing about it; they think it is just a lamp. You should put it to the right of your front door as you come in. Tell your mother you saw a fancy lamp online and wanted it.”

“I tell you, I don’t want this thing.”

G. managed to glare at her. “Do not be stubborn. You need it; it is coming whether you want it or not. Someone else has already installed a communications box in your basement. Connectivity to the lamp will go through the apartment power lines, so all you need to do is plug it in. Do this as a special favor to me, if for no other reason.”

## 22 Nov 2024, Arlington, Virginia

MELISSA HAD started with a day off from school, what was called an in-service day. Her mother would be at work, and she’d planned to get a lot done. First she looked briefly over online environmental reports. All terrible news, but bad as it was, much of the degradation came slowly, continuously. Evolution had programmed humans to respond to the immediate, never to what came gradually, so there was no alarm when each year was only slightly worse than the previous. A host of environmental parameters were changing for the worse, some slower than computer models predicted, but more

common was change faster than in the models. The faster change often came from self-reinforcing effects. The ocean level kept rising inexorably, accelerating faster than earlier predictions—terrible news, since rising ocean levels affected prime animal and human habitat. Humans, unlike animals, could plan ahead, make a model of the future, and watch the awful reality match the model. But not to worry because of the slow change....

The terrible fires in the west actually had a measurable cooling effect from widely dispersed smoke and ash, but such cooling was nothing compared with the ever rising carbon dioxide, along with a worrisome rapid increase in methane. And still people just said “adapt, adapt to the change.”

What drove her to distraction were pictures of localized results, of animals and plants dead and dying, “before” and “after” shots showing the relentless effects of climate change. The sea otters along the California coast, once common, were all gone now, disappeared. Even environmental encroachment came incrementally, step at a time, like eating a cake one small piece after the other, until it was all gone.

She visited Atlantis briefly only to hear from Joseph G. that she was actually in danger. He talked of sending her a lamp for improved Internet security, but she didn’t trust her Internet anyway. She had hardly popped back from Atlantis to the apartment when the flashing room lights, the apartment’s “doorbell,” announced a visitor. She peeked through the spy hole to see Charlie, Mister Weird Handyman, whom she liked. Her mom had arranged with the management that no one should come to the door unaccompanied.

Charlie explained that the men with him were delivering a lamp, and she nodded her agreement. The men moved a crate into the living room with a dolly, and in almost no time they had it opened up. She indicated by gesture to place it on the right side of the entryway door. A large, modern-looking lamp,

but presumably also what Joseph G. had promised. She thanked everyone, and fetched a large cash tip for the men, since she always tipped. They were surprised and pleased, thanked her over and over, and finally left with Charlie, who told her to let him know if she had any trouble getting the lamp to work. She didn't plan to use it except maybe as a lamp.

The lamp didn't look like much. It was sturdy, with a wide base. She tipped it a little and saw it was much heavier than she would have expected. When she plugged it in, it turned out to be a very nice floor lamp, with three switches that provided lots of lighting options. How had they been getting along without it?

\* \* \*

Melissa took her bag with all her normal stuff and went first to a computer supply store just four blocks away. In the store she paid cash for an SNB, a Secure NoteBook computer—they were small, without much functionality, but all the system software was burned into read-only memory. If you were careful you couldn't get into trouble, although a remote application could still present a novice with a bogus window or a “systems” message that asked for information. But the system itself couldn't be perverted.

Most people were connected all the time, of course, but recently some users had their internet access turned off for non-payment. This created a need for the type of service she wanted. She went six Metro stops to a freshly painted coffee house, looking better than its clientele: a mixed group of users, or maybe losers. She'd been here once before, just to check it out in case of need.

Coping with the kid at the desk was annoying, but lately everything annoyed her. Finally, he got used to the drill of communicating with her through her droid. He was grumpy when she turned down the standard wireless connection and instead insisted on plugging an actual hardware wire into their machine.

He wasn't even sure it would work, but through her droid she told him to take her money, give her the access code, and let her plug in *right there* at the machine behind him.

She was trying to get high security, and she didn't trust the wireless. Even if someone was following her, the new computer was clean and hack-proof. And now the connection didn't immediately broadcast itself. A traceback would lead to this Internet coffee shop, with no surveillance and no oversight—a dead end, she hoped. She strung her own wire over to a small table and got to work. The first step was to plug her tamagotchi pet into the new computer, to get access to a terabyte of data. Well, it wasn't full but held a lot. The tamagotchi knew her, *really* knew her, by pulse, fingerprint, and all sorts of other biometrics and habits; she alone could access it (not “it,” but *her*, actually, named “Samantha”).

She got to work: set up a secure connection through Sealand, to a special site she had created but never accessed. From then on it was work, work, work; stop for snack food; disconnect and take her computer with her to the toilet. And so it went for six straight hours, setting up new access codes and accounts, keeping a log on her tamagotchi of everything she was doing, even though she could remember it well enough, and then more work.

At one point a slightly geeky looking man, she guessed early twenties, tried to talk with her. Maybe trying to hit on her? Fortunately he gave up when faced with the polite but firm message from her droid. Completely exhausted, she made it back to the apartment before her mom got home. Then came a long bath—an expensive treat, since water and power to heat water were both carefully metered and charged for. Ah, the bath was worth it.

\* \* \*

Three days later, on Monday, her mother was away at work



again, so Melissa could work all day from home. First she sent a message to her school to claim illness. Then came heavy-duty work again, using her SNB as a springboard into the Cloud. She had made no attempt to use G.'s lamp with its supposedly secure Internet. She didn't trust it.

All her work went through the SNB—nothing left it or entered it that wasn't encrypted, and the codes were only on her tamagotchi. A trace of the encrypted traffic would be stopped at Sealand, since it was all encrypted again in another layer, and the traffic was so heavy, it was mostly secure. Well, unless they had subverted Sealand. For extra safety she had managed to set up a number of staging areas from the internet café she had visited, so no connections would lead directly to her room and to her in the Cloud. But now she had decided to continue her work from home. Working at the café was too much like an unpleasant camping trip, without the comforts she was used to.

She was especially paranoid about her home environment, since bugs and surveillance could be everywhere, almost too small to see. She had searched her room obsessively for possible devices, finding none, of course. As with a search for bugs in a computer program, a search for cameras could only prove their presence if you found one, but never their absence.

Now she was accessing crucial software on crucial hardware. She had harnessed and appropriated all sorts of resources to herself. An army of bots (a *virtual* army) marched in the Cloud, looking for information, special access, work to do. She had instantiated a number of the latest AI entities, more flexible than regular bots, with speech capability. The unsophisticated, and sometimes even insiders, would think they were dealing with a human being. She was especially good at adapting other people's software to her needs.

## 24 Nov 2024, Alexandria, Virginia

CHARLIE GOT to church early. He and his friend John Turner were set to play their guitars and sing along over a mike for most of the music. Last Sunday the two of them and three others had played as a band at a wedding. Their minister, Jesse, wasn't happy about it, but they couldn't afford to turn down a lucrative gig like the wedding, and it was too far away to do the church service before the wedding started. John had a regular job, such as it was, but Charlie got by with Aikido classes, along with what he could make from his music.

They had a nice crowd, but then more people were going to religious services these days. Especially the Christians had been getting worked up since the prophetic fires in the west. In a perverse twist, Brother Jesse's identification of the World Wide Web as the tool of Satan had been picked up by a number of bloggers and spread throughout cyberspace before it appeared on the radio and video news. Most city newspapers had disappeared, but there were still smaller local newsletters that also carried Jesse's warnings. The story was everywhere now.

Jesse had been giving sermon after apocalyptic sermon since he announced his WWW ban. Now he started out saying, "We know that the end times are coming. Consider Revelation 10, verses five and six: *One day an angel will place one foot on the sea and the other on the dry land and lifting his hand to heaven, swear by Him that liveth forever and ever, that 'Time shall be no more.'* And then time will come to an end—trust me, brothers and sisters. It will be the end of time and the beginning of eternity.

"Christ himself will lead a great army from heaven against the Antichrist, who will be silenced forever. Revelation 20, verses 19 to 21 tells us: *Then I saw the beast and the kings of the earth and their armies gathered together to make war against the rider on the horse and his army.* The rider on the horse is

Christ here. *But the beast was captured, and with him the false prophet who had performed the miraculous signs on his behalf.* Of course the beast is Satan himself, while the false prophet here is the Antichrist, come to deceive. *The two of them were thrown alive into the fiery lake of burning sulfur. The rest of them were killed with the sword that came out of the mouth of the rider on the horse.*

“Some say all this will happen soon, very soon. But they do not know the time. The Apocalypse and the Antichrist may be right before us, but we do not know.

“I have looked and thought and prayed, but I have not yet discerned any man who could be the Antichrist as he is also foretold. So, brothers and sisters, until we have the rebellion, and until the Antichrist appears, Christ will not come again, and all that is in the unknown future. We know *what* will happen, but we do not know *when*.”

Jesse waited through a long pause. “Are you ready for Christ’s return? Have I not told you over and over: In this life you only have the two choices: you serve God in Christ Jesus or you waste your life in sin, serving Satan.”

Eventually, the music was done, the service was done, the fellowship afterwards was done. Charlie said goodbye to everyone and walked all the way home again. It was a cold day but with a cruel, bright sun that seemed to give him unusual clarity of thought. He didn’t like these sermons: End Times, Rapture, Antichrist, Satan, Christ coming again to battle with Satan. All this was missing Christ’s core teachings of love in the gospels, what Charlie lived for. He didn’t like the Book of Revelation either, with its red dragon, who was supposed to be Satan, and its seven-headed beast, who they said was the Antichrist. Why not worry more about Jesus’s call to love your neighbors as yourself? Jesus didn’t talk about seven-headed beasts. He didn’t talk about leading an army against Satan.

The Catholic Priest's words of two weeks ago remained with him more than he had realized. The words hung on him like a stole around his neck, like a blessing.

## 21 Oct 2026, Diary Entry

mom has turned into the unofficial public health officer in our region. there's a doctor in a town 30 miles away but none here in yates center, so mom fills the gap. she's also made policies that are used in the other towns near us. for example, infections—she's gotten people to be more careful of them. any kind of scratch or insect bite can lead to an infection and death, and us with no antibiotics. but mom and the doctor say that often the infection is something the antibiotics no longer work on anyway, so we're supposed to be careful about getting scratches, and to really wash them out when they occur. afterward some of the people, especially the kids, get a *boil*, a word i had only read in *job*, the book in the old testament, and thought it was just some kind of sore. in fact it's a ugly big red puffed-up place full of pus—another word i'd read but didn't know about. mom cuts the boil open, squeezes out a lot of pus, cleans it and washes it. nasty. this usually works but not always. a month ago mom stayed up all night with mrs. harkness and her little girl susan, washed and cooled the girl and even prayed with her, but she died in the morning.

another example are the ear infections that children get. before, they always used antibiotics, but 80 or 100 years ago, with no antibiotics, the doctor would lance the eardrum in an acute case, and this was usually quite effective. mom was really scared at first, but she read about it, and eventually got so she could do it routinely. she learned about this in a book called "ship's medicine," telling people what to do at sea. ordinary medical books always say, do this and that *until the doctor arrives*. but what if no doctor is going to arrive? doc

abrahms had several books, david had a book, and she's found some others, so she has a small library to consult at need.

of course some of the new diseases—like the red plague—kill right away and all we can do is bury them quickly. thankfully the wave of smallpox is over now, since there were deaths from that also. we don't seem to be getting the terrible tb that mom and dad say is in much of the world. they hear about it on our radio and then tell me. tb was already a huge problem before, but now people mostly catch a super drug resistant version, as if we could deal with the old version. the mortality rate for tb is pretty high now. as our society comes back online, a critical need is the tb test—simple to administer, but extremely helpful to screen people for the disease. we don't have any cases that we know of, so it's not a problem, but it could sneak up on us and be serious before we realized it.

we have had a fair number of accidents, including a few gunshot wounds, and of course quite a few a year ago. but several people have experience handling emergency first aid, dad especially. we can't do much for a bad gunshot wound though, just clean it up, try to remove the bullet, and give support, hoping for a recovery. dad made a plea for anyone off hunting to be especially careful. a bullet in the leg was bad before, but now it's often lethal.

a myriad of ailments come to mom, new ones and pre-existing conditions for people who no longer have the proper medication. before he died, doc abrahms and mom and several others made a raid on the walmart closest to us (maybe 15 miles away). it had already been picked over, but they found a lot of stuff left in the pharmacy, and brought it all back to the town. they were lucky to have several people with guns along because there was a confrontation within the store. i guess both sides huffed and puffed, but left without shooting at one another.

there have been maybe a dozen pregnancies since we came to yates center. after encouraging people *not* to have

any kids, for all sorts of reasons, mom has ended up pregnant. a big surprise for bethany and me. bethany is usually so calm, but even she is excited about this prospect. anyway, mom's due soon now—not more than a month. she's not getting around as easy as before, but she's tall, so she doesn't stick out as far as others do. mom has a group of women, half a dozen i think, who help with deliveries. they've developed some experience now, which i'm sure mom appreciates. of all our deliveries, we've only had one death. and i'm optimistic just like bethany.

+ + +

it's evening now. for the first time i asked dad about his time as a soldier. i could see i'd put him in a bind, because he didn't much want to talk about it, but he has also always treated me with respect and felt that questions should be answered. he said he'd been in various parts of the army, but had ended up in a special forces unit. because of his background, he'd become the "computer person" in that small unit. this dual role was a great weakness for him—you can take care of your computer and focus on it, or you can focus on the fighting and on staying alive, but it's difficult to do both. that was how he had gotten wounded.

dad sighed and paused, and then said it was all a terrible business— he had seen awful things, things no one should look at, much worse than the stuff here in this town.

i told him that of course i knew they were killing people, people dying horribly, his fellow soldiers. but was there something else that was worse than the killing and the dying.

this time he paused a long time, and i thought i'd put forward a question that shouldn't have been asked. i started to apologize for asking, but he interrupted, saying that he was only thinking back to those days. he said he had a grim answer if i could deal with it.

i said i thought i could. so he told me about his early good morale. he and his buddies were partly doing what they were

told, but they were also fighting terrorists, bad people who needed to be opposed, needed to be eliminated. he fought in several different countries, but always it was his group against a group of locals, people who lived where they were fighting, who had grown up there. eventually he came to see himself as the outsider, the interloper, even the terrorist in someone else's land. but worst of all, the fighting and the killing didn't change things over time; instead it made things worse. *this*, he said, was the terrible reality: they were fighting for less than nothing, fighting on the wrong side, for the wrong cause. he and his friends killed and got killed, and it wasn't just for no reason, but for a bad reason.

i thanked him and gave him a hug and then went off to leave him alone that night.

# 5. Shakedown

**28 Nov 2024, Washington, DC**

**W**ARBURTON HAD set things up with Wieland to take turns on computer surveillance. He was to do midnight to noon, so he decided to take a nap before starting. Sleep was slow to come, but with it came his terrible recurring dream. He always recognized it with a feeling of dread, but he was never able to remember most parts in the sense of recalling the plot of a story or characters in a movie. He could remember emotions of loss, of a world and a life made intolerable. The closest he could approach the main part was the thought of being trapped in the body of a fly, held against the ceiling and unable to leave or even move. He could only wring his tiny hands, the hands of a fly. Sometimes he would seem to come half awake, still gripping his fly hands that were also his real hands. He was still a fly, but the size of a man and lying in a bed. At that point he would be in the dream's worst part because he was afraid to wake up completely.

As always, true to the dream, he woke up fully, sweating, shaking, wondering if he still occupied the right body. Finally he got up and headed to the kitchen for a meal.

\* \* \*

Later, after midnight, Warburton felt nervous, fidgety, worried about the plans for his Mongolian rescue, but with nothing more to do. The action would start in earnest Sunday morning Washington time, in just three days. All the actors knew their parts now and were apparently ready, waiting in the wings for their cues. He tried other work, but it was hard to concentrate.



One of his displays showed several views of the activity he and Wieland were monitoring. The software provided a number of readouts, including an indication of anyone moving about, and it could identify individuals quite well—it had already tagged each person in the scene, so their presence didn't produce an alert. An alarm would sound if anyone else was detected, or for any of a number of unusual events.

After wasting much of the night, Warburton went to SubMarine to kill time until Wieland would take over. No one from his regular group was around. He chatted with various people about changes to the web. In the midst of talking, he heard an alarm in the background.

He excused himself and dropped out of Atlantis all in an instant. To the person he was talking with he would have disappeared with only a kind of pop to show for it, a virtual indication of the air rushing in where he had been. It was bad manners to leave that way, but here was an emergency.

He quickly reviewed the display with all its data. A new person was present, someone not tagged, and this had activated the alarm. He seemed to hold a gun, and the situation looked very serious. Warburton would have preferred calling the police but worried that there might not be enough time. Now a previously tagged person re-entered the room. As the new person seemed to swing his gun around, Warburton activated the first attack mode.

## 28 Nov 2024, Arlington, Virginia

**F**OR ASYA it was all a nightmare—confused at the time and not clearly remembered later. She had only left Melissa alone for thirty minutes, but now as she returned, the apartment door was cracked open. A man's voice came from

inside. She pushed the door further open, and the nightmare began. A scruffy blond-haired man in work clothes held a gun on Melissa and shouted questions at her, not knowing she couldn't answer. Asya had no idea what he was saying, not the individual words and not the sentences they formed. The man saw Asya in the doorway and turned toward her, swinging his gun in her direction. A little popping sound came then—Asya took it to be his silenced gun going off. At almost the same time a brilliant green flash came from the lamp to her right, leaving an after-image on her eyes. When she could see again, the man had his free hand over his eyes. He stood still, his mouth forming an 'oh' shape.

"I can't see," he said, almost quietly. "What, what's happening?" This was followed by, "I don't feel so good." Then he sat down on the floor, leaned back against the wall, finally fell over sideways.

Standing next to the kitchen door, Melissa seemed terrified, but also alert, taking everything in. For Asya it was insane, a man threatened them and then collapsed unconscious. While she stood frozen, she saw glowing letters, words, moving across the new lampshade, on the lamp that Melissa had just bought.

This was crazy, crazy. A moving message on the lampshade. She exerted herself to make out what it said.

"Don't mention this message out loud." The words continued, "Say something general. 'Oh my God, what's going on.' Look after Melissa. Then come back here."

It was easy to comply. Asya signed to Melissa: "You hurt, scared, ill?" Melissa managed to sign a reassuring reply. Asya turned back to the glowing messages.

"Bug in apartment. Video, audio, but they can't see this. Quick, say: 'Jesus, he passed out. Is he sick or on drugs?' Moan and groan. Then read more."

"Quick," the message continued when she looked back at the

lamp, “go to him as if to check him. There will be a dart in his mid-section. You must remove it. Point your back to the video screen. Pull out the dart and conceal it in your hand. Slip it into your purse. Throw it in the river.”

She found the dart high on his chest, pulled it, put it in her pocket. Why was she doing what the words demanded?

More message on the lampshade. “He fell over so easily, he must be out for twenty minutes, maybe more. But don’t wait in your apartment. Go downstairs, get to other people. You must call the police. Act hysterical. Intruder. Seemed high on drugs. Keeled over. You’re scared. Blah, blah. Careful what you say, they may interview the others. When it’s all over, come back here alone.”

She had no trouble sounding hysterical on her droid. The dispatcher told her to stay out in the open and wait for a patrol car. Soon a wailing siren announced the police while she waited with Melissa, who seemed to have mostly recovered. Why wasn’t Melissa still terrified? Asya didn’t know, but then Melissa was often calm in a crisis.

There followed a long wearying period, first with two very serious police officers going up to her apartment, guns drawn. Asya thought of them as Tall Cop and Short Cop. Then an ambulance left with the intruder, who was just starting to groan. Short Cop went with the ambulance, while Tall Cop interviewed her in the police car.

For Asya the interview was another crisis. How much should she tell? She decided to act confused, frightened, nearly hysterical, while forgetting several important details. It wasn’t hard. After a while Tall Cop finished his report and told her they’d be in touch later.

Back in the apartment she found out that Melissa had encountered the man after she had gone to empty trash. Asya thought back about the intruder’s clothes. He had on a uniform

like that of an appliance repair person. Such people were around all the time and wouldn't stand out. Obviously a burglar, interrupted by Melissa. But what in God's name was the lamp?

Asya turned back to examine the lamp, which immediately seemed to know she was there. Letters started appearing again. "Just the two of you now, right? This is Joseph K. Please log on and connect directly with me, so I can explain. There's a bug in your living room, but not in your study. Go there by yourself, without Melissa, and close the door so we can talk privately."

You could always try to get a direct voice connection with someone from SubMarine. The system supplied the usual disguise of your voice. Joseph K. started talking immediately. "The lamp came from Joseph G. and me. I'm sorry to have to admit that we've been monitoring you. It's a long story, but I'll try to answer all your questions. Just to save time, you should realize that we know who you are, your avatar, I mean."

Asya felt hard-pressed to know where to begin. "The lamp. Melissa said she'd bought it."

"One of Joseph G.'s ultras, that he and I use. G. told Melissa that it was for network security, which is only partly true. He also suggested she tell you that she'd bought it herself. You shouldn't hold that against her. The lamp allows monitoring and communication, but it also has several kinds of attack features. What you saw was an anesthetic dart that uses a new version of one of the curare type of drugs—extremely fast acting but not exactly safe, though the target can still breathe. Also a green laser blinded him temporarily."

He was glad the dart had worked; otherwise the lamp could have killed the man in two different ways, but there would be side-effects with a killing, to put it mildly. With the dart gone, the drug metabolized, the green flash dismissed as imagination ... well, the police might not realize he'd been attacked. Just one small puncture in his chest. Of course Churchill

would know the truth, part of the truth, from his bug.

“But why do we have a ‘lamp’? Why did we *need* a lamp?”

“That part is a long story. I assume that Melissa’s not with you now.” Asya replied that she wasn’t. “Just out of curiosity, I guess, Melissa was investigating one of the people in SubMarine—the person with avatar Churchill, if you’ve met him. In the world he turns out to be immensely wealthy, and he’s involved in, um, elaborate activities that you’re better off not knowing about. Melissa found out his secrets, and he discovered who she is. Joseph G. and I knew we would feel better if you had some protection. Frankly, it’s unbelievable that Churchill would send some goon like the guy who was arrested. It’s also possible that by some coincidence he’s just a common burglar. We don’t think so, though. We also don’t think Churchill ordered this. Because of his, um, exotic tastes in pleasure, he’s risk averse, so we think an underling acted independently.”

Asya was horrified. “That’s terrible. What will we do? I don’t even recall this Churchill character. My God, are we still in danger? Will he try again?”

“No,” said K., “You shouldn’t worry. He’s really overplayed this game, and now that his hired hand has been caught, he will be very careful. Joseph G. is talking to him as we speak. He’s telling him that Melissa is dropping this inquiry, and then he’s going to threaten him in a credible way. Churchill knows that you two are small fish. Trust me, he’ll leave you alone. Joseph G. can be intimidating.”

Joseph K. didn’t tell Asya that she herself was being tracked by people from her workplace, that her brother was in a German jail now. With luck he would be freed before she found out.

Instead, he said, “Don’t be too hard on your daughter. She thinks she’s invincible. But everything is going to work out all right.” With a few more reassurances, K. managed to sign off.

More than two years ago the daughter came to K.'s attention and to that of the other founders of SubMarine. It was simple: one day they noticed a new member. No one person knew all the members, and this one was on the proper lists with the correct permissions, but still they recognized her immediately as an impostor. They had log files she could not know about or access. They decided to watch her and see what she did.

She had the interesting avatar of Grace Hopper, the software pioneer of the mid-twentieth century, but portrayed as a very old woman. She must have known she would be discovered, so instead of slinking about trying not to arouse suspicion, she brazenly drew attention to herself—joining discussions, hanging around for hours on end, and even showing a knowledge of the inner workings of SubMarine. After they figured out how she had subverted their security, they all admired her ingenuity, while patching that particular hole.

By consensus they openly talked with her, and formally invited her in as a member. She proved to be clever and interesting. Soon they were working with her on several projects; she was lacking in experience and background, but was very quick to figure things out. She didn't realize that they became aware of her true identity almost from the start, and the novelty of an eleven-year-old deaf girl storming into their Club was part of the attraction. Later they decided it would be a good idea to have her mother as a member just in case.

## 28 Nov 2024, Atlantis

IT WAS MIDDAY IN ATLANTIS and quiet in the SubMarine Club. Goebbels was looking for Churchill and didn't really expect to find him. But there he was; maybe he'd been looking for Goebbels as well. They went to a private and secure

room to talk.

Goebbels started in. “Have you lost your mind? Sending a hoodlum to threaten two members of our club with a gun. I would not have thought it possible that you could be so stupid.”

Churchill snapped back, “I didn’t send ‘hoodlums’ to anyone.”

“Whether you ordered it or not, it is your people that did it. You need to control them. One little deaf girl and you think she is a threat.”

“It’s not just ‘one little deaf girl’ as you well know. She is formidable and persistent, and she’s been poking around in matters that don’t concern her. We do have interests on Niue that we want to protect. But the incident you’re talking about was probably just some robbery attempt. The DC area is filled with crime.”

“Don’t be ridiculous. Of course your group is behind this person. Fortunately your goon had some sort of asthma attack and ended up in police custody. You haven’t even bailed him out. Do you want me to do that?”

“You should stay away from issues that aren’t any of your business. And you aren’t hidden away—I know who you are in the real world.”

“Good for you,” said Goebbels. “I propose a little contest. I will show that I know *where* you are, while I’m sure you do not know where I am. I’m sending you a package, right now, by courier, addressed to you, at the building and on the floor where you are. You can refuse the package or chase the courier off or kill him, it does not matter, but you might want to see what is inside. A message for you. You can access it using your Atlantis name as password.”

“You’re playing a dangerous game here.”

“It’s no game, you worthless trash.” Goebbels was snorting with derision. “Let me be clear. *That girl is under my protection.*

Neither she, nor her mother, nor for that matter I, pose any real threat to you, unless you are stupid and push us too hard. Your ‘secret’ about Niue is known now to many people, and anyway it is just a silly cliché straight out of several movies, so what kind of secret is that? I insist that you to call off the agency trio who have been chasing the girl’s mother around. You even got them to toss the girl’s uncle into a German jail. You must let the uncle go and leave mother and daughter alone. I am sending someone to take out the bug you put in their apartment. Joseph K. and I have talked with both the mother and her daughter. They are scared; they are going to leave the business of Niue alone and you should just back away.”

“I’ve got to decide what poses a threat to my interests. I won’t have you doing that for me.”

Goebbels glared at him. The glare showed through all the facial transformations and other layers between him and his image in Atlantis. “I will prove I am no threat to you, and it should be obvious that none of the others are a threat. You know nothing about threats. Listen.

“Your operation on Niue is ridiculously vulnerable to attack, physical and net attack, not to mention political attack. Your security is a joke.”

“We have top professional security in all respects,” Churchill said. “You’re just trying to get me to reveal details about our security.”

“I know everything about your security on Niue. You have paid off the islanders and paid off the necessary New Zealanders, but what good are bribes in the face of larger bribes? I investigated your defenses. You have a multi-*billion* dollar project, including all your fancy biological laboratories, with a multi-*million* dollar physical security system. At night you have a high-tech warning system, including the coastline, with six armed men awake and ready to respond to an intrusion. *Six men!*



Without heavy weapons. Ridiculous. I would need no pay at all. Just talk two of the big pirate ships into coming over your way. They do not scare, and care nothing for casualties. Your six men would last five minutes, and backups would be too slow.”

Churchill seemed actually taken aback.

Goebbels continued, “And that is just attack by sea and just by pirates. It could be a group pretending to be cruisers, boating enthusiasts. And what about a helicopter attack, say, several of them, taking out the entire security building first. You are as vulnerable as a goldfish in a small bowl. And do not get me going on your *computer* vulnerability. One little girl was all over your system, and you did not even know it, still do not. *I* was all over your system. It is waiting to be hacked and crashed. Before an attack I would knock out your alarms—all computer based. You are also politically naïve. How would you cope with New Zealand if they find out what you are doing?”

“And one more point,” said Goebbels. “You or others in your group may see Joseph K. or me as a threat even in spite of what I have said here, or maybe because of it. You will never find me—that is the truth. But you can find the little girl. So someone might get the bright idea: snatch the girl and use her to control me. That might work for Joseph K. He has a soft heart. But it would not work with me. With me you would do what you want with the girl, and I would sink your whole Niue operation right into the sea. My little security talk just scratched the top layer. You have no idea what I could do to you and it might be fun. In two days the whole planet would know what was happening on that island. The web would be full of videos showing your Niue scientists having sex with chickens. Your Niue physical plant, your new laboratories and hospitals, would be a smoking ruin. You personally would be exposed and disgraced, no longer able to live in the US. Please tempt me.”

Goebbels paused. “Do you see my point now? If I wanted

to take you down, it would be too easy, no challenge. Do you understand? I am helping you here. I can give you more advice, better advice, if you agree to back away from the pathetic little group that you are following. Well?"

Churchill always found Goebbels irritating, especially the way he said "well" with a German accent. But here he was going way too far. "You threaten the facilities on Niue, you threaten our whole operation, and then you threaten me personally. You make it sound like breaching our security would be easy. In practice it would not be easy. You act like you're hidden, invulnerable, untouchable. I can indeed find you; I could harm you. And you're even bluffing about having good advice. I've gotten advice from the best."

"I'll tell you," Goebbels said, "because I don't believe you can profit from this advice." He paused again but Churchill said nothing. "Your Niue project is going to fail anyway whether you listen to me or not. I will get great pleasure watching you all scurry around trying to stay afloat in a sea of troubles."

"Just words," Churchill said.

"You should read Machiavelli about fortresses. He said something like, um, if the people hate you a fortress will not save you, because your people will get help against you from your enemies. You have built a fortress on Niue, but you have many people working for you within the fortress who hate you. Right now you are rich and have money to pay them, but there may come a time when your money counts for nothing. Then what will you do with the employees who hate you?"

"Our employees are extremely well paid. They are loyal to this project. They like us."

"Wrong. Of course they hate you," Goebbels said. "Your group treats most of the employees like dirt, like excrement. This is how you are accustomed to dealing with everyone. Your security forces are better paid but as I said, the pay may not mat-

ter later, and one day they will realize what they are missing, that they are missing life itself. You need to bring a large number of the people at the project on board as full members, with the full ‘benefits.’ Only in that way can you survive. I predict that you will never be able to get the rest of your group to go along with this. And you will see—it will all fall apart for you.”

Churchill wasn’t blustering and interrupting as he had done earlier but was quiet, pausing in thought for long seconds. “Do you really think the long-term situation on Niue is hopeless?” he said almost quietly.

“It does not have to be hopeless. You can try. Perhaps force the issue, even kill some of the others. But here is my final advice, completely free. Very good advice indeed, the best you will ever get. Move your fat buttocks off to Niue! Go there! Soon!”

“What? Why should I go there soon? What does ‘soon’ mean? How soon?”

“Soon!” said Goebbels as he left the room.

\* \* \*

Later “Churchill,” as Guzman, looked at the contents of the package delivered by the courier. Employees had opened it behind a blast-proof shield even though he was sure the “Goebbels” person, Wieland, would never be so crude.

After a one minute security delay the video disc inside opened as promised with his avatar name as password. And there he himself appeared in amazing high-definition clarity, from years ago, with an obviously underage girl, prepubescent. So this is what Goebbels meant when he threatened to expose him. It was really annoying—those people had guaranteed there would be no extra copies of the video. He watched it twice from start to finish. He’d forgotten how beautiful the girl had been.

Then Guzman pulled up a batch of pictures and video of the deaf girl, ones his people had taken. Some were very clear

and filled the screen. She was really special all right, and she was so very smart, too. Just exquisite. His mind was filled with fantasies. He had formulated plans for controlling her, forcing her cooperation. It would be so sweet.

But the video was indeed a message to him from Wieland, who must have understood that from the time he first knew who “Grace Hopper” was and saw pictures of her, he was interested in the girl herself, not just as a threat, but also as an ... object. That was why Wieland had insisted that he not kidnap the girl. Maybe Wieland wanted her for himself. Ah, well, sometimes you had to show restraint, and after all, Niue was full of beautiful young girls. He was even importing some.

## 1 Dec 2024, Washington, DC

**W**ARBURTON COUNTED down the time until the first reactor “incident” was due, this one situated in Japan. Sure enough, David’s data sources showed that promptly at 10 pm Japanese time, fourteen hours ahead of his time, the area around the reactor suffered a power failure. He was sure that the reactor would switch to emergency power.

Wieland was following along in Berlin, getting much of the same information, eight hours behind Japanese time.

Upwind of a small college some thirty kilometers away, Warburton’s agent had released a bottle of radioactive gas half an hour earlier—not virtual, but an actual physical container, and nothing truly dangerous, but enough to trigger the monitoring station of the college’s recently funded Nuclear Studies program. Their instruments would surely register the radiation, and with luck they would report it to the authorities.

Warburton pictured the ripples of alarm that should spread quickly through the Japanese hierarchy. Whatever alarms there

were, they would be trying to contain the news to prevent hysteria. There would be no news announcement from them for days, and then only to deny any serious incident.

But Warburton knew that at 10:20 pm Japanese time an alarming story was going over the Reuters news feed. He should know all about this story, since he and Wieland had written it, and Wieland had somehow inserted the copy into the Reuters news stream. Two other news services were distributing similar stories, believing them to be legitimate.

### **Radical Group Targets Nuclear Reactors**

Sunday, Dec 1, 2024, 8:30 am EST

NEW YORK (Reuters)

A previously unknown radical group threatens to shut down and damage a series of nuclear reactors, one per hour starting at 8 am EST. The first reactor affected was one of the Takahama plants on the coast in central Japan. The plant went offline about thirty minutes ago, around 10 pm Japanese time. Emergency officials have had trouble making contact with anyone at the reactor facility. An unusually high radiation reading was registered at Tsuruga University northeast of the plant, but the release of radioactive material has not been independently verified. One nuclear power expert estimated that the quoted radioactivity levels at that distance from the plant would seem to indicate "a major nuclear incident, although not a meltdown."

The group calling itself The Divine Brothers of the Moon claimed credit for this incident. They are making ransom demands of 100 million Euros, and warn of shutdowns and damage to another reactor each hour until their demands are met. The group claims that the reactors they are targeting are all made by companies from Japan, but are located in a number of countries.

Wieland had chosen the silly title for a fictitious radical group, almost giving away everything at the start. Getting the story spread as a legitimate news release was the only important part—nothing else would give Warburton the wide circulation that he wanted, and if the Japanese authorities had not heard from the university monitoring station, this news would get them to check in, leading to further confusion. He also hoped that Sunday was an off day for the news services, without many people to check on stories and correct them, and with a real demand for any interesting story to pass along. The other key factor was that six hours later in Mongolia, on Monday at 3 in the morning Mongolian time, his friend and the two other scientists were scheduled to make their escape attempt.

Warburton had trouble killing the next half hour until 9 am when the Syrian reactor was due to have its “incident.” Warburton had his own special news source in Syria. This was to be a true shutdown, arranged through some Syrian contact of Wieland’s. The time came and went, with no incident. They would still put out a fake news release even in the absence of a shutdown, but a real incident would be better. Finally, twenty minutes late, the reactor went offline without a major problem. Warburton had worried that an unqualified technician might cause a disaster, rather than just a reactor shutdown, but this one was clearly all right. The news story he and Wieland had crafted was similar to the previous one.

Four more hours went by, 10 am to 1 pm in Washington, what was 11 pm through 2 am Monday morning in Mongolia, with four more reactors affected. All four were strictly virtual incidents; Syria had been the only real shutdown. Quite a few reactions sprouted in the web news, including denials and retractions, but there were also continuing “news releases” that he and Wieland had written, and copies throughout cyberspace.

The time was approaching 2 pm Washington time—ready

for whatever was to happen in Mongolia. Warburton was frustrated that he had no information about events at the Mongolian reactor. The three captives were supposed to “notice” the news of reactor shutdowns, all Japanese-made like the Mongolian reactor, and then raise a panic among the late Sunday night staff. Carl intended to suggest that the Japanese software had a sort of logic bomb in it that would go off at a prearranged time. In fact, Carl had subverted the reactor software long ago. There would be a shutdown promptly at 3 am Mongolian time, along with a number of alarms.

They had chosen early Monday morning for the incident as a time when security was often lax and many personnel missing. The other possibility they had considered was to go with the twenty-sixth of November, what is called Mongolian Independence Day—an official holiday, with many stores closed in cities and with wrestling matches and other fun and games. The twenty-sixth was a Tuesday, though, and they finally decided on Sunday night and Monday morning.

One of the shipments of storage devices held radioactive gas they could release to make the old-fashioned Mongolian Geiger counters give a death rattle. At that time, now fast approaching, matters could proceed in many ways, and Warburton would only learn the outcome days later—when he got word from one of the Russian rescue teams, and part of the arrangement was for them to avoid unnecessary communications.

With nothing more to do, Warburton tried several general searches on the net, getting a lot of chatter about nuclear reactors, everything imaginable, every viewpoint from believing the whole story to total disbelief. It was amusing how denials of a reactor incident only seemed to increase the belief that something must have happened. A lot of the news reports centered on Japan, since the cover story by the “radical group” was that they had subverted Japanese software on the reactors. The me-

dia was really giving the authorities there a hard time. Warburton felt sorry for the trouble he had caused them. The radiation level reported at Tsuruga University was widely mentioned after members of the radiation lab were interviewed on camera early Monday morning Japanese time. They stuck to their story about detecting radiation but were cautious in drawing conclusions—very professional of them, even as it helped trash the official Japanese denial.

It came as a surprise that many Japanese had their own radiation detectors, the result of a “bomb-bitten” society still sensitive about the World War II explosions, not to mention the reactor disaster thirteen years ago. These devices usually showed no unusual radiation, but this absence did not quiet the continuing rumors.

Warburton had settled it with Wieland that they would let the story die after the escape attempt in Mongolia. So he was astonished to see stories about two new and separate reactor events after the last “virtual” event in Mongolia. These too came with the old demands for money from the same radical group. The new stories were similar to the earlier ones, and on the same news feeds. Was Wieland playing games now? Or had someone else decided to try to claim the ransom money? These recent stories each had a crucial difference in that they referred to the receipt of the story by an anonymous message.

In addition to the copycat actions, he noticed a large number of other panic reports, finding possible attacks and threats everywhere. Who could be giving them out? Or were these reports about real events? Was it possible that they had started up a rolling wave of incidents they couldn’t control or contain?

Some of the stories came from foreign military sources, on special channels Warburton had access to, and they reported two significant attacks, using chemical weapons in one case, and describing a successful Internet onslaught in the other. The author



of the story about a chemical attack was especially concerned because communication with the reporting agent ceased almost immediately, before giving any details about the attack.

He stayed up through the rest of the evening and into the night checking an increasing number of disturbing reports around the world.

## 2 Dec 2024, Arlington, Virginia

THE INTERNET WAS filled with rumors, stories of crimes committed, denials of the same crimes, outraged commentary from the storytellers and the rumormongers and the deniers. Claims came up that real events described by others were only virtual and had not happened. Counterclaims insisted the events had occurred. Melissa released a small army of bots to chase after the facts, rumors, and stories—and of course the denials.

As recently as five years ago the web would have been full of hacker attacks to match all the other activity, but efforts at network security had been more successful than many had expected. In addition to SNBs—the secure notebooks like the one Melissa was using—regular larger computers now routinely had secure system software, while many users did everything up in the Cloud anyway. All the internet protocols were secured with digital signatures now, especially the crucial BGP and DNS protocols, but the others were secured as well. The combined effects had been quite satisfactory, almost eliminating routing hijack attacks and the hijacking of web traffic. In contrast to the old days, it was now much more difficult to carry out electronic mail and message spoofing, or virus or worm attacks, or to take over a remote computer. Melissa had found ways to compromise machines, but often her attack was based on insider information.

As the night wore on, Melissa's bots sent back too much information for her to do more than sample it. Ordinarily you wouldn't expect much to be happening, since it was very late in DC, which was early in Europe, and still early afternoon in the orient. Instead, each random story she sampled seemed more hysterical than the previous one.

It had started with all the problems the nuclear reactors were having, along with the reports of extortion demands for money to stop the attacks. These stories circled the world, repeated endlessly in ever varying forms. On top of the buzz of reactor stories came even more fantastic stories of problems, attacks, counter attacks, and counters to the counters. There were continuing reactor shutdowns, along with shutdowns of other infrastructure, and successful hacker attacks.

Across the planet Christian religious crazies were expecting the advent of their Apocalypse, the beginning of the end of the world and of the end of time. These people gathered in places of worship or out in the open, looking for their rapture, where the elect would ascend into heaven, followed by the start of the tribulation. Eventually Jesus and Satan would appear, along with a host of angels and demons to battle one another. Melissa sincerely hoped that Jesus would win.

## 9 Aug 2026, Diary Entry

dad talked a lot at the meeting last night. mom was there interpreting much of it for me so i could catch the main parts. almost everybody is in total shock after the trouble the night before: an attack on the town, organized and with more than twenty men and several women fighting us. i've never been involved in anything like this—much worse than stuff that happened on our way to this town. we didn't know at the time, but it started the day before, in the afternoon, when two young

people came down the road into town: a girl slightly younger than me and her brother, maybe ten years old. we get refugees fairly often and even try to have two men with rifles ready just in case. this time the men were elsewhere, but these two kids were obviously no threat. with groups of adults, and especially with larger groups, we usually tell them they have to go on, but in this case we had no standard response; we've never had children show up by themselves. mrs. cummings, who lives next door to us and was sitting with mom at the meeting, had volunteered to take care of them temporarily—she lost her husband and one son earlier; she and her other son have been at loose ends. she said she would get them something to eat, let them rest up overnight, and have them talk to chief jeter the next day.

from the beginning dad had been suspicious. of course he always is. security is the first thing he thinks about. i only got the story much later, after the attack. anyway, dad thought they looked in very good shape to be true refugees, just finishing a 10- or 20-mile hike from the next town, and they didn't have much in the way of supplies with them. they said their parents had died, but dad didn't like that story either—it sounded rehearsed to him, as if it were memorized rather than being spontaneous. especially the boy's story sounded forced, with too much detail, as dad explained it to me later. he said that if a group is going to attack somewhere, they may want to send spies ahead first, to look over defenses and such. the spies either try to stay hidden, or you send people as spies who don't look the part, like the pair we saw. you give them a cover story. later, in the middle of the night, the spies sneak off to report to the main group. of course, this was just the old trojan horse attack that let one take over a computer, not to mention a greek city named troy.

sure enough the girl did sneak off as she was supposed to, but not with her "brother," who was sleeping in another room. i

guess she told them that the town didn't seem well-prepared for a fight. dad and nearly a dozen men had stayed awake, and as soon as the girl went off, they started waking a lot of the other men up—well, and some women too. dad isn't the only one who was in the military—I'd say twenty or thirty people from the town had this experience, and like any rural town in america, many of the men had guns and ammunition, although by this time ammunition was running short for most of them. dad once talked about several "militia" types in the town, and those still have plenty of ammunition, enough to fight a small war. these people even stockpiled bullets to use for barter, since they were expecting money to be worthless. dad was glad to have them in the town, even though they were completely crazy.

dad said i was better off not knowing the details, but in the end it wasn't a fair fight—according to dad only an idiot would want to fight "fairly," whatever that means; you want to win. the outside group came right into the town, without special cover, expecting a town completely asleep. instead they were basically ambushed, shot at from cover. but their group recovered quickly, sought cover themselves, and fired back. dad said later that several of the attackers had military experience and didn't just give up, but ran to the side and made a retreat.

still it wasn't exactly fair: three of our men had rifles and were shooting from a good position. dad was using his fancy gun, which the local men hadn't seen and greatly admired afterward. since coming to the town dad hadn't used this gun at all. it even had a special night scope which still worked because he'd been saving the batteries.

of course all the noise woke us up in the middle of the night—well, not me, but the others. mom and bethany and i had been told to stay inside until dawn, and it was terrifying to hear the others describe shouts and gunfire outside. before any sign of dawn, one of the people fighting us tried to break into

our house. we ran out the back door, absolutely frantic. that was when i saw dad's guard dogs in action, as i had never seen before. dad had kept them off their patrol and only released them when the fighting started. many of the outsiders had been killed by that time, and a few others had run off, but there were two together over by what we use as a church and as a meeting hall. two of dad's dogs moved so quickly and quietly, i wouldn't have believed it. not a bark and they came in from two directions. then all kinds of noise as the dogs attacked. i felt terrible for the two men, and it was just awful that they were soon killed. only a few of the strangers were left alive. and that's part of what dad was talking about at the meeting. some people were upset that most of the strangers had been killed. they thought many had been killed even though they may have tried to surrender. i was upset too, but women mostly don't talk at these meetings, and certainly not young people, well, or young deaf girls.

anyway jeter talked first in his boring style, and then dad also explained it to them very patiently as he always does: that these people had decided to attack us, instead of trying to make do in some peaceful way. what were they going to do if they had won? nothing good, and better not to think about it. it was confused and dark, hard to shoot, and you just had to shoot to kill if you could.

three of our own people died, and two have gunshot wounds and may or may not recover, too early to tell. (dad and mom and several others spent much of the day fussing over the wounded.) in addition to the dead attackers, two of them are badly wounded and surely won't make it. two others are in so-so shape and may survive. if they live, the town will have to decide what to do about them. also, one of dad's dogs was killed. dad said at the meeting how much he hates fighting and violence, and i believe he's sincere about it. dad told the people that it's a new harsh world, and we need to be tough to survive.

bob mitchell, the groceryman, who now slaughters our animals (with help from others), stood up to talk. a huge man and plainspoken like so many of these missourians (is that right?). "so what do we do with the ones still alive?" he asked. "we should damn well execute them, tomorrow first thing." (that is what mom signed, but i imagine the original was more colorful.)

several people started talking at once, with mom hard-pressed to keep up. "we don't execute people at all, let alone with no delay or discussion." "once they can walk, chase them out of town; let them walk to some other town." "chase them out and make them take those two kids with them."

here mrs. cummings spoke forcefully. "i have talked with both children at length, a number of times today. they are not related, but both sets of parents were missing, i mean, had been killed. these kids are victims. i'll keep them with me, and i'll be responsible for them. nobody's going to chase them out of town."

immediate strong protests came from several people. mom never talked at these meetings, except about health issues, so people were surprised when she said, "these are children. i'm not going to argue about what you might do to adults, but we don't harm children—jim," pointing to one of the men, "and ruth here," gesturing to a woman nearby, "both have some knowledge of psychology. i'm asking them to investigate, to see if the children pose any conceivable threat to our town." (after she sat down she told me what she'd said, although i'd sort of guessed it already.)

complaints from all over, but mom made more of an impression precisely because she never talked. then, of all people, jeter put in, "sounds sensible to me. those three, ann, and jim, and ruth can report at the next meeting. no executions tomorrow. we'll decide about that at the next meeting, too. maybe they won't survive and the problem goes away. but

nobody, nobody helps them along with the 'not surviving' part." jeter sat down, sounding more like a leader than ever before.

we finished the meeting like we always do anymore, with songs—kind of corny but people like it. of course i couldn't hear the songs, but i like being together with everybody anyway.

+ + +

two days later now. nothing has been decided except by default for the children. cummings and her son have kept on taking care of them, and the townspeople don't think much about it now. bethany has sort of taken the boy, jacob or jake, under her wing. i don't think i mentioned that bethany has started to talk now, much to our surprise after so long. she still doesn't talk much, but i always knew she was very smart, and when she says something, it's perfect english (so mom says).

on another subject, i have often watched dad exercise and train his dogs. he wraps a cloth around his left arm and uses gloves, but mostly he's just real tough on them. he always seemed so sure and unafraid, that i was amazed at what he said last night.

we talk about lots of things. i should say "talk," because we get by with a mixture of sign language and fingerspelling and sometimes writing things out. we communicate fairly well. we had wandered off to the subject of the dogs. i said something about how easy it was for him, how he was never afraid. but he said it was just the opposite, at least in the beginning. his turkish shepherd dogs are extremely independent and hard to control. in the old days if he had wanted one as a guard dog he would have bought a pup and raised it himself. that would be easy compared with the three adults he took over—they were used to bullying the poor farmer who had kept them. dad said it was the hardest job he ever had—he needed to control them and never show any fear, even though he was actually afraid. especially the male, urfa, has always been a big problem, much less now than before, though. but even now he has to be

careful with him, never relax and take his obedience and cooperation for granted. the dogs are so much happier now—before, they had nothing to do, and they love to guard a territory, to watch for anything strange at night. dad said it was just dumb luck that the best guard dogs in the world were in that silly dog farm—the farmer, mr. huntley, was relieved to get rid of them. actually huntley and his family ended up in our town, after working his farm with our help for one season. they grew and harvested quite a bit of food, but it was also too far away, and us with very little gasoline now.

i also asked dad what we would do if a much larger group came through and attacked the town. “why then we would lose,” david said. “i also have been afraid that a military group might come by with heavy weapons. but a larger group would have to be supported by the resources they could seize, and we don’t have much, neither here nor nearby. also a larger group would have other logistics problems. how do they move with such an energy shortage? an army unit isn’t likely to use horses to move their heavy weapons, and there’s no gasoline now.”



# 6. Knockdown

**3 Dec 2024, Washington, DC**

**D**AVID Warburton slept until early afternoon on Monday. On waking he saw the worldwide news had continued in the same rough trajectory, with ever more reports of “incidents,” usually without confirmation. He had also hoped to hear from the Russian rescuers by Tuesday at the latest but there was nothing.

Tuesday did bring an unexpected call from a military friend, an old security buddy named John Littlejohn. When he had served with John there had been endless jokes about his name, especially because he had a son also named John, so there was a “*little* John Littlejohn, *Junior*.” They also talked about “Littlejohn’s little johnson” and other silly wordplay.

“Hey, John,” Warburton said on the phone, “congratulations on the promotion. Now you’re *Colonel* John Littlejohn.”

“Come on, Dave, lay off my name. But how are you doing?”

Warburton didn’t want to answer that. “I don’t know, you tell me. Do you know what’s going on?”

“Well, that’s why I called. We need to switch to a secure line before I say anything.”

It took just a minute to set up a civilian secure line, not up to military standards but good enough. Littlejohn continued. “I wanted to ask for your opinion or maybe advice. This is all classified stuff, so I shouldn’t be talking to you but it’s an emergency. Things are going bad real fast now. I don’t know what to make of it. I’m going to leave off the name of the station in question here, so if you’re ever asked you can say truthfully that you never heard of it. Okay?”

“Yeah, yeah, sure,” said Warburton. “I’m not afraid of a little classified info. My head is full of it, a bit out of date, though.”

“Let me get right to it. There’s this small military base of one of our allies outside the country, the one I won’t identify. Anyway, we got a civilian communication from the base, just over a regular line, not encrypted. It said they had been attacked, people killed, hostages taken, poison gas used. Scary stuff. From the beginning we took it very seriously even though it sounded like a hoax. We’ve had all those damn nuclear reactor reports recently and now it seems they were hoaxes, not very sophisticated. Mostly sending out fake news reports. Of course a false report was the most likely scenario.

“So we tried to communicate with the base and the lines were down. Well, my CO was *really* spooked over that. He put out an immediate alert. It turned out that many of the computers on the base had crashed. They could boot them up and they would just crash again. In the end we didn’t have much trouble getting to the base online. Lots of their gear was still working. But literally hundreds of computers on base had crashed, large ones, military, civilian, some laptops, you name it. No cell phones or droids crashed.”

“Jesus!” said Warburton. “What, an electrical storm? Some sort of power surge?”

“No, nothing like that, no sign of trouble at all. Besides, a number of the machines had surge protection, UPS, the standard stuff. The machines just crashed and continued to crash, for no reason they could see. Not *all* machines, but for the affected ones, you could start a reboot and down they would go again. This sort of security is supposed to be my strong point, so they got me up in the middle of the night and into my duty station. There were initial delays getting permission from our ally to consult with us. Then it got really scary.”

Littlejohn paused. “Don’t be melodramatic,” Warburton

said. "Tell me the scary stuff."

"After less than an hour the affected machines all worked again—long before we could consult with these people let alone examine a machine. The computers would boot up, work perfectly, no failures at all. Sure makes it a lot harder to diagnose any problem—what we want is smoke, of course. With a failed machine, we could always sooner or later trace the failure and understand it. No such luck. Later we got hold of one of the machines that failed. We haven't found anything at all wrong.

"This bothers me as much as the original failure. How could they start working again after failing? And if they could fail once why not a second time? If they fail on that base why not fail elsewhere, one of ours the next time? How did they spread the failures to the whole base, or looked at the other way, how did they confine them to the one base? And, ah, there's more."

"There's more?" Warburton echoed.

"Yes. For starters, this isn't the only incident following the same pattern. There have evidently been others, quite a few. Except for these other incidents I would think it was just this one ally trying to mess us up, or a base with a terrible security problem, full of traitors. Nothing so far directly against an American base. Usually it's a base of a lesser country without all the protections that a more developed country would have. And then in addition...."

"My God!" Warburton said. "Does this go on forever?"

"The last item now. We've had nuclear reactors go offline, and no damn hoax—this was two days after the last hoax report. At least two reactors down in American, at least one in Europe, but I think there are others. The same story. Computers crashed, and the staff decided to bring the reactor down rather than keep it up using backup systems. Some of these reactors used their own network—not on the Internet or on any other larger network.

"So that's it, Dave. Help me out here. I don't see how this

could be happening. I don't see any way at all. I couldn't dream of being able to do something like this even in the most rosy scenario."

Warburton paused and then said, "What the Hell. I don't know. You should be talking to some of the other military experts. You guys are the ones with all the data, not me."

"That's just it. We've got nothing. Nothing. No data at all. And a lot of experts are working on this. Getting nowhere fast. They can't find anything wrong with the machines. We're not even sure now which machines crashed. Mostly we know, and they're looking over the log files. The base was sort of a backwater—even for this ally not their best people. Especially there were weak security officers. And shit, by the time we were really focusing on them all the computers worked again."

"Did they all crash initially at the same time?"

"As nearly as we can tell, yes, they apparently all crashed at exactly the same time, the first crash, that is."

"So what's your theory? Do you have one?"

"Dave, not much of one. I picture a worm, like the Morris worm—you know, the one that little prick Ivy Leaguer released decades ago. Anyway, somehow a worm spreads through the base, gets on each machine that will eventually fail. The worm is set to activate itself at a certain day and time, crashing any machine it was on. After less than an hour has passed the worm deletes itself. But a crashed machine, one that wasn't rebooted, should still have the worm on it. On such machines we haven't been able to find any worm. Of course we examined their innards without restarting. We haven't found any worm. The log files should show all sorts of data but they show nothing. You know, Morris's worm was tricky, and in the past decade we've had a succession of diabolically clever worms. Our countermeasures have improved, too, so now the worm problems have slacked off. But always before we could *find* the worm even if we had

trouble understanding it. We don't have our hands on any worm code, none. Like I just said, we've got nothing.

"Because other computers crashed, like those at the nuclear reactors, I'm also thinking it could be Trojan built into the operating system somewhere, set to activate at a given day and time. But the crashes came at the same time only on this one base, not elsewhere. Each incident has its own coordinated crashes independent of other incidents."

"What about the processor?" Warburton asked. "Were all the affected processors from the StackForce line?"

"I'll check." Warburton waited while Littlejohn made a query on another line. After a long delay he came back.

"My source says you're right. They'd already noticed it. Good call. How did you come up with that?"

"It's the most popular line by far so it's not hard to guess. I suppose someone discovered a way to exploit that particular hardware or the software that runs on it. It's somewhere to start: that you can't trust StackForce processors. And quite a limitation since they're so common. I've got several machines implemented with StackForce. I need to be sure I have alternate backups around."

"Dave," said Littlejohn, "think of something, some way. This isn't academic; things are getting worse real quick now."

"I'm sorry, but I can't. If you have a worm you should be able to find it. I'll think about it. Poke around. Look up the specs on StackForce. It's an unbelievably complex line. Security was one of their big goals. If I have any ideas, I'll get back with you but don't count on it."

"Thanks for listening, Dave. Call me if you have any ideas at all. And just another word: You're right in the middle of DC there, right? DC is extra bad. All the big wheels are long gone now, the wealthy, too, and they've already started a general evacuation. Sources say there is a 'credible attack threat.' If you

can you should leave right away, or before morning at the latest. Ah well, take care of yourself.”

Warburton said goodbye and broke the connection. Then he thought the whole business over. He knew something Littlejohn couldn’t be aware of: his own involvement. These attacks seemed to be inspired by his reactor incidents, and the timing of the fake reactor shutdowns had been his own choice, a decision he made only a few months ago, arbitrarily. No one at all knew his timeline; he himself didn’t know it until perhaps August. That precluded any sort of timed bug inserted long ago into the operating system.

And then there was the StackForce line. A year ago he had spent time looking for a weakness that could be exploited in systems built on StackForce. Nothing came of the effort, though. He vaguely remembered that a company owned by his friend Wieland had helped somehow with StackForce development—back when Wieland used a different name. The memory was just a blur or a rumor. He tried to look it up online but had no luck.

Starting early in September sometime, Wieland was the one other person who knew the schedule for reactor shutdowns. Could he have been involved in the crashes that came afterward? He had a tricky mind and promoted many agendas. Could he be doing something this evil? This disruptive? It was hard to believe. But the current mess had Wieland’s fingerprints on it: a subtle, clever, untraceable approach.

An hour of thought, along with a study of StackForce, produced nothing. It was just flat out impossible to get a coordinated crash of a whole collection of computers unless there was some coordinating signal or timer. Impossible. The way Littlejohn described it, the crashed machines had no common power supply or common connection to a network. He had just ruled out a common timer. All that was left was a worm. Or some type of conspiracy?

Confining crashes to the one base, one local area, seemed particularly difficult. Even if you had a way to crash these computers, how could you pinpoint one base? He should have asked Littlejohn if the crashes that brought down the two nuclear reactors were also localized. It was all a mystery.

OK, wander off into a fantasy realm. Suppose you decided to use a specific contaminant in the air, maybe radioactive, maybe something else. That would mean that Wieland had subverted the actual hardware of StackForce processors but go ahead with that. Insert into the hardware a tiny section that could react to a specific airborne contaminant. Lots of chips now had sensors onboard, especially temperature sensors. Just like a male moth responding to the female's single molecule of pheromone in the air, the processor would also respond to the contaminant, follow its own program, maybe to crash. This could explain why the machines "recovered" after a couple of hours. But it was another stupid idea—one that couldn't work for any number of reasons. Inserting special circuitry into a chip design is hard enough to imagine, but this would have to be some sort of exotic component. And the hypothetical contaminant wouldn't spread or dissipate uniformly. No, it wouldn't work. What else then?

\* \* \*

Warburton got back online to check news sources, public and private, to find that significant conflicts had broken out in many places, especially in an arc from Egypt and Israel across the Middle East all the way to Pakistan and India, but also in China, Russia, and South America. These weren't virtual incidents, but real conflicts, serious ones, people with real weapons. It looked as if a number of groups were taking advantage of the current chaos—and he had started it all with his reactor incidents. Maybe he had started it all. A fluid international scene, hard to tell what might be happening, but the Internet was just a beehive of activity. Littlejohn had been right—you could see

the computer crashes mirrored elsewhere once you knew what to look for. He felt sick at the thought that his efforts had gotten so far out of hand. Where would it all stop? And on top of that, where was the news about Carl and the other two, news from the Russian teams? He was distressed that no word came to place them safely out of Mongolia.

Just then an alarm interrupted Warburton: Incoming mail from Littlejohn, encrypted and on his special channel. After decrypting, it had a header from Littlejohn, indicating that this was another incident and that the contents were classified. The attachment seemed to be a quick translation of a Turkish military communication. The gist of it was that a group of personnel from a small army installation in Eastern Turkey, somewhere near Tunceli, had been confined to their quarters pending a state investigation ongoing at that time. A garbled message mostly in English, from their post to central authorities, had stated that they were under attack from the PKK and could not hold out much longer. Attempts to reach the group failed. When helicopters dropped down with special teams, they found a confused group, saying they had no knowledge of any messages about the PKK and claiming that several computers had ceased to work, including their main communications machine. However, the story was not credible, since all the indicated computers were working perfectly.

Yeah, working perfectly *again*.

## 4 Dec 2024, Arlington, Virginia

**A**SYA WAS HOME Wednesday afternoon listening to all sorts of disturbing news. Of special interest to her were stories that told of collections of computers that would all crash at the same time and refuse to boot up afterward. Later



however, all the computers would work again. Several bloggers were looking for patterns in this data:

Hey, guys, have you seen reports of computer crashes? The ones that then work fine after a delay, with no indication of the cause of failure? I've noticed that earlier accounts had a relatively long lapse before the machines once more started working, typically an hour. As time passed, the interval became shorter. Several recent stories talked of a failure for only a few minutes. It's true that we often don't learn the timings, but others online besides me are recognizing this pattern. Initial studies of failed machines were thwarted because the machines were working again by the time experts got to them. More recently, security personnel realized the importance of a quick investigation, but they continued to be frustrated because of the ever shortening failure times. To me, this sounds like a deliberate strategy, recognizing that a careful examination of a failed machine may uncover the cause; a working machine is hard to diagnose.

I don't see this caused by a simple virus, but perhaps by a worm, not attached to any file, or a Trojan horse in some piece of system software. Either way it's been lying low and just spreading for some time now, waiting for a pre-set time to spring into action. A given local collection of these might communicate and vote, using one of the clever randomized and decentralized votes, whether to start right away, with a long crash time, or to start after a delay and with a shorter crash time. Unfortunately, no one's yet found any copies of this malicious software.

Even worse are reports of messages sent out from the locality of the failed machines, messages that tell of an actual, physical attack on the local site, an attack which in fact may not have occurred at all. It seems to be a deliberate attempt to provoke a response, again an actual,

physical response, but this time one that does happen. The way I see this, a fake message is sent from somewhere, reporting an attack. Then right away that somewhere goes down and can't be reached, so it looks like the attack was successful. It seems to be working in some cases, too. I see a lot of confusion out there, along with a number of instances of fighting.

The use of computer crashes to promote fighting now seems to have given way to its use to shut down power plants and possibly other major industries. The data so far is scattered, but several nuclear plants have shut down voluntarily due to interference of some sort, most likely crashes of their computer systems.

Yes, it all sounded deliberate. Very strange and frightening. How could it possibly be carried out?

Melissa was also home, sleeping in her room instead of going to school. She had convinced her mother that she didn't feel well. Asya intended to check with her soon, but her droid got a call from work:

"Asya, this is Joe, Joe Puentes," the voice said. "I'm at work here. There's a huge amount of extra work to get done. I'm asking you and several other employees to come in and stay here for a couple of days. Pack for three days. We'll have food and cots for you to sleep on."

"Joe, come on. I don't want to come and stay for several days. Why now all of a sudden?"

"Haven't you heard about all the weird breakdowns going on? Two federal agencies are pushing for answers right away. You often work overnight anyway, so this is just a little longer. This isn't a request, it's a requirement. We are an emergency response team and this is an emergency. I want you here within two hours. I need to hang up. Get here right away!"

A simple solution came to mind: she could quit that very

moment. The world seemed unsettled now with all the disturbances, especially the shutdowns, faked and real. Just then Asya noticed that Melissa was awake and listening in with her droid. She immediately signed: “You go on. I’ll be fine, no problem. We’ve got lots of food and we’re walled in here. I’m not scared. Like your boss just said, you stay off at work overnight all the time as it is.”

This started the sort of argument Asya usually lost with her daughter. She did feel a misplaced sense of duty to her job. And her agency truly did exist mainly for emergencies. So she allowed Melissa to talk her into leaving. As she hurried to gather up necessities in a small bag and get ready to go, she was signing a whole list of instructions to Melissa: “Apartment locked always. Don’t go out at all unless there’s a fire, except of course to go to school tomorrow. Send regular mail reports to me.” Each instruction she gave seemed to call to mind two more instructions.

\* \* \*

Asya woke up early Thursday in the “dorm” room where they had laid out cots. She was stiff and sore from the cot, tired from trying to sleep with all the people around. In the cafeteria the television was on, giving news that a “dirty” truck bomb had exploded in lower Manhattan, over near the approach to the Brooklyn Bridge. How big and how dirty? The news report didn’t say precisely. She knew that security nincompoops had overstated the effects of dirty bombs, as if just a backpack bomb with radioisotopes stolen from a hospital could contaminate a city indefinitely. That wasn’t true. But they said this was a large truck, and even the bare physical damage was considerable.

The whole country was going nuts, but she could tell that the chaos in and around New York City bordered on psychotic. The details were sketchy. Only emergency vehicles into Manhattan at all. The tip of lower Manhattan was closed south of Houston

street, again except for emergency vehicles. All subways were stopped, all air traffic halted. They were trying to evacuate, so people were encouraged to leave Manhattan, but checkpoints at all the tunnels, bridges, and along Houston Street increased the confusion. They were also trying to evaluate the radiation levels in Manhattan, as well as the degree of exposure of individuals—both tasks clearly impossible in the near term.

As part of her work, Asya had studied the dirty bomb issue, going through a wide range of scenarios. Fear and panic were the biggest problems; an abundance of these could be found all around New York City. News reports showed people inside the lower Manhattan exclusion zone absolutely desperate to get out. Authorities were trying to be reassuring, following their own silly playbook of what to say: do not panic, only those very near the incident are in any danger, even for those the radiation level is acceptable, and so forth. The calming statements weren't effective.

With this New York City bomb added to everything else, Asya wished she hadn't left her daughter alone for what should be at least two days.

## 4 Dec 2024, Berlin

WIELAND LOVED his most recent apartment, located in what was called the *Viktoria Quartier*, once an old brewery. Investors a decade ago had turned it into a set of expensive condominiums. He was one of the investors.

He tried to move every few months, his attempt to keep away from those who sought the very wealthy. He would take a new name, renting several units for himself and his group. The current units weren't ordinarily available for rent but that rule didn't apply to a major investor. The beautiful *Viktoria Park* was

right next door, including the actual hilltop that was *der Berg* in *Kreuzberg*, and all the amenities of his neighborhood were near at hand. He'd last lived here three years ago.

He couldn't remain invisible to the government itself; universal surveillance and identification software took care of that. Of course they used facial recognition, but also data they could capture on the fly. They could even grab an iris photo if you were close enough. He mostly was driven in and out, using a car registered to an underling, but he refused to give in to all the federal eyes watching him and often walked around, though never alone, always with two of his people discreetly nearby.

He had just returned from a walk on Berlin's dark and cold streets, wet with slush instead of snow. He'd gone to visit Fritz, a young friend he'd known for five months, long before his latest move. She served drinks at the *Haijischbar*, on the *Arndtstraße* close to where he lived. She thought he was just a normal Berliner who worked in "finance," someone who was short of cash at present, who sometimes borrowed money from her—his way to make sure his companion didn't know his identity and wasn't just after his money. She was not much more than half his age, and going out with her reminded him of the German poet Goethe's final fling with a seventeen-year-old when he was seventy-two. Poor Goethe, a dirty old man, rebuffed in his overtures.

"Come with me to Bavaria," he'd said to her. He had brought this up several times before. "Way in the south, colder than here, but beautiful, with white snow, not this gray stuff. I'm going down there to stay for quite a while."

"Why would anyone want to move to Bavaria? You can lose money trying to work here just as easily as there. Stay here and starve with me in Berlin." He liked her sarcastic attitude, and he found her interesting, clever. She even had a university degree, one that did her no good.

He pressed her again to come with him, and she said, “I’d like to, lover, but I can’t. I never told you, but I’ve got a younger brother in an ... institution. I see him at least every week. I can’t go off and leave him.”

He kept after her, even telling her he wouldn’t be back, that she would probably never see him again. She actually looked *niedergeschlagen*, “crestfallen” you could say in English—a delightful word, so vivid, Fritz with a crest of feathers drooping down over her head. It was too bad, really, but maybe just as well. He wasn’t sure how she would adjust to the Bavarian compound and to a different version of himself, one more assertive, in charge and with lots of money. He was concerned about her, though, with nothing to do about it. “Look,” he said, “economic hard times are coming soon, very hard times. I’m going to be gone. You need to team up with someone strong and resourceful.”

“Strong like you, you mean.” she punched him lightly in the chest. “I’ll be all right. I can take care of myself.”

“I worry about you, silly me.” He took an envelope out of his pocket. “I may not be so strong, but I’m more resourceful than you think. I came into a little money yesterday, never mind from where. Take this, but only if you wait till you get home to open it.”

She promised, kissed him goodbye, and stared after him as he went out past the mass of teeth in a dried shark’s mouth at the entrance. He’d left her five hundred Euros, a completely trivial sum, less than nothing to him. He wanted to help her, but giving her a large amount of money was not the way. He needed to set up another approach.

\* \* \*

It was nice to have taken a break. For days he’d been working without much sleep on several projects. One was the conversion of his monetary investments into more tangible goods. If the two

Great Wars of the twentieth century were a guide, then later his most valuable assets might be deeds to property.

He was also acting as a juggler to keep a number of balls up in the air at once, trying to take each ball down in turn, without dropping them all. Recently the worldwide financial scene had become very strange—no one wanted to commit even in the short term, let alone in the long term. Everything was falling apart rapidly. There was no more he could do to move his wealth around. Just follow his own advice to Guzman: he should head south soon. Soon.

Back at his apartment, he briefly looked over the news. He'd set up feeds to relay vast numbers of news stories to a site at his Bavarian compound. He pictured himself pouring over it all later, enjoying every piece. So many parts of modern civilization were going bad so many ways. A popular German word of the Americans was *Schadenfreude*—literally “damage-joy”—enjoyment obtained from the misfortunes of others. In fact, they liked the word so much that it was in all their dictionaries now.

Next he switched to the 3D virtual environment his people had set up, the latest beautiful technology, very realistic. He quickly shifted into Atlantis and SubMarine, looking for the little deaf girl again, Grace/Melissa, and finally found her off by herself. He knew she was still in Washington from the Lamp, and even without it his tracker would have shown the same data. She often seemed to know everything, but this tracker was a special device installed when she first came to SubMarine; she didn't seem to know of its existence.

“Didn't you hear about the evacuation?” he said, as Joseph G. “I thought you would have left by now.”

“My mother decided she had to follow orders and report for work during this emergency.”

“They are taking advantage of her and she will not be rewarded for this loyalty. They will use her up and discard her.”

“You’re right,” she said. “They told her she has to stay overnight at the agency. They have cots and extra food. I’m not sure she even knows about the evacuation of DC. They’re even busing the carless and the poor out to remote shelters. It’s all over on the news.”

“It is worse than you think. Your government continues to lie about the risks when there are multiple credible threats to your area. They are admitting the threat of a dirty bomb, while the actual risk is much worse: a nuclear attack. They have already evacuated all important functionaries, days ago. I fear that workers like your mother may be left hanging. Even without an attack in Washington, your security could deteriorate rapidly. You must talk your mother into quitting her work and leaving as soon as possible. I also need to leave Berlin, but your security is much worse. Berlin has no special threats against it yet and the police still have control. The two of you must get out, out of the Washington metropolitan area, toward areas of smaller population density.”

“I have to wait till my mother comes home. I don’t see any other way now. What else can I do?”

Joseph G. quickly made up his mind. “Perhaps the Lamp can at least help keep you safe where you are. I am right now sending you the specifications and passwords for the Lamp in your apartment. The user interface is intuitive and not too complex. There is also a sort of user manual. You will see; it is easy to figure out—easy for the likes of you. You can use it to protect yourself in your apartment. Be very careful with the two attack features that can kill. They are safe enough until explicitly armed. Please, you would not want to kill your mother by mistake. Keep the door locked, while you hide out in your room. If someone breaks into your apartment, even without this emergency, killing them would not cause you too much grief with the law, not in the US where you are. You have ten shots from each



of the killing weapons, and five anesthesia darts, well, four left now.

“I must get on to other things, and then get some sleep. I will check in with you again in twelve hours or so, and then again a day from now if I can still get through. Get to work figuring out how to use the Lamp, and be careful!”

## 5 Dec 2024, Washington, DC

MELISSA HAD been shocked to hear yesterday that an evacuation was ordered. She had gone to bed anyway, totally exhausted. Early the next morning she looked out the window down to two intersecting streets visible from her apartment’s small living room. The traffic at this time, on a weekday, was always busy, but now it looked crazy, like a whole different city. Many more vehicles than usual, all honking, most filled with passengers, not the normal one or two heading for work, suitcases and boxes strapped to roofs. How could it have started so quickly, this exodus, the mass movement to get out of the DC area?

She didn’t usually watch the television news but turned it on to see if there was local information. Her droid caught a news-woman in mid sentence describing rumors of planned attacks on the city. The woman quoted officials saying they had started an orderly evacuation of the Washington DC area, but there was no need to panic. Everyone should follow the plans put in place last year. Then this same source said, right there on the Washington news, that people were starting to hoard gasoline. “Please,” the announcer said, “the mayor has issued a special plea to everyone not to buy any more fuel than absolutely necessary.”

These people were brainless, anencephalic. Tell the public not to buy gasoline—in what possible way could you give advice

that would produce more purchases. Many in the city planning to leave and step one would be for them to realize suddenly that they needed to hoard gasoline, once the TV had reminded them. Morons, morons.

The newswoman was droning on about how “of course” you needed a ration coupon to buy gasoline. Then she switched to several pictures of grocery stores, convenience stores, and others: mostly empty shelves and sold out. There had already been a run on ordinary staples.

Melissa decided this evacuation was “an abundance of caution.” Suddenly the doorbell’s light flashed. She looked out the peephole and saw the Williams family, father and mother along with Elizabeth, their daughter, the same age as Melissa. The girl was a good friend of Melissa’s; she’d actually learned a fair amount of sign language as part of their friendship. Melissa let them in as the mother started saying that they were leaving Washington immediately. Then she asked what Asya and Melissa were going to do.

“My mother had to go into work during this emergency,” Melissa said using her droid. “Being ready during a crisis is much of her job.” In response to their unasked question, she continued: “I’m just going to stay here while she’s gone.”

This prompted a quick whispered consultation between the Williams adults. “Everyone is supposed to evacuate,” the mother said. “Why don’t you come with us. We’re heading for relatives south and west of Fredericksburg. They live on the south side of Lake Anna down there, with a big house. People are worried about attacks on the city, and you’re right in the middle. You can tell your mother where you’re going—she can pick you up later after the danger is gone. We’re kind of crowded in our car, but there’s room for you.” They were quite insistent and seemed well-intentioned, but Melissa was equally insistent that she would wait in the apartment for her mother.

Eventually the Williams family left, obviously worried about both Asya and Melissa. Melissa knew she didn't want to go to Lake Anna—a lake created to cool the nuclear power plant, which could itself be the target of some attack, or in case of a long-term power outage, could be the source of terrible radiation from fuel rods. She'd rather take her chances right there in DC.

\* \* \*

That morning, information kept coming in from all over the world—lots of sources, even military ones, supposedly secret.

Melissa noticed a lot of “tit for tat” activity worldwide. In her evolutionary biology readings the phrase referred to responding in kind to a positive or negative action. It was considered a way for organisms to get along, to help one another out, a model that led to what was called “reciprocal altruism.” Animals did best when their initial act was positive. And the model helped weed out those who didn't cooperate. It might work fine for a group of animals or a tribe of humans, but competing tribes often made an initial hostile move, which would provoke a hostile response. In what she was seeing, though, there was an initial faked action, a virtual action that appeared very bad, but hadn't occurred. Then two parties who didn't like one another to start with continued back and forth with actual bad actions, not responding with bad for bad, but with worse for bad: escalating exchanges that had yet to see how far the two sides were willing to go. Actual wars had broken out along three separate borders in the Middle East, with any number of skirmishes elsewhere. Oil tankers had been sunk, especially three in the critical Strait of Hormuz, making it hard for oil to move through—soon there would be no oil at all.

She had followed Goebbels' advice to check out the Lamp. As promised she found a thorough set of instructions, along with modes for testing the Lamp without any danger. Especially impressive was the software that tagged individuals and then locked

onto them, assuming it worked as described; she couldn't really test that part out. By overriding the lock-on feature, she first tested the laser light that had temporarily blinded the white-haired guy who had attacked her. She felt it was essential to test at least one of the other modes. She'd already seen the anesthetic dart, so she tested one of the two killing attack modes, again using an override to have it fire into the back of a chair. It was awesome: a metal sliver went all the way through the plastic chair and on into or through the wall. Against her face she could feel the vibrations of the sound it made, so it had to be fairly loud, a standard explosive-driven bullet, but a particularly deadly one. Then for a second she had a moment of panic before remembering that the exterior of the wall was brick, so the sliver couldn't have gone on through and hurt someone.

She needed to know if someone was breaking into the apartment, so she set up her motion-sensor to drive a bright light if it detected anything. The Lamp itself would also do some kind of motion detection, but she didn't want to rely on it or on the alarm it would put out.

She went to check in at SubMarine and this time she found Goebbels there. Not many others though. Soon it would close down. He came over with his usual limp and the same nasty visage of the real Goebbels in his prime. How could he (the real Goebbels) have possibly married a beautiful woman and carried on affairs, all with his ugly and club-footed body? And with the sex appeal of a turnip? But no, he had the sex appeal of a powerful and malevolent weasel.

The current Goebbels, or Wieland as he called himself now in the world, was much more interesting, powerful in his way, and also with a bit of the weasel to him.

"I was hoping you would be gone," he said, "already on your way out of the Washington area. But I know your mother is still at the CISA building.

“I have been thinking about your situation. When your mother leaves CISA and comes home to you, the two of you now have no way to get out of the city. You know that the contractor David Warburton is Joseph K. in SubMarine, yes?”

“Yeah, of course, I’ve always known that.”

“He has a car of his own, lives close to you, and is resourceful. You should appeal to him for help as soon as you can. You know where he lives, yes?”

“Sure, I said I know all about him. I don’t think my mother knows he’s really Joseph K., though, but that doesn’t matter. I was planning to try him, believe me. I don’t see any other option now, you’re right.”

“Well, do not waste time but get hold of him. And finally, did you get the Lamp to work for you?”

“Oh, yeah,” Melissa/Hopper said. “It’s easy to use and deadly. I did a test shot sending a metal sliver all the way through a chair and into the wall. It was cool.”

“I will say again, be careful with it. Someone local, a neighbor or a workman, could come by and you might kill by mistake. That sliver will go all the way through a person, even through an ordinary bulletproof vest. For someone with a military ceramic vest you need to use the other lethal mode. Please do not make me regret that I gave you access to this deadly toy.”

“I said I’d be careful. That’s why I wanted to test it. Also, I thought the instructions were exaggerating what the second lethal mode would do, but I guess not. I’ll leave that one alone. Thanks for the help, anyway. You should head south as you’ve been meaning to, and I need to get some sleep. I don’t think SubMarine will be open for long, so contact me in one of the two standard ways you know about. If I have more questions I’ll try you through your private droidmail.” She cast him the correct droidmail address, and after saying goodbye, left very quickly, almost the discourteous virtual pop of air.

Wieland was left to wonder how she could possibly know about his need and plans to travel south, or for that matter, how she knew his private droidmail code.

## 5 Dec 2024, Washington, DC

**H** E COULDN'T get hold of his mother, after trying several ways, using the phone and the computer chat he'd set up with her, as well as trying to reach a neighbor. Charlie had heard the news from New York City—all very disturbing. He didn't want to get involved with that mess, but he had slowly decided there was no choice. He had to go to Queens to take care of his mother in this emergency.

He grabbed his backpack and stuffed it with the standard items he took with him when he went to New York City. He put on two outfits, one over the other, for warmth and to have extra clothes with him. He looked around. Did he need to give notice to the apartment manager? Hardly. So many people were leaving the DC area now, that wasn't an issue. What else? He dug out his money stash so he'd have more cash with him. Then he set off quickly.

His bus didn't seem to be running, but against all expectations, the Metro was open. He gritted his teeth and paid the extra fare. After a while a packed train actually came along, and with a change at Metro Center, and another long wait, a second full train took him to Union Station.

The station was absolute chaos, lots of bags, along with taped up boxes and laundry baskets full of belongings. People everywhere. There was no help for it, he had to wait in a long line for a ticket, although "line" wasn't a good name for a swarm of people trying to get to one of four windows. Finally he was at the front and told a middle-aged black woman, "One-way ticket

to New York City.”

The lady glared at him. “Are you crazy? Haven’t you heard any news? Of course no trains are going to New York City.”

“The train doesn’t go through lower Manhattan where the trouble is. I thought it might be okay.”

“Well it’s not. No trains to New York City.”

“Okay, a ticket to Newark, then.”

“That whole area is completely disrupted. Nothing goes north of Philadelphia, and all trains to Philadelphia and Baltimore are already sold out.”

And on it went. They weren’t selling tickets for the next day, and anyway Philadelphia was no good—a long ways from Queens. He’d been stupid; he should have known there would be no trains to New York.

The station was filled with increasingly desperate people. As he wormed his way out, Charlie began to worry for his safety, that he might be hit, his backpack grabbed. Twice, tough looking young men offered him a ticket to Baltimore or Philadelphia at a scalper’s price, but he didn’t have enough money even if he’d wanted to try.

\* \* \*

A long walk later, he waited at an on-ramp to the 295 freeway, trying to hitch a ride. Lots of traffic but no car even slowed down until a police car stopped. He threw himself on the mercy of the officer with a story about his mother in Queens.

“Tough luck, kid,” the officer said, “but there’s no traffic at all into New York City, only outbound. Even coming down from the north, you can’t get into Queens. From what I hear, your mom may be evacuated anyway. They’re busing people out right now. So don’t worry kid, she may be okay.”

After that he walked a long way and finally decided to splurge on the Metro to get back home. But then the Metro wasn’t running anymore. His one good chance at a ride was

a serious older man with a old, stalled car, who offered to take him across town if they could get the car going. Charlie fiddled with the engine, but couldn't see anything wrong. The man said it was a stick shift, and they should start it with a push. So Charlie helped push the car to a hill, letting it coast down; this was exhausting and not successful. He finally gave up on the man with his old car and walked home, an even more exhausting trip when he was already tired. Way after midnight, the day wasted, he was back where he started.

## 10 Sep 2025, Diary Entry

unlike the ghastly red plague of three months ago, smallpox came upon us "like a thief in the night," to quote from poe's story. as before we had heard about it on the radio, about how rapidly it spread and its devastating effects. it might have come from a group of half a dozen strangers who went past the town and were told not to stay. the town had decided to be firm about not admitting new refugees. winter was coming and it wasn't clear how the food would last, what there was of it.

chief jeter and david—I often call him "dad" now—had promoted an attitude of suspicion by default when dealing with strangers. in this particular case the six were young to middle-aged males, which made them look like their whole group, but wasn't reassuring as to what threat they might pose. in the way we handle all strangers now when possible, we forced them to stay at a distance, watched over by several men armed with rifles and under good cover. we gave them all the water they wanted, along with modest amounts of food, and wished them well and on their way. dad and two other men, along with two of the dogs, shadowed after the strangers for a couple of miles, until it seemed likely that they weren't coming back. for two days afterwards we had the full complement of guard dogs out on patrol at night.



dad's dogs are extremely important now. at least one adult dog patrols the town every night and all night long. it took people time to get used to them, not to be afraid. dad got everyone to see how the dogs work, which is amazing. they settle down, and then after a short while patrol around the perimeter. normally they make no noise, but are alert to anything unusual, and signal their concern by barking. without the dogs, we'd have to use sentries, and i doubt that human sentries could do nearly as good a job of checking for strangers.

despite not having trouble from the six men, some three or four nights later smallpox stole in, infecting half the town before we knew it was happening. the red plague spread more slowly and we could isolate ourselves, but here there was no use trying isolation of those infected because everyone had been exposed. it's pretty much run its course now.

as expected from reports elsewhere, this smallpox was not weaponized or enhanced, but regular smallpox was bad enough. the degree of symptoms varied a great deal. generally, older people had better immunity, and some showed no symptoms at all, like dad, who had been immunized in the military. for some reason bethany also didn't get sick at all. it's sort of like chickenpox, with blisters all over, but some people get really sick. others have significant residual scars. i got quite sick but got over it quickly. mom said she thought about ten percent of the remaining people in our area died—that of course on top of the catastrophic aftermath of the red plague. a good number of that ten percent already had other health problems.

and i don't think i mentioned before in my diary that a second wave of the red plague got loose in the town, three weeks or so after the first outbreak. it took us totally by surprise, but we were used to the isolation drill by that time, and only a few people died.

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we get less information about the world at large now and more

about our country and areas close to us. one lady came as a refugee some time ago from st. louis. the city is an absolute mess, filled with dead people, too many to bury, and so huge numbers of other animals explode in population and take over. among the larger animals: wild dogs and cats, coyotes, now even wild pigs—what they call feral hogs. and don't forget: some pretty wild human beings. one reason she left was that her group was fighting off wild dogs and coyotes, and especially the clever wild hogs, all the time. the city was full of rats, and huge numbers of insects—cockroaches everywhere, the ultimate survivors. st. louis was nasty and dangerous, but it could be mined for valuables of all sorts, from food and drink to clothes and survival gear. that's how her group was surviving. we don't use such mining anymore because we're too far from any larger town, and as i've said, we've taken all the goods, the clothing and food and gasoline—you name it, nearby. the old walmart was particularly useful as a source of specialty items, such as drugs and first aid materials that mom has been working with.

if anyone had thought about going to st. louis or even to one of the smaller cities between here and st. louis, on the outskirts somewhere, well, the lady's story was enough to give them pause.

the radio says that some cities are half civilized, and some areas of north america are almost fully civilized, with electric power from coal, medical clinics, and what have you. i sure wish we had power.

in our area we've gotten primitive. no electric power. a number of larger solar panels give a little power, and there is some wind power. no indoor plumbing works, which is sort of horrible, but i force myself not to complain. the town had water and power, and of course regular toilets, when we got here, but in late winter it all gave out. we knew about the cutoff ahead of time, so we could make some arrangements. there was too

little time to dig pits for outhouses, not to mention the frozen ground, so we started using “chamber pots,” a phrase i knew intellectually, but not as i know it now. the new system isn’t so bad, given time to get used to it.

the health care situation is also primitive. there was a medical facility about twenty miles away that everyone used before, but even if we could reliably get to it, most of its staff are dead or not functioning for some other reason. so ... serious health problems don’t get taken care of. mom is working on that, trying to get a reasonable clinic going, doing what we can. by good luck a retired physician lived just outside the town, with his horses and flower garden. by default he started taking care of the sick as he was able. mom and another lady worked with him; they developed methods for coping with a number of common ailments. then the doctor died in the plague, and the lady died only a week ago from the smallpox, so now it’s just mom, who’s really quite stressed with being the only source of health care in town. she’s doing her best with help from me and from several new recruits and even from bethany. one bright spot: we have a retired dentist who’s been doing surprisingly well in helping fix people’s teeth.

dad has started up a basic blacksmith shop. he can repair some farm machinery, fix tools or sharpen them, and shoe horses. he works in the shop when he isn’t working with the dogs. people around here were spread out all over, but they’ve moved in closer to the center—there’s plenty of room in houses of people who died, and being close together is safer and more convenient.

+ + +

two days later. i finally had the long talk with bethany that i’ve been putting off. she signs beautifully now, fluidly, with a good vocabulary, so we can sign whatever we want back and forth. i asked about her life before she met up with us. i should have asked earlier, because she doesn’t remember it as well as one

would expect. but children quickly forget early events in their lives, and her life has been difficult since joining us so i guess it's reasonable. still, i thought she would remember more than she does. incidentally, she never lies or even dissembles, so i'm sure she's not covering up. she mostly remembers images—of a nice small house, of a lovely mother with long blond hair, of a tall father with dark hair. she said her mother was like a princess, and always took good care of her. she doesn't remember how she ended up where we picked her up—part of a traumatic experience perhaps, and maybe that part of her life lasted a long time. finally, she said her mother had a special old locket that she gave her at some point. she remembered getting it placed around her neck.

i was really startled. “your locket belonged to your mother?” i signed. “does that mean your name isn't bethany, that bethany is your mom's name?”

“that's right,” she signed back. “i never tried to correct you; it didn't seem to matter.”

“then what was your name, what *is* your name. we should call you by your real name.”

“i was martha,” she said. “my name was martha. it sounds crazy, but i don't remember my last name. anyway, don't change. i like the name bethany, and it reminds me that i had a first mother so long ago, before my second mother, *your* mother.”

# 7. Breakdown

**6 Dec 2024, Washington, DC**

WARBURTON PACED around his apartment. What to do? He should follow Littlejohn's advice, get out of DC, and now, right now. Already it was very late to be getting off. And he was all set to leave, survival gear ready to pack in the car, his nice hybrid banged up to look old, extra gas tanks—enough that he might make it to his friends in New Mexico.

One worry was getting stuck in traffic, in the city or on one of the freeways. He was monitoring the traffic—there was a lot of it, but much more northbound than south- or westbound. Stalled cars, too, but mostly not blocking the roads.

So what was he waiting for? For the tenth time he tried to get hold of Wieland, and succeeded—almost losing the connection because he'd already failed so often. Of course not in SubMarine—the whole of Atlantis was closed now—just a regular Internet droid connection.

After they had identified one another Wieland immediately started talking. "David, you caught me at a busy time. It would be good to hear from you but I know better—you are still in Washington. Didn't you hear about the evacuation? And the threats to your area? This connection may fail any moment so listen carefully. Our mutual friends, Asya and her daughter, are in trouble, stuck in Washington near you. I think Melissa will contact you soon and ask for help. Please do what you can to keep them alive."

"Why didn't they leave? Why aren't they long gone?"

"And why are you still there?" Wieland said. "It must be

the same reason. Where is your will to survive? You should try to contact Melissa as soon as you can. She is home by herself in her apartment, and Washington is falling apart around her and around you too, worse than you realize. If you cannot get hold of one another, wait for her; she will come to you.”

Warburton must have paused, because Wieland quickly said, “I need to go—too much to do. You three get together and head west.”

Warburton tried to figure out what he wanted to say. Did he want to confront Wieland? And what would be the point anyway? “Wait. What about the computer crashes? You must have heard of them, and all that’s been going on because of them. They started just after our shutdowns. Did you have anything to do with them?”

“Why think of me? Why imagine I was involved?”

“Don’t play dense with me. You’re the only one besides me who knew the timing, the schedule for the shutdowns. The crashes came very quickly afterwards. Who else but you? Also I think you might be able to do it—I’m damned if I know how.

“You know how it went,” Wieland said. “Our deadline got close and we asked for help from all sorts of individuals and groups. A lot of people were involved. They learned about the dates you chose. Or someone causing those crashes might have been all set to go forward. It could be a coincidence. Anyway, I did not do this thing. I absolutely did not. What possible reason could I have had?”

“I don’t know, maybe you expected a worldwide crash sometime anyway, so you wanted to pick your own schedule. Maybe you hope to be in charge afterwards. Then I came along asking you for stories of failed nuclear reactors.”

“Those might be motives, I suppose, but you missed my most likely one: I like chaos for its own sake, just by itself, so I would need no reason at all, or because I could, out of boredom,

or for a bloodletting to improve the race. But I did not do it. Do not forget that you asked for the stories, the fake shutdowns. You started it all.”

Warburton was having major problems staying calm. “I might have started it all in a sense, but we would have had none of these problems with just the fake shutdowns. You bragged about the amount of ‘bang’ I was going to get with the reactor events, that no one else could do what you could do.”

“You are wasting time, and I really am terribly busy.”

“Yes, busy getting out of Berlin, to a refuge somewhere. I’m amazed you’re not long gone yourself, following your own advice to me. Let me guess—you’re going to Finland. Or Switzerland.”

“No, I’m staying in Germany. When this is all over, years from now, come visit me here. We can drink some good German beer together and talk about old times.”

“Don’t leave me like this. We were friends once. At least tell me the truth now.”

“I have been telling you the truth. But the main truth right now is that our friends are in trouble. Please, please do what you can to keep them alive. And I really do invite you to visit me in Germany. Maybe things will recover quicker than we think. If they do, you should come. Put an advertisement in a newspaper or online, whatever is functioning, and address it to ‘Joseph G.’ We’ll get together. Sorry, but I have a million things to do, and no time, so I will drop out now. I truly value you as a friend, and I hope you and our two friends survive all this.”

Warburton was completely dissatisfied with the cutoff, but what could he do? His curiosity didn’t matter anymore.

He’d been trying off and on to get hold of Asya or her daughter, at their apartment and on their two droids, with no luck. Wieland said Melissa was at the apartment, but where was her mother? After days without sleep, the stimulants weren’t work-

ing any more. It was dangerous for him to be so crazy sleepy. He set a machine to keep calling, turning up the volume very high in case it got through. Tomorrow he would go try to pick up Melissa. He fell into his bed with all his clothes on.

\* \* \*

A dream came then. As a young boy he walked through the kitchen of the house where he had grown up. He knew only that his father had done something unspeakable: had gone insane, had killed someone, and then had killed himself. He opened the door to the small closed-in back porch of the house, and what he saw was a complete surprise: a person, no one he knew, was hanging from the ceiling. In the next few seconds he took it in. The body had been neatly cut into multiple component parts: arms, legs, feet, hands cut apart at the joints, the head cut off also, the parts wired back together so that the result functioned as a marionette, suspended from above with wires articulating each part, all prepared to dance as the wires were manipulated by his father.

He woke up instantly, completely wide awake, his heart pounding and his breathing ragged. Jesus, this was the worst dream he'd ever had, worse than the awful military dreams. And where could it have come from? It was almost enough to make one believe in demons, that one of them had taken control of him while he slept.

And he had gotten along fine with his father, who had told him a thousand things he didn't know. Ten thousand things. One day a mosquito landed on his father's arm. "It's starting to bite," he said. "Now watch it swell with blood." Sure enough, you could see the tiny creature grow large as it engorged itself. Then his father smacked it, to leave a blot of blood on his arm. For his father the annoyance of a bite was nothing compared with showing his young son actual blood from inside the mosquito.



## 6 Dec 2024, Gaithersburg, MD

THE MEETING was scheduled for 8:00 am, after two nights spent sleeping on cots. They wanted absolutely everyone present, with no exceptions. Some they had to wake up, while others were told to close any work and get there right on time. Asya was groggy, but not asleep, and in a foul mood like most of her co-workers. Mr. Fourquet, the head of security, called the meeting to order in a voice with a slight French accent. Asya had never seen him before. She wondered how a French accent could become head of security, but CISA seemed all mysteries, now more than ever.

Fourquet cleared his throat and began. “We all must leave this building by noon today at the latest. I regret making this announcement as I regret the whole situation, but I am only conveying a decision which the head of CISA made late last night. At noon the building will be secured against any entry.”

He swept his hand around, including those in the auditorium, forty or fifty workers. “We are providing each of you with a small box of food, which you can pick up in the cafeteria. Aside from that, you individuals out there should band together in such groups as you can, to help one another.”

Someone shouted: “Where can we go? What should we do?”

“In case you don’t know, an evacuation of DC in effect. However, the area out here is almost where people in the inner city might choose to go as part of an evacuation. The instructions from authorities only say that people should go at least thirty miles from the center, and preferably farther. I cannot make any recommendations as to where you ought to go, except that you should not head back toward the center of the city.”

Another person shouted from the front of the group: “I’ve heard it’s dangerous out there, no law and no police. How do you expect us to get home or further away from DC? Without

getting mugged or raped or murdered?”

“The news you heard is an exaggeration. It’s not that bad outside. There are only a few of us from security left in the building. We have ourselves and our own families and friends to look out for. Again I regret to say that none of us will be able to give any help to you at all.”

“*Won’t* help us, you mean,” a woman at the back said. “This is criminal of you security types. I now see that all the supervisors left last night. You people are despicable.”

“National Guard troops in large numbers are being sent in and should arrive in two or three days. Police and other first responders are active. But I can only repeat: band together, take care of yourselves. We cannot help you. Anyone remaining in the building will be forced out by 11:45.”

Someone else shouted, “You can at least give us some guns!”

“Giving any of you firearms is not possible. There is no legal way we can do that. I’m sorry.”

Increasing numbers of people were shouting out questions or complaints, much of it profane. Fourquet rapped on the lectern and said, “I cannot give you any more information or help. I have no answers for your questions. If you don’t already know, you should be aware that no public transit is functioning in this area. Time is passing quickly and you should all work out the best solution you can find. This meeting is dismissed.”

Fourquet tried to leave immediately, but the only exits were at the back of the hall. People came up to him and around him, asking questions, pointing at him, swearing at him, some starting to shout. To Asya it looked scary, and so it evidently did also to Fourquet. He made a gesture that fetched two other security people to his side. They were big and intimidating.

“Acting irrationally is going to do you no good,” Fourquet said. “I repeat. We cannot help you. Your time is short and you need to help one another, starting right now. You should not

delay, but should leave as soon as possible to take advantage of available daylight hours.” The three of them moved out of the hall without having to manhandle anyone. They were clearly relieved to be gone.

She should not have been such a loner at the Agency. A mistake, as it turned out. She worked mostly with contractors and none of them were present. The two employees she knew best were supervisors, long gone now. Melissa was the biggest problem—Asya absolutely had to connect up with her daughter. Her other mistake was leaving Melissa back in Arlington.

A number of people were taking Fourquet’s advice to form groups and discuss how they would leave. The CISA building was leased space located out from downtown toward the north and a little west, past where Wisconsin Avenue became Rockville Pike, and past the end of that street, about twenty miles from the center of Washington.

Asya forced herself to be aggressive, to talk with groups where there was no one she knew. The first such group she tackled had five women and two men already. She told them that she had to go south to Arlington. To give them credit they didn’t laugh at her, but they quickly said it was impossible for their group to head into the center of DC; that was the last place they wanted to go.

She went through every group in the room, large and small. Several wished they could go into the center of Washington to fetch belongings, but even these rejected the idea. Nobody, not a single person, would head south.

Asya tried to think. What could she possibly do? Demand help from security? Try to bribe someone in security? But with what money? Then she saw the third member of the team that gave her the performance review. What was his name? Griesbecht or Giesbrecht, something like that. She ran over to him.

“Mr. Griesbecht, I have to get to Arlington, I just have to, to

get home where my daughter is waiting.”

“Arlington,” he said. “No, I’m going north and west, not through downtown DC, or around it.” He looked even weirder than before, disheveled somehow, and almost manic.

She said she had no choice; she must get to her daughter. What could she do? She said she’d do anything.

Giesbrecht shook his head several times, then looked at her closely. “I don’t know,” he said. “I don’t see how I could do it. Maybe I could. Sort of crazy for me. Maybe we could team up. Yes, maybe I could help you out.”

His weak enthusiasm didn’t reassure her, but still she started saying how grateful she was for his offer when he went on with: “I’ll be going out on a limb for you. I’ll expect something in return.”

“I have some money,” Asya said. “I can give you that.”

He practically giggled. “I don’t need money. Maybe we could team up,” he said, “if you’re that desperate. But we’re going to have to team up for several weeks. And you’re going to have to put out.”

Asya couldn’t believe it. She just stammered out “What?” several times.

“That’s my condition. I’ll take good care of you, we’ll fetch your daughter, and you have to fuck me, this very evening. It’s not such a big deal.”

Asya wasn’t sure what she said, only that she swore at him and turned away. He called out to her: “Do you really expect me to team with you just to be a nice person? I’ll say it again: I’ll be good to you. I have several weapons. I can take care of you and your daughter. But the rules have changed. Things are going primitive. What do you have to barter but yourself?”

“You’re filth, total filth. You’re worse than anything out there in the city.” Again Asya turned to get away from him.

He grabbed her by the arm. “You’re wrong about what is out

there, you silly cunt. You'll be somebody's bitch soon enough. Better for you to go with me."

She tore away from him and ran off. If she left the building by herself, would he follow her? What would keep him from that? But leaving by herself made little sense anyway. *Walk* south then? Or hitchhike?

Asya had been trying over and over again to get through to Melissa with a data connection, without success. Everybody had been having trouble with the overloaded Internet. Then she remembered that Melissa could use her software to "talk" to her mother in real time. This time she tried for a voice connection and succeeded on the first attempt.

Asya started in quickly, "This connection might fail at any time, but I know you record what you receive." She quickly went over her difficult situation, with no obvious way to head twenty miles south. When she had finished, Melissa talked as fast.

"I'm going to get help from that contractor who worked for you, David Warburton. He lives close to us. I can't get him online but I know his address. As soon as I can, I'm going there. I'll talk him into picking you up. He has a car. So it's nearly nine now. Figure less than an hour to get to him, that's ten, a half hour delay, and another half hour to get to you, so we should arrive by eleven, no problem."

Asya was horrified. "You're not going to *walk* all the way over to Connecticut, not with the city in the shape it's in. No. We have to find another way."

"There is no other way. I'm not scared. I'll dress so I look like an urchin. I don't expect problems."

"No, No. This is no good."

"No choice," said Melissa briskly. "I'm leaving right away. I also like contingency plans. If we're not there when you're forced out of the building, head south on Rockville Pike, and then on south on Wisconsin. But we'll be there. Don't worry. I

love you. Now, anything else.”

Asya tried to think. “What if Warburton won’t help you? How do you know he has a car? What if he’s not home?”

“He’ll help. You didn’t know, but I’ve met him. And trust me, he has a car. If he’s not home, then I’m out of options. I’ll just head back to the apartment, I guess.”

For Asya, it was weird listening to her daughter talk, even though she’d often talked with her when she was “Grace.” She managed it so fluently, so quickly.

## 6 Dec 2024, Berlin

WIELAND WAS concerned about Asya and her daughter, but it was their own fault for being so stupid, for not following his advice to get out of the DC area. He hoped the two of them would connect with Warburton and all three would survive.

The world stood on the cusp of unguessable events. “Cusp.” What a strong word. Knife edge, or turning point. In German one might say *Schwelle* for “threshold.” But his favorite English word was “pawn.” In German, the word was *Bauer*, which just meant “farmer” or “peasant,” as well as a pawn in chess, so it didn’t work in German as a single word with the extended meaning of the English word. Native English speakers had told him that when the word “pawn” was used, there was always the possibility that it could become important, that it could become a queen. That was the subtext. And he knew all about people as pawns: using them, sacrificing them, savoring the rare times when one of his pawns made a decisive move, even moved to the end row to get promoted.

Again he listened to fragments of news, with far too much happening to keep track of it all. His bots were still caching a

huge quantity and relaying it south. He had months of entertainment ahead.

There was still talk about the many computer crashes and the accompanying weird panic messages, although the crashes and messages were over now. Only the residual fighting remained, escalating, spreading. Things were getting exquisitely out of hand. He could not believe that no one had discerned the cause of those crashes. At least no one online was claiming to know. A lack of imagination. They needed to look at all logical possibilities, eliminating them one-by-one, and in the end only one would remain.

He had finished setting up arrangements for his friend Fritz—*a* younger man he knew was also stubbornly insisting on staying in Berlin, and he'd gotten a promise from him to contact her, maybe to look after her, or maybe more than that.

Konrad came in to say that everything was ready. They could leave at any time in a convoy of two cars. They were going to drive to Bavaria; flying had become too risky. Driving was risky, too, but the convoy would help. He was happy to give Guzman advice to quit New York City and head off to his island, but then he turned around and delayed leaving Berlin.

Besides himself, there were seven people in his inner group, his special group here in Berlin—five men and two women. One of the rules that he followed but didn't tell others about was to avoid having just one woman in a group of men. Two women worked out all right, and when they ended up in the shelter, he had always planned to have a mixed group. He was pleased with these seven: smart, loyal, without strong ties to Berlin. He had briefed them about what to expect in the near future and even years ahead. He needed everyone to function as a working unit, even after much of his special authority was gone, the authority that his money and position gave to him now.

## 6 Dec 2024, Arlington, Virginia

MELISSA KNEW SHE had very little time. She had to get off to Warburton's apartment, and the trip itself might take as much as an hour. Grab a backpack with several items, including her droid. Stick in the special item that G. had told about, from the lamp. Then dress down to look impoverished. She found old clothes, rubbed dirt on her face, messed up her hair, never forgetting that she needed to get going.

\* \* \*

She had been sleeping off and on the past thirty-six hours, but not well, so she'd felt groggy when she wasn't dozing. Already before the recent events the world had boiled over with too many problems to keep track of: fighting along borders and internal fighting with guerrillas and disaffected groups, refugees everywhere, food shortages and riots (not to mention starvation), endless competition for resources, with the large and powerful countries succeeding while they pushed smaller and poorer ones down beyond poverty into failure. In a sea of failed states across the earth, Africa was the first failed continent. It was dangerous to go anywhere in Africa. Some companies still tried to extract wealth, but they needed private armies to succeed, and in many cases, such as Nigeria, even the large multinationals had given up. Borders and oceans were full of refugees trying to escape.

But now so much was happening, and so much information had come to her that she archived most of it in her tamagotchi. She would look it over later when things quieted down. During this day and a half of waiting, her infobots scoured the world for information. They had powerful AI features and "knew" quite a bit about her interests. Her software assembled headlines and story summaries that stared at her, screamed at her:

OIL FIELDS ON FIRE—The Ghawar oil field of Saudi Arabia and the Kirkuk field in Iraq are burning across their



extent now. Many other fields are on fire from sabotage: Russia, Kazakhstan, Iran, and likely Kuwait, Qatar, others.

**NUCLEAR EXCHANGE BETWEEN PAKISTAN AND INDIA**—At least five nuclear warheads exploded over strategic areas of the two countries. India appears to be suffering more than Pakistan because of prevailing winds, although that imbalance is expected to change soon.

**TEL AVIV DUSTED WITH ANTHRAX**—Drone aircraft of unknown origin have aerosolized and spread a large quantity of anthrax spores over Tel Aviv, Israel. No estimates of the amount of anthrax have yet been forthcoming. Initial deaths are in the thousands, but the full scope of the disaster is unimaginable, as more people encounter the deadly spores. Experts stated that the anthrax used is in a lethal weaponized state. Israel has not yet issued an official statement except to confirm an attack using anthrax.

**NUCLEAR EXPLOSIONS IN THE MIDDLE EAST**—Several cities and military installations were hit with nuclear explosions over the past few hours, including the cities of Basrah, Qum, and Tehran, using suicide missions. Many if not all of these appear to have originated in Israel, likely misguided retaliation for the attack on Tel Aviv.

Just before dawn, still dark outside, she saw that a bot had labeled an item “unusual content, unusual source.”

agent tareq kayali cia  
nuclear devices 3 boats chesap bay  
into dc fri aftern/evening  
gps locater 7.105 mhz  
alert coast guard anybody  
turned to crap here  
dont trust me and no time

She had tried to get hold of officials, or law enforcement, or military, but with no success. Too many people had been clamoring for attention. Finally, she'd given up to talk with her mother.

Also early in the morning, but after dawn, she'd been dozing, trying to stay awake, when she was startled fully awake: the motion detector light was on, very bright. She went through her droid on into the Lamp. This was only the second time in her life she'd been in any personal physical danger, and just as with the assault by the white haired man, she didn't like it.

"Don't move at all or you will be killed," she sent out to the living room's speakers from her droid. Earlier she had programmed a number of different sentences. "Drop what is in your hands and hold them high and open." Her voice came with an unusual accent. At the same time she was peering at a display showing several video views from the Lamp. They were small and hard to interpret in the panic of the moment.

"Oh, my God! Easy, easy, steady. I'm one of the apartment managers. Jeez, I thought this place was empty. I pounded on the door. Don't shoot, now. I don't have any weapon."

Melissa typed frantically. "We may be gone late today or tomorrow. But this is still our apartment. What are you doing coming inside?"

"Didn't you see the notice? During the evacuation we're shutting this place down, at least for a week. We're turning off the water, then the heating and electricity—all the services."

"Can we still stay here today?"

"You can stay as long as you like, but I don't think it's a good idea. Starting in one hour, there'll be no heat or water or electricity. You should leave town like everybody else. The owners don't want any liability."

"We may have to be here through the rest of the day."

"If you insist on staying, you should fill up your tub with water—maybe other containers, too. And it's going to get cold."

“Do you have a way to get out of the town?” she asked.

“Only for myself. Sorry. I’ll be gone in an hour, by eight at the latest. You should try to keep anyone from knowing you’re still in here. And, uh, good luck.”

\* \* \*

But all that was hours ago. Now was time to be gone, well after nine. She hurried out through the front door, carefully locking it. As she went past the covered pool, she almost ran into Charlie, who was hurrying in the opposite direction.

“What are you doing here?” Charlie said. “I thought you and your mother were long gone.”

Using her droid, she explained that she was heading to a friend’s apartment for a ride to fetch her mother. She quickly went into a few of the details with Charlie.

“You’re walking by yourself all the way to the National Zoo?” Charlie said. “That’s too dangerous. You shouldn’t go anywhere by yourself. And you shouldn’t go off so far at all.”

Well, she had to convince him she was going no matter what he wanted. She said as much, concluding with, “It’s not your choice,” spoken through her droid.

“I don’t know,” Charlie said, and hesitated. “Okay, I’ll have to go with you. You absolutely can’t go by yourself. It’s dangerous even with me.”

This was not good, it was all delay. She tried to communicate that to Charlie, but he would have none of it. He could leave right then if there was such a hurry.

On reflection she could see obvious advantages to letting Charlie go with her. Her mother knew Charlie and trusted him, and she did also. If Warburton wasn’t home, this would give her extra options. Yes, a good idea to go with Charlie.

Teaming with Charlie had cost her ten precious minutes. She hurried him along, practically running. The route she planned was one completely familiar to her: just over to the Key bridge,

across it, and on in any number of ways through residential areas to get to Connecticut Avenue. She must have made this trip a hundred times, by bicycle and on foot.

## 6 Dec 2024, Arlington, Virginia

**C**HARLIE HAD ended up walking all the way home very late the night before, after the fiasco of trying to get to Queens. He was so tired that he slept later than he had intended, getting up a little before nine.

First he saw that his droid held a message for him. The droid was no longer connected, but it had dutifully saved the message. He pulled the text up onto the screen.

My Darling Charlie,

I hope you get this message so that you won't worry about me. Seriously, you should let me do the worrying—about you. I am going to be fine. My wonderful neighbors, the Nickells, offered to take Joseph and me off in their car. They are headed for one of the city shelters way to the north and west of here.

I put myself into God's hands as I have always done. And I'm very old now, but with my faith I'm prepared for anything. I've had a wonderful, exciting life. You were one of the best parts. For quite a long time it won't be possible for you to find out where I am, so you should not look for me. They want me to finish this quickly.

You are a good boy. I will be praying for you every day. You must find your faith and strength in Christ as I know you will.

— Your proud and happy and content mother

He was very glad to hear that someone was taking care of his

mother. The Nickells had helped him with her in the past—he should have thought of them himself. There was nothing more he could do for her, so he tried to focus on his immediate problems: mainly no way to leave the city, and secondarily a small matter of survival. He'd really screwed up, letting everyone he knew leave while he tried to get off to Queens.

Plans. He needed plans. He noticed that the apartment was feeling cold. Actually quite cold now that he thought about it. He went to relieve himself and discovered the water had been turned off when the flush didn't work. Great. They had shut down the complex. The only water he had was filtered drinking water. Just then the lights went out, too. This was not good.

Okay, check to see if any managers were still around, maybe his boss even. Somebody must have thrown the switch for electricity. As he hurried around a corner toward the front, he nearly ran into the deaf girl, Melissa, who lived at the other end. She was in a frightful hurry, but finally explained her plans to him through her droid. These plans made his own sound inspired: the crazy little girl was heading across town on her own. A very bad idea. Against his better judgment he insisted on going along with her once he understood that she was going no matter what.

\* \* \*

They headed toward the Key Bridge. As they passed the Marriott Hotel, Charlie winced to see a huge graffiti art work from his own minister's weird dream. It was in fact artistically done, where the dark "WWW" had sinister eyes peering from each letter and the red "666" was made from flaming snakes. Brother Jesse had hit a public nerve with his campaign.

On the bridge Melissa kept hurrying him along; she was in better shape than he would have guessed. A number of people were on the bridge, along with a line of twenty or more cars and trucks. Weren't they all supposed to have evacuated? In the

middle was a checkpoint, with two men in uniform beside barricades. They had a jeep with them and each carried an automatic weapon of some sort—he didn't know anything about weapons. Another pair manned a checkpoint in the opposite direction.

The two were being careful: one interviewed those trying to cross, while the second stood some distance away with his gun ready. At least people were getting through all right. Melissa was clearly in a frenzy of impatience, but finally it was their turn. He intended to tell some story himself, but Melissa took over instead.

"I need to use this machine to talk," she said, the words coming out of the droid. "We are going off to fetch my mother, who is stuck at work. A friend has a car for us to use."

With that Melissa pulled out her ID card, and Charlie did likewise. Ever since the western fires, you needed ID to go anywhere.

The guard let them through, saying, "Fine, good luck with your mother. You should be careful; there's a lot of crime going on out there now." And on they went. He was surprised that they hadn't even looked in Melissa's backpack.

Charlie knew this area well himself, but he was letting Melissa lead the way. She hurried straight north on 35th Street, toward the Navel Observatory. He was waiting for her to slow down, but she kept going, even though she was breathing harder now. They went a short way along Wisconsin, and then cut over to the circle road, the one around the observatory. It was all going pretty fast—quite a bit of traffic, but nobody paid any attention to them. Maybe they could get to this friend of hers without any trouble.

A car drove up beside them along the circle, filled with loud and drunk young men, a mixture of races. The car screeched to a halt and all five climbed out quickly. Charlie figured he could outrun them, but he knew Melissa couldn't, so he had to

try something else. And what were these men going to do? They were laughing at the weird looking guy and little girl in front of them and talking about having fun. Drunk as they were, he might be able to take out all five of them before they realized how serious it was. But drunks were notoriously resistant to pain.

He saw that Melissa had pulled a shiny object from her backpack. What in God's name was it? She held it with both hands and pointed it toward the men. "Leave us alone and go away," Melissa said through her droid. "Or else I will have to kill you with this gun." The "gun" just looked strange, not like a gun at all, but the size of an automatic weapon.

One of the men immediately started in with baby talk. "The liddle girlie is gonna kill us with her tricycle, or her ice cream maker."

Melissa aimed her gun, whatever kind it was, at the men's car. There was a sharp crack, very loud and not at all like normal gunfire, at least as it sounded in the movies and in Charlie's neighborhood where he grew up. Then with the shrill sound of a hawk's shriek, a bullet from the gun tore all the way through both metal sides of the car, and ricocheted off the pavement on the road's surface with a shower of sparks. The five men, along with Charlie, were in shock. At this point, Melissa had her droid say exactly the same thing as before, and she pointed her gun at the men, still holding it with both hands.

He could see them sobering up. For Charlie it was a scene from a bad science fiction movie, one with a killer robot played by Melissa. Part of the effect was due to her odd voice coming out of the machine. "Go away!" the machine said again, and they did, as fast as they could get into their car and be off.

"Jesus," Charlie said, "Where did that come from? What kind of a gun is it?"

She was shaking from reaction and was carefully holding the gun at one end, but she managed to type into her droid, "Rail

gun, hurry.” He had to hustle to keep up with her.

He felt like lecturing her. Whatever that gun was, she shouldn’t be playing around with it. She kept carrying the gun in such an awkward way that Charlie finally realized it must still be hot. Finally, he saw her switch on what might be a safety lock and return the gun to her backpack.

They hurried around the circle, a short ways on Massachusetts, and then north on 34th Street. Right onto Garfield at the Belgium Embassy. Garfield went on for a ways, but was blocked at Cleveland.

“No matter,” Melissa’s droid said. “Head north one block.”

So north on 32nd and east on Cathedral. Cathedral went right to Connecticut, where they wanted to be. Past the snooty Maret School where he’d given Aikido lessons to a small group of kids three years ago, once a week. He’d talked his students into renaming it the “Marmot” School. Maybe that was why they hadn’t renewed his contract.

At Connecticut they turned right and crossed the street. Warburton’s apartment house was just past the corner, a large, modern eight-story building. It had an entryway with the standard buzzers to sound in each apartment and an intercom. Not all of the buzzers were labeled, and no label had “Warburton” on it, but Melissa knew he lived on the top floor. Only one of those buttons had no name. She pressed it. Charlie was glad to hear a far-off ringing sound. Melissa pressed it, held it, pressed it again, over and over. Finally a deep male voice asked what they wanted.

### **3 May 2025, Diary Entry**

after the difficult times last winter the town has become serious about stockpiling food, as much as we can. locally we can hunt, of course deer, but also the wild pigs, and a number of other



animals. we can fish with considerable luck—catfish especially are easy to catch, and people here really like their taste. i personally am a vegetarian, have been since i was five years old. no meat or fish of any kind. at first it was an ideologically based decision, but now the thought of eating meat, and sometimes the smell alone, makes be gag. once when a number of family members went to a fancy restaurant in new york city, i had to wait outside because they were serving freshly cooked lobster; they had a tank with live lobsters in it. i was only six and they thought i was shy or sick or something. they had no idea how angry i was with them for eating those beautiful lobsters.

my vegetarian diet worked fine before we came here because i was willing to eat dairy products, but we haven't had many of those—well, some eggs from chickens, but no milk. mom's been worried about me, and about bethany too because she also won't eat any meat or fish. (she never explains, not even to me in sign language; she just refuses.) fortunately we have been growing some food, but that also has been difficult: getting seeds or plantings, growing them with insects all around, and so forth. i never thought farming was glamorous, but i didn't realize how much work was involved. several of the locals had maintained vegetable gardens, and they have helped others to get gardens going. once people made a trip to the nearby larger town (50 miles away) with lumber and meat to barter. sort of like the jack and the beanstalk story, where he trades a cow for beans, but in our case the town did end up with some grain and even a large sack of flour. the trip used up too much gas, though; they're not going to do it again.

during the worst of the late winter shortages, three horses made what one could call the ultimate sacrifice for the common good. some people here weren't happy about that.

initially we also raided a nearby walmart (well, 20 miles away). that went fine at the time, but such stores are either all worked out now, or are guarded. we can't get any more

supplies that way. and it's far too dangerous in any larger town, not to mention st. louis—it would be suicide to go there.

we lost power and water in mid-winter. that was in early february, about three months ago. i've gotten used to it, but i sure don't like doing without. some people wanted to get out of here, to go where you could find power and water. there are just the two options: stay or try to leave. the leave option is getting increasingly difficult. first of all, if you drive off, you need enough gasoline, which was designated communal property two months ago. you could also walk, with the nearest reasonable destination the city at the edge of the forest, about 50 miles away—a very long walk. we hear that newcomers are not welcome in this larger city, as they are not welcome in "our" own town, and of course we are relative newcomers. so last winter several families left, by car and walking; we never found out what became of them. by the same token, a number of people arrived here after we came, by several means and needy to different degrees—twice they were in desperate shape. in the end, people are mostly stuck here.

+ + +

i just got back from a trip with david in one of the town's trucks, requiring special permission because gasoline is communal, as i wrote above. david had heard of a puppy farm only a couple of miles away, with an owner who couldn't handle his dogs—some sort of guard dog. i didn't know what a puppy farm was: turns out that farmers sometimes made extra money raising purebred dogs to sell in the city. well, david thought we could use guard dogs, so he talked jeter into letting us borrow a truck, put in makeshift dog cages, and go fetch them, or try to anyway, using up part of the town's precious remnant of gasoline.

the dogs turned out to be anatolian shepherds, a special breed from turkey i hadn't heard of. david knew all about them and was excited at the chance to get such a good breed. the farmer just wanted to get rid of them. in fact he was ready to

“dispose” of them when we showed up. we gave him some dried meat and a sack of vegetables as payment, though. he had a male, two females, and three juveniles (david checked their sexes, i think, but didn't tell me what they were). we took all six. the adults are huge, ferocious looking dogs, especially the adult male. david was prepared for trouble, with a thick towel wrapped around his left arm. at one point the large male grabbed him on the arm, and he bopped the dog hard on the snout, with a sharp command at the same time. i was scared, and i decided david could be pretty ferocious himself. david followed this with quiet talking and giving the dog some food.

david talked with this farmer, mostly ex-farmer now, since he needs a whole list of materials to farm the old way as he had been doing: fuel, seeds, fertilizer, insecticide. our town is the closest larger gathering to his farm, and in the end he and his wife and two kids may need to move in with us to survive. david thought that the town could help the farmer bring in some kind of crop and keep his farm going—get food for the town and help the farmer and his family. they agreed to get together later.

when we got back to yates center, david started working with the dogs, training them. as before, the large male is the trouble dog, and david's really tough on him. david says these dogs had been left in small enclosures and hadn't been trained or socialized. this breed wants structure and discipline, and they love to have animals to watch over. eventually they should make excellent guard dogs for the town.

there are several dogs already in the town. some are pets, but the others are hunting dogs, so-called: dogs that assist people in hunting. (i'm glad i've never seen what they do, but i guess they chase hunted animals up a tree, or at least corner them, and swim to fetch birds that have been shot, like the wild turkeys we have around here.) i asked david about these other dogs. he had thought about it—that we might need to fence the two groups of dogs off from one another if they can't get along.

he said he'll have to convince people in the town how important good guard dogs are for security, because the hunting dogs are also important— hunting is still our main source of food.

+ + +

i wrote the last entry four long weeks ago. these last weeks have been so horrible, i know i can never do justice to them with words, the worst time of my life. i've finally gotten around to writing in my diary. the first sign of trouble came when a man asked about red marks on his wife, along with a little bleeding. i was right there when a woman, new to the town, started screaming. i could see her going practically nuts, and i could partly read her lips. later mom filled in what i'd missed.

after some kind of scream, she had said: "don't you know what that is? christ almighty, that's the red plague. the lady must be isolated—you must not touch her. dear god don't touch her, or you'll get it yourselves. you'll all catch it. you'll all die. i saw a whole town just disappear that way."

someone else must have shouted, "you mean we have to let her die? just let her die?"

"no, no," the woman said, and then went on with something like, "you can take care of her, and any others who get it, but you must wear a mask, use rubber gloves, not touch anything they touch. keep them in separate rooms or houses by themselves. not all of them die—some recover— i recovered."

i give this lady credit for saving our butts, although i think it's possible she brought the disease with her. but people are still arriving now and then, and some leaving, so we can't necessarily blame the lady. anyway, people understood her and were terrified. the sick woman's husband had already been in close contact with his wife, so he volunteered to tend to her and to any others who got sick. right away he came down with it and died, though the wife made it. my mom and several others managed to get the town organized, sort of behind the scenes. mom still follows david's advice not to stand out. they had to

demand that people adhere to a set of rules. in the end up to a quarter of the whole extended town died, and half the people never caught this plague—I think because we did such a good job of isolation.

we had heard about it on the radio, but didn't really think it would come to us. the radio speculated that it was an artificially modified form of the ebola virus, weaponized to kill fewer victims and more slowly, so that it would spread more readily. the original ebola killed people very quickly, and the disease would die out from a lack of hosts to infect. the new version is just as infectious as the old, but more people are infected before you know about it, and there is time for infected people to travel elsewhere. after initially being called the red plague, people also called it the red death from that short story by edgar allen poe. a guy on the radio read the last sentence of the story, which i had read a long time ago: "and darkness and decay and the red death held illimitable dominion over all."

i've seen terrible events these past weeks. i don't forget things anyway, but all this has burned special circuits into my brain. perhaps worst was when they had to kill two of the victims who wouldn't listen or stay isolated. i watched people bleed from all parts of their bodies as they died, and then were buried quickly—part of the effort to contain the disease. in the middle of the cycle we had to dig a trench and put people in it, without having a proper grave. toward the end, even that became impossible, so the town cremated over two dozen people by dragging them into an abandoned house which was set afire. a nasty, nasty business. mom insisted on reading a short prayer service for each of the dead; at the peak it was for a number at once.

david says that i and the whole town are suffering from a type of post traumatic stress disorder, ptsd. it doesn't have to come just from fighting in a war. we have the standard symptoms, including frequent feelings of panic and difficulty

sleeping. david says he understands this well because he himself suffered from ptsd, although he's gotten much better. for him, terrors here are not as bad as he encountered in several wars, so he can cope with them better than others in the town.

+ + +

another week has passed now. our town isn't exactly a safe place, even with no outsiders around. in fact, the residents often cause trouble, especially at night. there have been lots of fights and a few killings. once a while ago, right in the middle of the day, i came up on two boys just outside the town—teenagers, older than me; of course i'd seen them before but hadn't ever talked with them. for a second i thought i was going to be in trouble, assaulted maybe. then a third boy joined them. i could more or less tell what he was saying: something like, "are you guys crazy? don't you know who that is? that's the blacksmith's daughter, jeez, come on, leave her alone. you want to tangle with *him*?"

so yesterday evening i was startled when bethany pulled me out of our house into the dark. she and i are not allowed to go outdoors at all after sunset. i signed a protest to her, but she shushed me in the deaf way, by refusing to look at me. she dragged me past the church and along the main road to the old sports field. and suddenly there were fireflies all over, winking on and off, hundreds of them, thousands. i can't remember ever seeing a firefly, except pictures. it was magical, an enchanted world that had impinged on our own.

i remember now that in washington they would spray for mosquitoes in the summer, and the spraying also killed the fireflies. wasn't that a strange choice? they could either have beautiful fireflies, along with annoying mosquitoes, or they could have neither; they could choose between life and death.

# 8. Meltdown

**6 Dec 2024, Washington, DC**

THE DOORBELL rang repeatedly. Warburton couldn't believe he was still asleep. Part of him didn't want to answer it. They could just be checking if anyone was home, for whatever reason, maybe criminal. He wasn't going to buzz a stranger in, whatever the story. Maybe it was Melissa, but if so, how could she have made it all the way to his place? Finally he couldn't stand it anymore, pressed the button, and asked what they wanted.

It was obviously Melissa's computer-generated voice. "I'm so sorry to bother you," the voice said. "This is Melissa, Asya Lifschitz's daughter, as you know. My mom is stranded at that horrible agency, CISA. They made her come to work, made her stay for three days, and now at noon they are going to chase them all out of the building. It's twenty miles away, with no public transit and no one to give her a ride; she can't get here without a five-hour walk."

He didn't say anything, so she went on. "I walked here from our apartment in North Rosslyn, near the south end of the Key Bridge. I have a friend with me who also lives in our complex." She paused and then said, after frantic typing, "Are you still hearing this?"

Warburton heard her all right. If he had just left earlier, days ago, he'd already be with his friends in northern New Mexico, settled in and ready for hard times. He especially hated mingling with people he didn't know. Of course, Melissa wasn't exactly in that category.

"Who is with you?" he said.

More frantic typing by Melissa. “His name is Charlie Moreno. He’s a young musician who lives in our complex. He’s a good guy. I’ll vouch for him.”

He had to do what Wieland had asked for. Of course he couldn’t leave Asya at that damned CISA. Why did she have to report in when they asked? “OK,” he said. “I’m coming down. When I get down, I’m going to let you, Melissa, in, while your, uh, Charlie waits a minute or so.”

Warburton slipped on a jacket, grabbed a handgun, checking it compulsively, and headed down the stairwell. He had decided not to trust the electric power anymore. As advertised, the two of them were waiting for him, with this “Charlie” several steps back. He motioned Melissa to the door and let her in carefully, closing it so it locked again. He walked back to the end of the little hallway, keeping an eye on Charlie. Before he could ask Melissa anything, she finished typing, and her droid said, “It’s all right. He’s not forcing me. In fact, he wouldn’t hurt a fly; he’s afraid of *me*.”

Warburton let Charlie in with them, and then said, “I don’t like this, but I’ll drive to CISA to pick up your mother. You said noon was the deadline?”

“Actually, they must all be outside by eleven-forty-five.”

“Anything else I need to know before I go?” Warburton said. “Be quick, the time is tight.”

Melissa was typing furiously. “I thought we would all three go. Do you know where CISA is? Do you know what my mother looks like? We should all go fetch her.”

“Yes, I know where CISA is, and I’ve seen pictures of your mother. I’m sure I’ll know her when I see her. You two cannot help with the pickup in any way, so it would be needless extra risk. Also I’ve only got two protective vests—a military one and an old-fashioned civilian type.” His military vest was high-performance, with many small circular ceramic disks woven into



it, but the other one was crap, could only stop a small caliber handgun. Better than nothing, though.

“I want to go. Besides, what will we do here?”

“Simple,” Warburton said. “You can wait upstairs in my apartment. We’ll go up together right now.”

As they headed up the stairs, with Melissa still shaking her head, Warburton continued, “Don’t use the elevator, because the power could fail any time and you’d be stuck. Stay in the apartment and let no one into the building or the apartment. Absolutely no one, no matter what their story is. Um, don’t even answer the bell. Finally, if your mom and I aren’t back by this evening, you’re on your own. Something happened to us.” As they went up, he was watching Charlie carefully; he didn’t entirely trust him. Charlie was stocky, with wide shoulders and big hands, and he took the stairs easily, smoothly, like an athlete. Warburton stuck that information into his subconscious: perhaps there was more to this Charlie than one saw on the surface. He decided he wouldn’t lightly confront him or take him for granted, if it came to that.

With Melissa panting a bit, they reached the eighth floor and his apartment. “I’ve been thinking about your options if we don’t come back. I don’t have good ideas.” He turned to Charlie. “Are you familiar with weapons?”

“The short answer is ‘no,’ ” Charlie said. “I think I can point and shoot. Actually, Melissa seems better with her weird gun than I would be with anything.”

It took just a minute for Charlie to tell Warburton about the run-in with the drunk group and how Melissa shot through their car.

Warburton looked startled. “The hybrid rail gun! But Melissa shouldn’t be carrying it around, using it.” He turned to her. “What were you were doing?”

“Joseph G. gave me access to it,” her droid said slowly. “I

was using it to survive, and it worked.”

David didn’t know Wieland had included it in the lamp he shipped. It was their favorite toy, very dangerous, unreliable, and a unique weapon much too expensive for most uses. An explosive ceramic cartridge propelled the slim sliver of a bullet out, but also emitted a pulse of electric current as it was blown up and compressed—for an instant a megawatt flowed through conductors, almost melting them. The pulse helped the bullet reach more than three times the normal velocities.

Warburton gave up on her to talk with Charlie about what they should do, or rather *not* do while he was gone. After asking a number of questions, he thought Charlie sounded sensible, not crazy like Melissa. He gave him keys and explained a bit about the apartment. Even in the worst case, if no one came back and they left the apartment on their own, they should lock up carefully. He got two handguns out of his gun safe and locked it shut again. He favored Glocks for amateurs, well, and for others too—light, fairly safe, and easy to use, but also effective and deadly. Then he spilled out ammunition for them.

He addressed Melissa. “You shouldn’t use that rail gun except in an ultimate emergency. It’s really dangerous. You shouldn’t use handguns either, but if the two of you are on your own....”

Melissa typed furiously. “I’ve studied gun safety online. I remember it quite well. Show me how to use your Glock.”

Warburton demonstrated the basics and wasn’t surprised to see that she seemed to master the gun immediately. But really, all you needed to do was pull the trigger—the reason he had picked out Glocks for them. He showed them how to load the guns and talked about the safety features, disabled by pulling the trigger. Charlie obviously understood it all too.

“These are also terribly dangerous to use or to carry with you,” he went on. “If I don’t come back, you’ll have to decide

what to do. I'm not trying to scare you. This apartment has a very solid front door, but if someone breaks in, you need to be prepared to kill them." And at Charlie's reaction, "I mean it. They'll just kill you if you let them; all the apartment management and workers are gone now. If there's a fire, you have two stairways down, so you can wait to see if it's a false alarm. But if you have to leave the apartment, take your handguns with you."

He paused "Let's be positive. *When* your mom and I come back, we all need to decide what happens next." He thought they might all four go off together, though he wasn't wild about it. Better would be to take the two of them off with him, pick up Asya, and head north and west, without going through the dense parts of Washington a second time, and without going back to anyone's apartment. But he needed some preparations to leave for good, and they probably did too.

He was ready to leave when Melissa said, "I forgot to tell you my contingency plan with mom. If no one shows up, she's supposed to walk south to Rockville Pike, and then on it, and on down Wisconsin."

"Good idea. I'll remember. Now think. Anything else? I'm going to get my car in the garage underground."

There was a gate that should open, but if it didn't, he'd have to use tools to force it. He was putting on the body armor as he talked. He grabbed the old "bulletproof" vest, picked up several other weapons, and headed downstairs to his car. Damn, this trip would use up some of the gas he was counting on to get him to northern New Mexico. The electric gate went up on command. At least that saved time.

\* \* \*

He'd decided on the obvious route to CISA, using the main roads from Asya's plan; the more isolated side streets could be worse. And he didn't want to try any freeways. So he headed northwest on Connecticut up to Van Ness.

There was lots of traffic, almost what one would expect on a normal day, but with subtle differences. Often just one person driving. Maybe that shouldn't be a surprise; he was one person driving. Other cars were full, with baggage tied to the top. There were also quite a few people on the streets, but so far no larger gathering, like a gang. At the end of Van Ness, he stopped at the light, which was working, before making a right turn onto Wisconsin. A man came running toward his car, waving his hands and pointing to himself, trying to signal a frantic need. As he headed off, the man managed to bang his fender. The incident was more unsettling than anything before—a desperate man seeking help from each random car that came along.

He was making good time on Wisconsin Avenue, almost up to the Navy Medical Center, when the crack of a gunshot came, with breaking glass and a hole suddenly in the rear passenger side window. Sweet Jesus! He drove faster and with random erratic motions, weaving but trying not to have a predictable pattern. He had a mental image of being in someone's gun sight. One strategy would be to kill or wound a driver, then finish off the driver if necessary as you picked up the car.

No second shot came as he continued on. His heart rate slowed down. This was terrible. He had talked about the dangers, but he didn't expect anything this bad or this soon. Maybe it was just bad luck. The road switched to Rockville Pike. Then over the freeway at the interchange, while the Metro came up out of the ground to his left. Still fairly heavy traffic, but he kept making good time, at least half-way there, just another eight or ten miles.

A convoy of a dozen military trucks and jeeps went past him heading south. National Guard, maybe to reinforce the center of DC. There had been isolated military vehicles before, but this was the first large presence he'd seen. Littlejohn had said they knew of specific threats, and anyway the capital was an obvi-

ous target. After the New York bomb, it only made sense to be worried about DC.

He couldn't believe how fast it was going, with no stalled cars blocking the road or any other problems. Rockville gave way to several other names, but they were all Highway 355. He turned left on Shady Grove, and then only half a mile more. Asya's commute from the Metro Station must have been a pretty good walk. There was a big parking lot right in front of the building, but still he didn't like leaving his car unprotected. He also didn't want to meet up with Asya in person. It had been nice talking with her anonymously, but this was different. He quickly took off the good vest and put on the wimpy one. Then he forced himself to go to the front door, give his name and ask for "Ms. Asya Lifschitz."

## 6 Dec 2024, Gaithersburg, MD

**A**SYA WAS pacing inside the CISA building, back and forth down the main hall. Time was getting short, and that disgusting Griesbecht was still hanging around near the front. She had never felt such a sense of desperation. And how was she to know that David had arrived? Then one of the security people came up to her.

"Your name Lifschitz?" he asked, and she nodded. "Someone outside's asking for you. He looks hardcore. Said his name was Warburton."

Thank God, David actually made it. She was surprised at how nervous she was—finally meeting the reclusive David Warburton. She decided to treat him casually, like a friend helping her out, a friend with nothing special about him. She would use his first name. And what did she know about him, anyway?

She went to the entryway, just inside the main door, got the

initial greeting done with. She apologized and thanked him for coming, but it was awkward. She'd seen still pictures of him and had talked with him by droidmail, but hadn't realized how big he was, and with a menacing look as advertised. David was just inside the door, carrying a fancy-looking black vest. "This is a flak jacket," he said. "I've already been shot at once, so you definitely need it." He dragged out a pair of goggles. "I also want you to use these high strength glasses. Let's be as safe as we can."

"I'm not taking your vest, am I?"

"Don't worry, I've got one on right now." She started to try on the one he had carried. "Of course it's too big, but we'll adjust it to help." He fussed with some straps at the back and tightened the vest on her.

"Before we go," he said, "is there anything you need, anyone you want to say goodbye to?"

"No. Nothing, nobody," she said. With luck she would never see Griesbecht again. "Melissa's in the car with you, right?"

"Uh, no, sorry. She wanted to come, but I made her and Charlie stay at my apartment."

"Charlie! What was he doing with her?"

"I guess he's someone who also lives in your complex. When he found out she was heading off by herself to find me, he insisted on going along. But there was no reason for them to come fetch you—dangerous enough anyway."

After they got onto Rockville Pike, there were more cars, quite a few in each direction. Asya wondered what had happened to the evacuation. People paying no attention to it? Maybe they weren't worried this far out from the city center.

David turned to her and said, "About this guy Charlie. Do you know him well? What's he like?"

"Well, he's a martial arts instructor. Something called Aikido, whatever that is. He gives regular classes, so I think

he may be good at it. He's also a musician, an amateur, though he tries to make money that way, too."

"But what do you think of him?" David asked.

"Oh, he's helped me in a number of ways over nearly two years. I'd say I trust him completely now. He seems smart and reliable. It doesn't surprise me that he would come with Melissa. A nice young man. But I guess you've met him already."

"Yes I did meet him. And martial arts instructor is good."

"You know," David continued, "I'm assuming the four of us are going to leave the DC area, um, because of the call for evacuation. That is, leave together and go somewhere. Not everyone knows there's an actual serious threat. A nuke on the city would be unimaginable and we're pretty close in. That's if you want to go with me, in this car. Is that right?"

"You're right that Melissa and I need to leave. And we don't have any good way to evacuate. A very generous offer, David. And I'm ashamed that I didn't make some plans. Melissa wanted us to head out of town a week ago, but I thought I needed to stay." A pause. "I don't know about Charlie. He often goes off to help his mother in Queens, so I'm surprised he's not there. Maybe he tried to get out of town. Yeah, that's right. I doubt if trains are running north to New York City."

"We'll see when we get to my apartment. It's nice to know that this Charlie would be an asset, good to have along."

She saw people ahead in the lanes across the road from them, in the opposite direction. As they got closer it was clear they could get through, but the people were using cars to block the adjacent lanes—soon they'd have the whole road blocked. She was nervous as they went past.

"I think they're just freelancers," David said, "trying to extort from anyone who needs to go through. God, I'm glad we made it before they finished their roadblock."

"But what about the police?"

“There’s a couple of dozen people back there. A police car will feel lucky to get through without paying. A national guard group could break them up quickly, but I expect their plan for that is to scatter and set up somewhere else,”

David carefully laid a handgun in her lap. “I should have done this at the beginning,” he said. “If necessary, point where I tell you and pull the trigger, over and over.”

“David, I don’t know anything about guns. I’ve never fired a gun.”

“And you won’t unless we get in big trouble. Then you might as well try. Hold it with both hands, put your finger through the trigger guard and pull firmly. And be prepared for a loud noise and some recoil, so don’t flinch. But probably you won’t need to.”

To her great relief she didn’t need to. The rest of the trip was uneventful, though with still quite a few people hurrying about, whatever they were doing. David headed into the underground parking lot, with a gate that worked when he inserted a card. He parked in an awkward spot behind a pole. She figured he wanted to be as unobtrusive as possible, “I don’t trust the elevators,” he told Asya as he led the way up eight flights to his apartment.

She watched as he unlocked the door and cracked it open, still holding a gun ready to use. “Charlie, it’s us,” he called out, “Melissa’s mom and me. Be careful if you have a gun ready.” Then to her he muttered, “I’m surrounded by amateurs, people who know nothing about guns. Pretty funny that Melissa was the best at using a gun—of all things the rail gun, but she is young and has no fear.” Asya made a mental note to ask David what he was talking about—Melissa’s “rail gun”? Charlie came into view, while David still had his firearm ready. Why? And suddenly she understood: it was against the chance that Charlie was somehow coerced by an intruder. But everything was fine and they went on inside.



## 6 Dec 2024, Dresden

HARTMUT WIELAND ASKED Konrad to pull over when they had a good view of Dresden from a distance. The second car pulled up behind. He wanted to look at the buildings in its famous skyline one more time, perhaps the last.

“Did you know about the *Frauenkirche* in Dresden?” he said to Konrad. “It’s the one over there with a bell-shaped dome.”

“What’s to know. They rebuilt it, I heard that, but I’ve never been in Dresden.”

“Pull up a picture of it on your droid.”

It took Konrad just a moment to get a picture. “That’s odd. It’s mottled with dark and light stones.”

“Yes. They did not just rebuild it. The project was an ‘archaeological restoration,’ incorporating many of the original stones from the old ruins.” The best stonework in the world. He had always admired the craftsmanship involved, the *German* craftsmanship.

“I think it’s crazy. Why mix old and new stones?”

There was no point in reasoning with him. Either you thought it was a magnificent idea to include a number of the old stones, an idea full of symbolism, or you thought it was stupid. He really hoped these buildings would survive the hard years to come.

\* \* \*

Before they’d left central Berlin, Wieland told Jürgen to research conditions along the roads they might take.

“There’s some problem in Leipzig,” Jürgen had said. “A major problem. Authorities are trying to keep the news quiet, but the whole area around Leipzig is restricted now. The news reports are not clear. We should stay away from there, and not stray near any other large city either. Also, we should get out of Berlin as soon as we can.” Wieland did not like the note of

pleading in his voice, but he was right: it was late to be leaving.

“I wonder if you can guess what is happening in Leipzig,” Wieland said. “What do you think? An external attack? A disease? A nuclear explosion?”

Jürgen was dismissive. “Not any of those. Certainly not a nuclear weapon. Even if one were smuggled in and set off, it could not be kept secret. Like the two bombs the Amis dropped on Japan—impossible to keep the news from getting out. No, my guess is a takeover of some sort, probably right-wing—the neo-Nazis. A *partial* takeover, more likely.”

“From what I’ve heard,” Wieland said, “I think the situation is much worse than a partial takeover. Leipzig will be the first German city to descend into chaos. But not the last.”

Yes, the traditional German love of order and obedience was not as strong as it once had been. Wieland welcomed that. For too long Germans had only been happy marching along behind a flag. Now everything was more complicated, and more diverse with so many foreigners around. People in cities will start to panic, and then as they like to say in English, there will “be the Devil to pay.”

Wieland looked over at Jürgen. “So how do you want to go south?”

“Through Leipzig is the direct route, but instead we can move to the east and go south past Dresden. Then keep going south, finally around Munich and on into southern Bavaria. It is a bit longer that way, over seven hundred kilometers instead of six hundred fifty, but I want to find out about Leipzig after we get to Kreuth, relaxing and drinking beer, not by actually going there. We should still have enough fuel to make it all the way without refilling. If we’re not delayed we will arrive in seven hours.”

They left Berlin in mid afternoon, going alongside the Berlin Brandenburg Airport, where they had flown from just a month

ago. Across the Berlin Ring Road, and down the autobahn heading toward Dresden. Even in Berlin problems were cropping up. Lots of police milling around and checkpoints on major highways; they went through two small ones without any problems. Wieland had prepared his group to be ready for a major gunfight if necessary. They could easily have taken out such small checkpoints, but that would be a last resort, very dangerous.

There was still wireless access to media, so Jürgen continued to gather news reports, feeding summaries to Wieland. Except for Leipzig there were no other reported hot spots. It looked as if the whole of Germany, and even of Northern Europe, was holding its breath, waiting to see what would happen. There had been no large-scale attacks in Europe, but Wieland could detect lots of distortions. Finances were in terrible shape. The week just ending had seen most stock markets close, starting of course with the United States after its dirty bomb. Economic prospects for everyone were awful, so no company or country was going to make any investments or take any risks. This effectively called a halt to global trade. As if this weren't enough, there had been successful hacking on a scale that should not have been possible.

Throughout the Middle East and large parts of Asia the situation was unimaginable, with nuclear explosions, widespread biological weapons, conventional fighting.

Wieland was glad to get hold of Gustav on his droid. "I was not so smart," he admitted. "We should have left Berlin earlier. There have been no problems so far, but a worrisome amount of activity." He was thinking about not "crying over spilled milk"—another colorful English idiom. Or should it be *spoiled* milk? He wasn't sure.

"If we have no problems, we will reach the compound in four or five hours. And someone should be watching the surveillance cameras carefully—all night long, and make sure they don't go to sleep."

“No worries. We are watching them all the time. As you know, we have motion sensors also.”

“Good. And Gustav, I’ve been rethinking the whole approach to our security down there. We had planned to control our compound and traffic along the road, with checkpoints in both directions. Now I think that is limiting, making us vulnerable. Listen, there are too many people to the north of us, and too close to us. Thousands of people are within a ten kilometer walk of our compound; millions are within a hundred kilometers.”

“Hartmut, did you just now discover this? We talked about where to locate, and this is the best we could come up with, after we rejected Finland and New Zealand. We can hold the checkpoints against a small army. We have antitank guns, other missiles, lots of weapons.”

“But we could get into trouble from a large group close at hand, and only learn of the danger at the last minute. A mob of ordinary people could swarm up into the hills and along them to overwhelm us. Cameras further away would help—in fact remind me to do that also. But we need more people, warm bodies to block the way long before they get to the compound, people to block any hordes heading south.”

Wieland paused, but Gustav said nothing. “I want to go ahead and build the two checkpoints on the 307 Road, but I picture another bigger checkpoint to the north.”

Gustav didn’t sound happy. “I was looking forward to a nice, quiet time in the compound, drinking and watching the monitors. You’re making everything more complicated. Where will your ‘warm bodies’ come from, anyway? And if we add them, how do we feed everyone? Hunting was supposed to supplement the food we have stored. Even with our small group, you were worried about food. Our supplies will not stretch to a large group of people.”

“I’m now thinking of taking over the city of Kreuth, at least

as soon as the government loses control of events; that is my plan for the source of our new people. Barely to the north of the city, just past the City Hall, is a partial bottleneck in the terrain. You surely remember it. Three roads and a river go through, but the hills rise on either side. It's a natural place to put in a fortified stop, north of everything in the city proper."

"Yes," said Gustav, "I know where you mean. You would be bisecting the *district* of Kreuth, which goes all the way up to the water, to *Tegernsee*. I doubt that the Mayor of Kreuth will let you put a checkpoint just north of his own city hall, chopping his district in half."

"Gustav, have you met this guy? Fleischhauer is his name, Manfred Fleischhauer. Of course he is mayor of the whole district, not just the city."

Gustav said he hadn't met him, had never seen him.

"I have known him for years. He is ... not very bright. Well, he's an idiot, but that's our good luck. As you say, the district extends far to the north, but there is no other place for a fortified checkpoint, and thousands of people up there. My idea is that we claim to the mayor that we want to 'help' him, to control access to the City Hall and assert some control over Kreuth itself, to protect against lawlessness. This is actually true. Refugees will completely overrun the city if no one stops them. And those pouring through to the south will be ordinary Germans, mostly, but we will talk to Fleischhauer about all the Muslim terrorists we will be keeping away from his city hall. We will be *checking* anyone who goes through, not *stopping* them. I just need to get him to buy into that. Later we will be turning almost everyone back."

Wieland had to answer a question from Konrad, and then got back to Gustav on his droid. "I want us to plan carefully. I'll talk with the mayor tomorrow."

"And what about food?"

“Yes, we knew food would be a big problem. With this change it will be a bigger problem, but actually we now understand the problem better, that’s all. We were always going to have hungry people outside our compound. Even as we add on people from Kreuth, they won’t see the inside of the compound or know what supplies we have. Anyway, add food to the list of worries.”

“Well,” Gustav said, “the situation in Kreuth is worsening quicker than you imagine. Already a number of refugees, or at least friends and relatives, have shown up there.”

“Refugees already! Then we have to move fast, start organizing and recruiting men in the city. And women too, of course. The number of people in our little group is too few to maintain a barrier at the gap north of Kreuth. The sooner we get a fortified checkpoint there, the better.”

“Hartmut,” Gustav said, his old friend Gustav, “are you trying to create your own empire down here? Become you own little dictator?”

“Yes, another Hitler, mad for power. You know I’m not like that. I just want us to survive. And I own a good part of the city already—almost a third of the town.”

“Sounds okay, I guess,” said Gustav, “but how will you ‘organize’ them?”

“Why, after I talk with Mayor Fleischhauer, I’ll use the old tried and true method straight out of Hitler’s playbook: a rousing speech. Tomorrow early I’ll take a group into Kreuth. First the mayor, then we talk with people, get a meeting started. I believe I can convince them that they are all doomed if they don’t throw in with us. And if larger groups try to get through to the city from the north, our expanded numbers can hold off an army at that bottleneck. I looked it over carefully that last time I was with you. We can put some of our heavy weapons at the barrier. I don’t see anyone bothering to send in air strikes against us—

too little to gain.

“But I want to involve members of our group with more military experience. Here in my car I have Tobias Voigt. You remember him; he was an officer in the German Army. I’m going to go over all this with him. See what he thinks. You have Dieter Mayr there with you in the compound—also from the military. Talk it all over with him. When we get there, at least the four of us, and perhaps several others will go over the plans. I don’t want too many voices at the beginning.”

“Okay, I’ll do it,” said Gustav. “I just hope you don’t have trouble getting through today.”

“Thanks. Almost halfway home already. Also, first thing tomorrow I want to snap up that resort, ‘Wildbad Kreuth,’ between the compound and Kreuth, you know, where they have the seminars all the time.”

“Yeah,” said Gustav, “I know of it. I’ll see if one of our people has contacts there.”

“I own a twenty percent stake in the operation, under the family name of course. We can claim that I’m taking control during this emergency.

“And remember. If we are not there by tomorrow morning, and you hear nothing from us, well then you are in charge. No waiting for us—you and Dieter should make your plans with the resources you have. In your spare time, start thinking about food. And as I said before, if we don’t make it at all, then carry on, survive, create a starting point for a recovery in the south of Germany. And good luck.”

Wieland knew he was sounding sentimental, but before Gustav could sign off, there was the sound of gunfire.

“Gustav, somebody is shooting at us right now. I’ll keep this line open. Just listen while we deal with this.”

Gustav heard more gunfire, shouting voices, noises of all kinds, until the connection was broken.

## 6 Dec 2024, Washington, DC

MELISSA WAS VERY happy to see her mother come into the apartment with David, who started talking as Melissa listened through her droid. “We need to decide what we’re going to do next, decide quickly. We’ve got these threats and the evacuation order. I guess I’m proposing that the four of us go to your apartment complex, pick up supplies, and head out of town right away.”

After a long pause, he went on. “Okay, here’s some stuff that hasn’t been released. Several days ago every important person in DC left town. It was impossible to cover up, so the government decided they had to explain to some extent, and that led to an announcement that everyone else should evacuate. In fact there’s been what are called ‘credible threats’ against this area. They should be trying to locate the threats, but they haven’t mobilized very quickly or effectively. Also they’re focused on locating dirty bombs like the one in New York City, when they should be looking for nukes. A dirty bomb causes panic and is a nuisance; a nuke is terrifying.”

After a glance at Melissa, Asya indicated that she and her daughter were going with David.

He turned to Charlie. “We don’t know what your plans are. Do you want to be part of this circus?”

“I ended up stranded here in DC after trying to get to my mother in Queens. I have no plans, but I can’t ask you to take me along. I can take care of myself.”

“You’re not asking. We’re asking you to join up with us. There’s barely room, so we’ll all have to be careful to take as little as possible. I think you should come along.”

“Of course I’ll be glad to go with you. And anywhere. But do you have an idea for a destination?”

“Well,” David said, “I want to get way outside the Washington DC metro area, head west and keep going for a long while,



way more than the recommended thirty miles. At some point we should stop and evaluate our options, perhaps to come back if everything settles down.

"I'm going to finish getting my stuff. I was almost ready, but I'd filled up a good part of the car. I've been thinking this over—I have a special aluminum container I can put on a rack on top of the car. Much of my stuff will go in there, making room for the rest of you. While I decide which weapons to take with us, I want the three of you to be thinking about what you'll pick up when we get to your apartment. We're not sure how long we'll be gone, so you should get survival gear. No keepsakes or valuables except for things we could use as barter. Warm clothes, warm coats, sturdy shoes. Medicines, whatever. A bag of non-perishable food. A duffel is better than a suitcase because we can cram it in easier."

Melissa's mom was starting to look dazed—too much had happened in too short a time for her to process it all. Melissa decided they were going to need a better idea about how much they could take. "How big is the car?" she signed.

"Oh, I don't know," her mother signed back. "Easy room for four, with cargo space. We can put stuff between two people in the back. Say at least a duffel or so for each of us, but not too much. That's if we still have that old duffel for me to use."

David went downstairs with Charlie to attach the container to the car's top, taking about twenty minutes. After that Melissa tried to stay out of David's way, but it wasn't easy. He paced up and down his apartment, dumping several bags at the door. One bag was full of guns and ammunition. David had paused in thought at the door.

Her mom said to him, "That's a whole arsenal there. Do we really need so many guns?"

"Unfortunately, yes," David said. "Do you have any idea the number of people armed in this country? How many guns people

have on the average? The guns I'm taking are really dangerous. I'd rather not, but I don't see any alternative. Sooner or later we'll have to defend ourselves."

He turned to the whole group. "Ready to go? We'll make just one more trip downstairs. I want to get down as soon as we can. I'm worried someone might steal the car."

"Steal the car!" Asya said. "Are things that bad already?"

"Things are that bad. If someone steals the car or messes it up, we'd have to try to steal another ourselves. A car is a basic need for people left in the city. So you all must be careful, all the time. We could get in trouble without warning, from any direction."

David opened the bottom door slowly, carefully, with his handgun ready. He looked over the garage, but it seemed empty. He checked around the car, glanced under it. Then he turned to them. "I'd rather not do this now, but we have to. Each of you needs to shoot a couple of rounds from a handgun until you get an idea how it feels. This isn't a good place for it, but right outside is where you might need to fire."

"I don't want to shoot any guns," Asya said.

"You have to practice because you might need to shoot. You all need to be able to use these weapons. It'll just be a few minutes." He got out ear plugs. "Lots of noise in the garage here." Then he pointed to a long opening in the wall, with a steep grassy hill outside. "Fire through that hole into the dirt. Quick now, the noise may bring someone."

David handed Charlie one of the Glock handguns. "Always think about where it's pointing. You could end up putting a bullet there. Hold it with both hands. Don't put your finger through the trigger guard till you're ready to fire. Then just pull, firmly and smoothly. Shoot three rounds and stop." Charlie had no trouble. Next came Asya and then Melisa's turn. Her mom acted as if the gun was going to blow up. She herself enjoyed shooting—only

her second time ever, after the rail gun.

They climbed into the car and started up, with Charlie in the front beside David. David muttered a pagan thanksgiving when the card opened the gate out of the parking garage.

Melissa was still using her droid to hear David say to her mom: "Asya, if anyone starts shooting up our car, push Melissa down and lean over her; you've got a vest on and she doesn't."

Next he asked Charlie if there had been any trouble besides from the group they chased off using the rail gun.

"Just at the Key Bridge," Charlie said. "There were four national guard troopers checking everyone."

"And what did they check? What did they ask?"

"They only looked at our IDs, nothing else. They didn't even look in Melissa's pack."

"I'm really worried about checkpoints," David said. "But they'll have a checkpoint at each bottleneck leading south and west, so we might as well use that bridge."

David quickly routed them over to the bridge. If anything, there was more traffic around. Now six guardsmen manned the checkpoint at the center of the bridge, two checking in each direction and two extras. Lines waited in each direction. When they got their turn, the same young man they had talked with before recognized Charlie and Melissa in the back. Melissa had thought about trying to talk with him, but she let David do it.

"Let's see all four IDs," the soldier said. He stared at their identification carefully. "So you managed to get your mother. Good. Are you headed out of the DC area?"

"Yes," said David, "as soon as we can."

"Okay, go on now." No check of registration or insurance or search of the car. Lots of cars were full of belongings, some with bags tied to the top, so they looked typical and didn't fit any profile. Still Melissa could see that David was relieved to be on his way.

“Tell me which way to turn up here,” David said.

Asya gave directions: “Go right at the turn after the stop sign ahead. The next block is our complex. I think you’ll have to park on the street at the front.”

David pulled to a stop. “I’d like to come up with you, but I’m more worried about the car. Sorry—your safety is important too. I’ll guard the car while you three head upstairs. Charlie, please go with the two girls and get them to their apartment. After checking that no one is inside, you go on to your own. Each of you should lock yourselves in. The two of you should wait until Charlie comes back to pick you up. If you see anybody at all, anywhere, well, be very careful. I was going to send you off with guns, but I think that’s more dangerous than without. If they point a gun at you, do anything they ask, promise them anything. Then be sure to do some coughing as you come down.”

“I forgot to mention,” Charlie said. “There’s no power or water or heat. Less likely that anyone stayed around. But the closets and such will be dark. And what about water?”

“I’ll get two flashlights. I already have a fair amount of water in the car.” He waved them on. “As quick as you can make it now.”

Melissa went with the others to her apartment. Charlie paced through their rooms and quickly checked closets just to be sure. He warned them to lock up after him and set off for his own apartment at the other end of the complex.

She and her mother gathered up items to take, dumping them on the living room floor. The piles got big, so they picked over each others’ goods to try to eliminate what they could.

Her mom looked stressed. “This is impossible,” she signed. “I’m leaving most of what I own. You are too. Dammit, I don’t want to abandon all this. How long will we be away? Will someone raid the apartment?”

“It’s all just *things*, objects, stuff that can be replaced. You

know we have to leave. Something terrible is going to happen to Washington—and happen soon. We need to hurry; we need to leave.”

Melissa finished well before her mother, at about the time Charlie gave the agreed upon “SOS” knock on their door. They were pretty close to the car, so Charlie proposed taking Melissa down and getting Asya next.

They headed out while Asya locked up again. As they turned a corner onto another walkway, there was Hemingway’s old man standing near a door. He looked just like the person that Melissa had imagined when she read the book in school, with weather-beaten and sunburned skin, full of wrinkles. Charlie really jumped as the man began to talk.

“Hey, I thought I was all alone here. All the other fools had left.” Charlie was trying to recover, letting his heart rate slow down.

“We should get together,” the man said. “Play cards, maybe share our food for variety. I found a couple of apartments open and full of food, so we can really have a feast. All those people are going to feel stupid when they come back after nothing happens.”

“Sorry, sir,” Charlie said. “We’re also leaving, right now. You’ll have the whole place to yourself again.” He was talking as they walked on past the man and down the walkway.

“Don’t leave,” the man said. “There’s no reason. It’s all a hoax, a stupid hoax.”

“Sorry, sir,” Charlie said again over his shoulder. “You take care now.”

When they got down to the car, David wasn’t in it or next to it, but was standing in partial shadows to one side of the entryway. Charlie dropped her off and went back to get Asya.

The whole time she’d been with David, she’d wondered if she should show him the message, the one that talked about boats

and GPS. She thought she'd just look stupid showing it to him.

She felt like an observer, floating in the air and watching a girl pull a sheet of paper out and hand it to the man beside her. David stared at the sheet, studied it.

"Where did this come from?" he said finally, into her droid.

She started typing furiously. "It was online, posted several places."

"Did you do anything with the message?"

"I sent it all over, to the Coast Guard, to law enforcement, all kinds of places. The Internet is flooded with messages, most of them false or crap or hysterical. I figure that's the case here."

David kept studying the message. "I know the name, sort of. As I remember, he was an able operative. Spoke fluent Arabic, could pass for someone from the Middle East. Well, he *was* from there." Melissa wasn't used to David sounding so uncertain. "Oh, God," he went on, "I need to check it out."

He looked carefully about, then went to the car and got out a computer and another device with an antenna. He plugged them together and tapped out "7105" on a keypad. The phone service had failed, but the GPS system still functioned. Parts of the Internet were up, though unreliable, but it wasn't needed here. His computer produced a precise map of their area, with a winking dot far out in Chesapeake Bay.

David looked to be in another world, not seeing the one around him at all. After a long delay, he seemed to wake up. "We'll talk about this later."

On their cue Charlie and Asya came down. David was right calling the operation a circus. To Melissa, the four of them were like a clown act as they packed an impossible load of baggage into the car, fitted themselves in around and beside their belongings, before starting off.

\* \* \*

Thirty minutes later they were driving south on Highway 1 near

the Potomac River, very close to Interstate 95. David showed Melissa's message to the others.

"What do you think?" David said.

Charlie spoke first. "Is it genuine?"

David glanced at him. "Who knows? But I've heard of the person whose name is on it. He was an agent, though not with the CIA when I knew of him. And ... at the given frequency a source in the middle of the bay is broadcasting its location, right now. I think I'm going to have to chase after that boat. The risk of not going is too great."

"Why not alert police, law enforcement or the Coast Guard, as the message asks?" Asya said.

"We could try—in fact Melissa already did try, but I don't think it would work. There are too many rumors floating around, there's too much information."

Asya kept after him. "And how are you going to 'chase after' a boat. If you catch it, what's to keep you from looking like a dog who finally 'catches' the mail truck."

"I've been thinking about that," David said, "since I first saw the message. I have a plan, sort of a desperate plan, but it could work. There are lots of boats at the edge of the river, on down toward the bay. First I would beg or borrow or buy or steal a boat. I know, already that could be hard. Getting to the boat that's broadcasting will be easy, unless they're moving too fast."

Asya was still impatient. "And these people, if they really have a bomb on board, why they'll have guns, other weapons. How do you take over the boat, or sink it, destroy it, whatever?"

"Yes, they'll be heavily armed. But the boat can't be too big—because they can't get a big boat over here, and because a big boat would attract attention. These people will be loaded down with weapons, but I also have an excellent sub machine gun, as it's called. My idea is that I'll pick them off from a distance as they try to fire. It's very risky, but it might work, and

I can't think of any other way.

"I just *have* to do this, try to stop them. Imagine a nuclear device going off right in the middle of Washington. I know it's putting all of us at risk, but I have plans about that too. Um, the rest of you will drive off, maybe ten miles. That would be safe enough for a small nuke, or even a larger one. If a bomb goes off, you'll certainly know it. In that case you go on without me."

They had talked on, chewing on the subject every different way, while he drove across Alexandria and along Telegraph Road to pick up Highway 1.

At about that point David had asked Charlie to get a paper map of the DC area out of the glove compartment. David also had a small GPS device on the dashboard in front of him, but it wasn't always clear. "There's a big 'arm' of land along the Potomac, going all the way to the bay. We'll go down to Fredericksburg, around it and head east, to the south of the Potomac River, heading to where it ends at Chesapeake Bay. Can you find the roads we want to use for that?"

"Yeah," Charlie said, studying the map. "It's not quite clear from this map, but as you said, we go around to the east of the town Fredericksburg and head east on Highway 3. At some point you'll want to go to the edge of the river to look for a boat."

"You see the computer and radio in the space beside me, right?" David continued to give directions for Charlie to get the map up on the computer, showing where the boat with the bomb was. "There's a menu item to put a marker at the flashing spot. That way we can see where it's moving. Also if our connection fails, at least we know where it last was. You see our location, too?"

"Yes, I've got one marker set now. We'll want to go fairly far toward the bay."



## 6 Dec 2024, SE of Washington

AS THEY headed over toward the mouth of the Potomac, Charlie was coming to a decision. Finally he turned to David. “I’ve been thinking about what you plan to do from the boat. You can hardly do it by yourself: steer the boat till you’re at the target and then fire your gun. You need someone to steer while you concentrate on shooting. I’ll do it, I’ll do the steering, since it has to be done.”

“That’s good of you, but you should think about what you’re signing up for. I’m the one who’s pushing to do this. It’s going to be very risky. I’ve taken lots of risks in my day. I hate risks now, and I hate hurting anybody. But as you say, it has to be done. I don’t see any way out.”

After a pause he went on, “Yes, it would be a huge help for you to steer the boat.”

Charlie stared out the window. You couldn’t see any water yet. Why had he volunteered? Why? It was against his whole philosophy, and against his religion. He had never believed in any concept of a “just war.” Well, this wasn’t exactly war, and these crazy people were going to blow up Washington, or try. His stomach was tightening, worse than before the big tournament in Japan. He’d pushed his dan rank up one during the months he was there, but he had often been tense, even though he was supposed to be totally relaxed.

Charlie listened while David started prepping Asya up, well, Asya and Melissa too. “Now, assuming we get a boat, I guess Charlie and I are going out there. If the bomb goes off, that’s not really the worst outcome, uh, except for us. As soon as we leave, I want you to take Highway 360 here south and west. Cross over the bridge to the town with the long name.”

David had been using his GPS, but he had Charlie hand the paper map back to Asya. “I see it,” she said. “Ah, the town is named ‘Tappahannock.’ I never heard of that one before.”

“Okay, then wait in that town. It’s more than ten miles away. That should far enough. I’ve got two old-fashioned CB radios with me. I wanted something that didn’t depend on any outside technology—no cell phone towers or the like. You wait over there for us to signal that we made it back and you should pick us up.”

After a pause, while he turned onto a smaller road, David said. “Uh, as we go our separate ways, let’s try to talk back and forth a little, just to stay in contact. But no real information. Don’t say who you are or where you are. If we lose contact, that’s not good. I’ll say that we’re getting close just as we approach the boat, uh, *if* we do. When we stop I’ll need to go over how to use these radios.”

David headed toward the water. “If there’s an explosion, don’t stay by yourself. Get someone to leave the town with you, or go with several people in multiple cars. After an explosion you should all leave.”

At the water, there were several houses back a ways from the edge, two with small boathouses, what they were looking for.

“I’m open to suggestions now,” David said. “How do we get us a boat. What if we steal it?”

“Sorry,” Charlie said, “but I don’t think that will work. A random boat probably won’t even have fuel in the motor. They’re likely not taking it out in the winter like this. In fact, I just remembered: sometimes this whole area is frozen over. I wonder how your quarry was planning to handle the ice. Maybe they didn’t know that was a possibility.

“Also I seem to remember that you need a fuel and oil mixture for a outboard motor. I don’t think we can climb into a boat, add gasoline, start it up, and motor off into the river.”

David looked unhappy. “I forgot that you need a special mixture. I was going to use some of the extra that’s in the car. How important is it to mix in a little oil?”

Charlie said he had no idea, but there must be some reason for the added oil.

"I wish we knew more about boats. It sounds like we need cooperation from an owner. Do we try to use guns and force? I don't like that idea."

"I don't either," said Charlie. "There's so many ways it could go wrong. And law enforcement is still around. What if we hurt someone here, like an angry boat owner?"

David was still unhappy. "So we need to convince or beg or something. I don't see that working. This is a ragged group to be saying we have to get a boat, right away."

"So you say that you and I are undercover something-or-other, FBI, CIA, what you think will work." Charlie went on quicker. "I like that better. A terrible emergency. We were undercover. We must, just absolutely must intercept a boat out in the bay, and we need, the nation needs, your help. Much of it is true. Does that work?"

"Not quite," David said. "What keeps us from sounding like drug dealers trying to pick up a drug shipment?"

"People are so freaked out about terrorists, I doubt they're thinking of drugs." Charlie paused for a moment. "I've got an idea. Your computer and radio, with the little flashing spot out in the water. Show that to the people at home here. It looks like a high-tech tool of law enforcement. Also we hint that the boat we are after is terribly important, that it might have weapons of mass destruction onboard. Again, that's all true. Let's try it. Just the two of us." Charlie turned to the two in the back. "Sorry, but I think we should pass you off as refugees we picked up."

"And we have no time," David said. "No time at all if we hope to catch that boat. I agree with Charlie. You two stay in the car, and we'll go up to the house. I'll show you the CB radios later." He dug a small card out of his glove compartment and took it along with the GPS tracking device.

Charlie ran to keep up with David, who had pulled a plastic can of gasoline from the back of the car and quickly headed toward the house. They hadn't rehearsed what they should say, but Charlie figured they would fake it somehow. A suspicious middle-aged lady came to the door. David started in politely giving his name as "David Burton" and saying they were with Homeland Security, working undercover. He showed the lady his card, which Charlie could see was a fancy looking ID card, with a picture. Charlie was impressed with the idea of making themselves come from Homeland Security. Who knew what their agents were supposed to look like? But how did David have such a fake card? David gave a careful and earnest sounding story about how they were following two people who had escaped into the Potomac. However, there was a locator on the boat. He showed her the map on the computer, with its flashing spot, ominously heading toward the river's mouth. From the old mark, Charlie could see it was moving now for sure. After that David followed Charlie's script: "The people may have weapons of mass destruction on their boat. We have to borrow a boat right now and try to intercept them."

"I'll call the police," the lady said.

David was ready for that. "No time, we're almost out of time, and the police are swamped with problems right now. We've tried getting through to them and to the Coast Guard. Please help us get your boat going. As we leave, you *should* try to call the police and tell them what's going on."

David was actually convincing the lady, Charlie saw. What a performance! But then she said, "We have a boat down by the water, but it's raised up, with no fuel. I don't even have fuel around. My motor is probably frozen up now anyway. I have a man who comes in the spring to get it going." After a second, she went on, "But Emil, the older man next door, may keep his boat ready to go all through the winter. You should try him."

“Please come with us to talk with him,” David said. Charlie saw how clever that was—this Emil would much more readily deal with them if his neighbor came along.

They all three hurried next door. Emil was very old and hard of hearing. At first it didn’t look good. But he was quick-witted still, despite his age. He bought into their story, even to the part of the need for haste.

“I have a boat, yes,” he said. “It’s in good shape, but of course I don’t have fuel in it, not now in December.”

David started to say something, but Emil didn’t hear and kept on talking himself. “I’ve got a can of fuel in my storage room. The way things are, with all the shortages, I hate to use up what little I have.”

David spoke to Emil, slowly and loudly. “We’ve got gasoline right here. If you could lend us your boat, we could just put in our own gas.”

“Oh, no,” Emil said. “You need a mixture of oil and gas, about fifty-to-one ratio, but I often use extra oil. With just gas it’ll freeze up pretty quick.”

With more slow and painful persuasion, they talked Emil into being “patriotic” and letting them use his boat. Charlie could see that David was in an agony of impatience at the time flying by, but finally Emil led them to the boat. He cranked it down into the water. Then he got out a separate can for gasoline, poured it mostly full from David’s can, added a careful amount of oil, and mixed it up. Part of the mixture was poured into the motor.

“What’s in the tank plus the rest of this can will run for about three hours—at slow speed,” Emil said. “But we have to start it up. Lucky thing you boys look good and strong. First the WD40.”

He took a small spray can and sprayed oil on the engine, sprayed and sprayed, until it looked as if he wanted to set the

engine on fire.

“If this doesn’t work, not to worry, we just take off the spark plugs and stick a bit of fuel into the cylinders. That always works. But let’s try it first without. Might start.”

He pointed to a place on the motor. “One of you pull on that line to crank over the motor. I’ll choke it down.”

Charlie pulled the line all the way out. “Young man,” Emil said, “I said you looked strong. Surely you can pull harder than that.”

So Charlie pulled and pulled some more, until finally the engine coughed, and started chugging along. David excused himself and raced back to their car, while Emil showed Charlie how the motor worked, how to rev it up, how to start it again. In just a few minutes David was back, carrying his half of the CB radio and the GPS, along with an aluminum attache case. They loaded up the boat and were ready to go, thanking Emil, and the other lady, Mrs. Myerson, over and over. They would be back with the boat in a couple of hours at the most. David explained that the two ladies in his car were going to the town to try to contact the police.

The flashing red spot on their map was almost even with them now, heading into the mouth of the Potomac. With Charlie steering and David navigating, they headed out into the water.

\* \* \*

David was studying the GPS display, giving Charlie “tack left” or “tack right” directions as they went, sailor talk that didn’t make much sense in a motorboat. They could see a number of other boats in the bay, several fairly close. David opened the aluminum case he had with him to reveal a vicious looking black gun. Quickly he took it out, pulled off the magazine, checked it, and snapped it back into place. Finally he flipped a stock around that had been folded against the side. To Charlie it looked pretty

fancy, but he didn't know one gun from another. He noticed another magazine in the case.

"Charlie," David said, "I worry that you don't realize how dangerous this is. We're likely to die out here. I didn't want to upset the girls, but put yourself in the place of the people on the boat. In the best scenario for us, I start shooting them, picking off people one by one. It looks like their mission is going to fail. What do they do?"

"Sure, I know, they set off their bomb."

"Exactly. I don't know much at all about these bombs—not even where one might come from. An old Russian bomb? I thought maybe there was an initial arming procedure but again I don't know. They might not have somebody ready to push a button, even if that's all it takes. If it explodes way out in the Potomac, it will cause very little damage, comparatively speaking. And at least we won't suffer.

"There's one more thing I want you to understand. I'm not going to give them a warning or ask them to surrender. That makes no sense. Our only chance is surprise. I will be killing from the start. Oh, first I'll look them over carefully, but it may not be obvious that they really are what we think. If I'm mistaken about the boat, if it's just innocent people, that will be very bad. Of course, as far as they know we will just be another boat in the river. They may be cautious about firing on us. My plan is that they won't see a big threat from the small boat that we have here."

David fussed over his gun some more. Then he said, "Here's how I want to do it as we get close. Don't head directly toward the boat, that would alarm them. Instead head toward a point about a hundred yards to the right. That's about the limit of accuracy for this gun, my lovely little H-and-K UMP. With luck they'll think we're just trying to pass by. I'm going to be down on our left side, partly under this blanket, with my gun sticking

out. I'll check them out with my binoculars. You sit upright, looking calm, in case they use binoculars themselves. If they start to shoot, well ducking down is all right, but any bullets will go right through this boat. My task is to keep them from shooting at all, or at least from aiming and shooting.

"Try to make a circle around them about a hundred yards out. Or we might have to just chase them—we'll see how fast they go. My hope is that those on board will spray bullets toward us with machine guns, but not very accurately. I plan to kill them one-by-one as they pop up, sort of 'whack-a-mole' style. I'll use three-round bursts to pick them off, well, that's the idea." Then David said more to himself, "I wish I had a better long range gun, more of an assault rifle."

After a few more minutes, David said, "See if you can get more out of the engine. We're just barely gaining on the target boat." Charlie pushed the throttle even harder to the full position. He could hear the engine wine louder, and they did pick up speed.

"At this rate," David shouted back, "we should be on top of them in ten minutes or so. Don't forget: head about a hundred yards to the right."

Charlie suddenly distinguished a sound separate from their engine. He turned and saw a larger boat behind them.

"David, look back!"

David swung his binoculars around toward a large silver boat with a prominent bright red horizontal band. It was closing in on them. "A Coast Guard RB-M," he said. "That's maybe good—can't be sure. Throttle down, and I'll climb aboard."

With a frantic effort, David flipped the stock around and put his gun away in its case, covering what he was doing with his back to the other boat. He said a few quick words into the CB. Then he started waving wildly. After they came along beside, he climbed up on a platform and went onto the boat, carrying the



case and the GPS. He laid the case down on the deck and held his hands in the air. Charlie could see David talking with one of the crew, pointing to the GPS display, explaining, talking, on and on. Finally they signaled Charlie to come aboard also. Two other crew members tied a line to their motorboat. They set off, towing it behind.

David took him aside. "They're going to check out the boat we were chasing. They'll be able to catch it quickly. They are, uh, skeptical of my story. The word from intelligence is that any bomb is supposed to come by truck." He pointed to the crew member he had talked with. "That's the officer in charge, Lieutenant Munroe. Be careful to address him as 'sir.'"

In a few minutes they caught up with the target boat. Charlie could see that one of the crew manned the forward machine gun. A loudspeaker boomed out: "Turn off your motor. Everyone stand with your hands in the air."

Three men did stand as ordered. A few seconds later, a fourth man rose suddenly, holding a very odd looking rifle with a huge bulge at the end pointing toward them. Charlie barely saw David snatch his gun up and shoot all in one motion, a quick triple rat-tat-tat of gunfire. Charlie hadn't noticed him take it out of its case; no one else had either. The bullets caught the man in the chest and threw him backward. Into the shocked silence, David said loudly: "You in the boat. The next bastard who moves also dies!"

Lieutenant Munroe started to sputter, asking what the hell David thought he was doing. "Sir, didn't you see?" David said. "He was going to hit us with an RPG. It's still lying there on the deck." David addressed the crew member at the machine gun. "Didn't *you* see it? Are you just resting on that gun?"

"No sir," came from the crew member. "I didn't know what to think."

"Don't you know what a rocket propelled grenade looks

like?” David said.

“No, sir, I don’t. I’ve never seen one before.”

Somehow they got the three men from the boat into the RB-M, with plastic restraints on wrists and at David’s insistence, around their ankles also. One of the three had tried to hit out as he climbed on. Charlie saw David’s hand snap out like a snake to smack him in the neck. Then Charlie watched as David and the Lieutenant went down to the smaller craft.

First they looked at the man David had shot. He must have been dead. Then they went down below, into the small cabin. After about two minutes they came back up, and onto the larger boat. David continued talking with Lieutenant Munroe. They talked for long minutes. Charlie finally heard the Lieutenant say, “Thanks for the help. I’m going to follow your advice and recommend a sweep by several boats down the river from Washington. We’ll have to assume there are two other boats as your informant said. I think they can also send surveillance aircraft and drones over this way. You two should get to shore and head west as fast as you can. Do you think we should try to get information out of the three that are left?”

“No, sir, since you can’t believe anything they say. You should get on the radio and start setting up a sweep as soon as possible. Also, I’m no expert at all, but I think that’s a real nuclear device on the boat down there. If you see another boat like this, you should take it out all at once if you can, say, with a missile. Blow it to pieces without warning.”

David stopped to say a few words to the machine gunner who hadn’t fired, then clapped him on the back. In no time Charlie and David were back in their small boat. Charlie managed to get it started, and they quickly left the larger boat to its search. Charlie was a nervous wreck, but he saw that even David looked strung out. David talked on the CB, and seemed satisfied with what Asya said.

“Such young kids on the boat,” David said. “Even the Lieutenant. None of them have ever faced a serious enemy before. But now Munroe understands what the rest of his crew doesn’t: they’re not getting out of this alive. That’s why we have to flee to the west as quickly as we can.”

Later while they motored their way back to shore, David turned to Charlie and said, “I want to explain that I’m not, um, a casual killer. But I didn’t trust that Coast Guard crew. Especially the machine gunner looked green. That’s why I wanted my own gun with me on their boat.”

To that Charlie said nothing. In half an hour he guided them into Emil’s boat house.

## 28 Dec 2024, Diary Entry

is there any good news at all? well, we still seem to be safe. we still have power and water. we have food, but food to last through the winter and beyond is a worry now. the new emergency town council finally seems to realize that food is a big potential problem—getting less potential and more real all the time.

one interesting happy note: i’m excited that in just the past two weeks bethany has made major progress with sign language. she still won’t talk at all. she’s an odd child, quite smart for her age. our theory had been that she was traumatized or abused in some way, and that’s why she won’t speak. as part of a bath she let mom look her over thoroughly—it seemed like a good idea—mom even looked inside her mouth and inspected her vagina, done slowly, with great care, and with her permission, to make sure she didn’t mind. as part of her basic personality, she’s not shy, but usually sober and serious, and calm too, that’s part of it. the result of mom’s simple exam: healthy looking child, if very thin, teeth in good condition. more important, she showed no sign of sexual

molestation, and had no special bruises or scars. so much for the abuse theory, at least *physical* abuse.

after the bath i finally got around to asking mom about the man who had died beside our car as we were coming here. bethany and i were inside the car and couldn't see anything. but mom was reluctant to communicate. "well, he *died*, that's all. he'd been shot, not by us, shot in the stomach if you have to know. a terrible wound."

"but you seemed completely distracted afterward," i signed. "what else happened?"

"it was awful. we couldn't bury him—too dangerous and we had no time." she paused. "he said something odd to me, unexpected. i heard the words, but i didn't understand what he meant, not at the time ... well, i still don't. it was just ... odd." she wouldn't say any more.

+ + +

i would find the situation in space hilarious if i could laugh anymore. when the current crisis came, the two space stations started having troubles. no one seems to have noticed any extra rocket sent up into a retrograde orbit—a rocket that might have exploded to scatter billions of small pellets above the low earth level. (a lot was going on, so this would have been easy to miss.) anyway, no one knows the cause, but over a number of days more and more satellites have continued to malfunction. each day brought more small strikes on both stations, and the cumulative effect was terrible. ever more systems suffered small damages and degradations. dad relayed the cries for help from the four astronauts on the iss and from the two chinese, but help was impossible, and now there are no cries. little in low earth orbit is functioning now, and the higher satellites are starting to have troubles. david and i did a back-of-the-envelope calculation, starting with a cubic meter of a billion pellets, each about a millimeter in diameter. in spite of space being so large, the pellets would have many opportunities

to hit other objects, and the retrograde orbit would provide lots of energy on impact. still, a billion didn't seem to be enough, but maybe these pellets could have ground up other space debris, and perhaps there were many cubic meters or smaller pellets. whatever has happened, i think space is closed to humans for the near term.

i have a theory that a lesser world power was unhappy with the weaponization of space. maybe they decided one rocket would work as an "equalizer" to deny weapons in space for everyone. i can think of more sinister explanations, but it doesn't matter. years from now we'll be able to get back into space if we don't lose the technology. just need better shielding. and a lot of debris will drift down and burn up.

meanwhile on earth a great deal of radioactive dust went into the atmosphere, far more than with any of the bomb tests half a century ago or with the chernobyl or fukushima disasters. the government has talked about everyone needing iodine tablets to protect against the radioactive iodine, but in the end they could only suggest using extra iodized salt in our food. a ridiculous recommendation. i read about that long ago—iodized salt only works for iodine *deficiency*, and then only because you use it all the time.

these same officials also recommended staying inside when possible and avoiding the dust that has fallen everywhere. now that makes more sense, though we didn't get much dust, and it's subsided now. the dust is a terrible problem mainly in the middle east and further east.

so far no reports about troubles with all the nuclear reactors worldwide, clustered in america toward the east. some of them still have stored fuel that needs to be water cooled. if the cooling fails, the fuel rods will catch fire and release even more radioactive material. i'm sure this is why david wanted to get as far west as possible.

the dust gave us several lovely sunsets for a week, but it

didn't keep us from having fantastic skies on clear nights. i can't believe the stars we see here. david has a good pair of binoculars, and on two nights bethany and i looked at the stars until we got cold. with the binoculars orion is so full of stars it's hard to get oriented, hard to find its nebula. jupiter is bright and high in the night sky now, and its four main moons are wonderful to look at, all lined up in a neat row and changed on the second night. i try to picture how exciting it must have been for galileo when he first saw these moons.

the worldwide economic collapse is accelerating, but i feel that the biggest problem everywhere will be the same problem we faced with no collapse, the same problem we face here: lack of food. producing enough food for the growing world population was an unsolvable problem anyway, without any collapse, and it was all intertwined with our other problems—with water especially, and with energy, with plant diseases and insect pests, with the failure of the green revolution. oh, and the biggie: climate change.

ah, and then there is religion. in america a number of christian groups have started claiming that their "rapture" has already occurred. i guess enough people are missing that it looks to them as if all these missing people have gone floating up to heaven, or whatever they are supposed to do. people who believe this are quite serious and quite crazy, no longer looking for the antichrist, because he's now clearly identified as the secretary general of the united nations. they are waiting for the tribulation, the final battles, the return of christ to battle the antichrist. it's amazing to have mom sign to me a lot of what is sent over the radio, even in this country.

america has had anti-technology riots. i can't picture that, but it sounded as if the same religious people singled out technology as the source of all the problems. hey, i can agree with that. using technology has always been a pact with the devil.

+ + +

two days later now. i just returned from a trip with david to fetch the rest of our stuff, what we left in the car. we had tried to hide the car in brush, but i knew david was worried that our remaining baggage and supplies might be stolen. david left goodies in the car and buried nearby, especially his weapons. he managed to get help from the motel owner, donald bush, who's lived in the town for years. david didn't want to be seen slinking off but wanted everyone to know what he was doing. after all, the townspeople stare at us constantly, usually with a flat affect, no expression, just creepy staring. so mr. bush lent david a wheelbarrow and, more importantly, went along to help and to be sort of a witness. bringing his weapons back to town might have been tricky without mr. bush along, even though david let jeter, the police chief, keep most of them. it was pretty cold, but otherwise the trip went fine. we returned with the wheelbarrow piled high. thank goodness we have the rest of our supplies—we've been short of everything up to now—i'd run out of clothes. and we didn't use any of the town's gasoline; in fact, dad used a siphon and cans to bring back most of the gas left in the car. and everyone is still staring at us. it's scary.

# 9. Shutdown

**6 Dec 2024, Tappahannock, VA**

**T**O KEEP HIS left hand from trembling David gripped the steering wheel tightly. He didn't want to admit how stressed he had been on the boat, but a delayed reaction was causing him trouble with his driving.

They had gotten back to the shore, met up with Asya and Melissa, and headed out on Highway 360. He had done his best to thank Emil, whose last name he never learned, and Mrs. Myerson, without a known first name. He gave Emil two hundred dollars for the use of his boat, and warned the two of them that they should evacuate to the south and especially get away from the shoreline. He knew they wouldn't do it—more guilt piled onto his conscience. He should have warned them forcefully or ordered them in the name of Homeland Security.

Now they were driving through the quaint small town of Tappahannock, what they used to call a one-horse town, with several fast food restaurants and such. The sign on the bridge had proudly announced the Rappahannock River. "Where did they get these crazy names?" he said. Anything to keep from thinking about what had happened. "Must be Indian names."

It was starting to get dark, the end of a gray, overcast day. A vivid white light lit up the clouds above them, as if the sun had suddenly peeked out from under those clouds. It was brightest to the north. The light dimmed, brightened again, and then faded away slowly.

"David!" Asya said. "My God! That was a bomb, wasn't it. Is it going to hurt us?"

"I ... don't know," David said. He pulled the car to the side



and stopped. His hands were white on the steering wheel. From when he was a kid he always counted seconds between lightning and the sound of thunder. He did it automatically this time. He'd hardly started before the car shook from side to side, making a rattling noise. Everyone waited without speaking. Finally as he got to "eighty-nine" a smashing sound came like a single very loud clap of thunder, with continuing reverberations following it. Some wind and other sounds. OK, divide by five to get eighteen.

"It was twenty miles away or so. I don't think it was danger to us ... not directly." He paused in the silence. "And we're some seventy miles from Washington." Another pause. "That's good. It was in the river, not close to the city. But Munroe and his crew were likely right there."

For the benefit of Asya and Melissa he added, "Those were the young men on the Coast Guard boat. They would have all died." And it was just Charlie's and his dumb luck that the two of them made it out alive.

David was silent until he said, "I need to wait a minute or so before I try to drive." After a bit he continued, "Something shook the car shortly after the flash of light."

Melissa answered slowly using her droid. "That was the shock wave through the ground. It's much faster than the wave through the air."

David wondered how the hell she knew that. Then he said, "Okay, let's get out of here as soon as we can. The locals may think it was just loud thunder. I'm going to head straight west on back roads, not toward Richmond. Stay away from there at all cost. Jeez, and it'll be completely dark soon."

They drove in silence for a while. David kept looking at his GPS display to see how they should go. "I mustn't get distracted here. I need to switch away from Highway 360 soon." It went straight into Richmond. Instead there was a cut-off to catch Highway 30, which went west and under the Interstate.

Bright lights showed up ahead of them, more buildings and a number of cars. Then they went under the freeway, Interstate 95 heading south to Richmond and north back to Washington. David went north on Highway 1 a short ways and then turned to the west. "I'm trying to stay completely clear of Richmond," he explained, "so I'm angling down to the Interstate 64 freeway heading west." The local roads were crazy the way he wanted to go, but as long as the GPS held out he could follow the complicated twenty-seven mile route it had picked for him. He didn't know if it was good or bad to get onto a freeway, but there were only small towns for a long ways.

They kept watching as David switched from one road to the next—a bewildering route. "The software says there's a tiny town up ahead," David said. "It's name is 'Montpelier.' Why does that sound familiar?"

"Because it's the capital of Vermont," Asya said. "We must have strayed off course." Nobody laughed. After a minute she went on: "Let's try to get news on the radio."

David switched on his radio and started scanning for what sounded like news. First came someone saying, "... prophecies of the Early Church, including the Second Coming, lead to our economic analysis of..." Scanning on, David got music and Spanish language and finally a voice saying, "... trains running anywhere on the east coast. And repeating our main story of the hour, Homeland Security Head Rex Hayes read a prepared statement concerning the large explosion earlier today in the Potomac river, fifty miles south of Washington. Mr. Hayes said, quote: 'At approximately five PM today a large bomb on a boat exploded in the river south of Washington, DC. A captured terrorist confirmed that the bomb was intended to blow up one of the Capital's Memorials. The bomb has some radioactivity associated with it, similar to the recent bomb in New York City, but levels of radiation do not pose a risk to humans except for those

in the immediate vicinity. Federal agents seized the boat fifty miles from the city, causing those on board to blow themselves up prematurely. Those brave agents lost their lives, but they kept the bomb from doing any real damage. There is no reason for alarm. Citizens should remain wherever they are tonight.' Mr. Hayes couldn't be reached for further comment, and folks, that leaves us with lots of unanswered questions...."

The reporter ran on in this way, but David had stopped listening. He turned down the radio and said, "It's amazing. That weasel never directly denied there was a nuclear explosion. I wonder what else they plan in order to keep it quiet. Anyway, it's good to have less panic. I'm still worried about roadblocks and checkpoints." He turned the volume back up, but it was all just chatter about the bomb.

"Is it possible it wasn't a nuclear explosion?" Asya asked.

"No," David said. "What I saw on the other boat was either a real nuke or a good mock-up of one. I only know what they're supposed to look like. A long time ago I got recognition drilling. But the explosion we heard and saw was far too bright and loud to be conventional and yet twenty miles away." He hoped they would keep the third one from going off, if there was a third. A crazy voice from his magical-thinking childhood told him he should not dwell on any third bomb.

Just before seven o'clock they got to the freeway, I-64, and headed west. Fairly light traffic. "Okay," David said, "I'm going to go west on this road and then south on the next freeway, well, southwest on the next one. I want to go for three hours or even more. Get some distance between us and Washington. I plan to pick a small town, spend the night. Does that seem all right?"

"We just stop at a motel?" Asya asked.

"Yeah, a motel in a small town, along the freeway. Tomorrow we can think about what we want to do." Try to act like you know what you're doing, he said to himself. But he was making

it up along the way, faking it.

The radio was still on, but too quiet to hear clearly. David thought the voice on the radio had changed, gotten more serious. He turned up the volume.

“... reports place this most recent explosion in the Potomac some four miles south of city center. We’ve not been able to get any idea of the extent of the disaster, but some phones near the central government buildings seem to still be working. We’ll be giving you whatever news reports come in....” The news continued in this way. David could tell they had very little information. He turned the radio down.

Silence in the car. Asya was shaking from reaction. She said: “David, ... what does this mean?”

David finally said: “This is really bad.” His mind was going every which way. Why hadn’t they closed off the Potomac after the New York City bomb? And done a better job patrolling the water? He’d been surprised the people on the first boat were so incompetent they let themselves be caught. Evidently the other two boats were better manned. He should have stayed with Monroe, screaming on the radio at everyone. The other bomb had looked to be a small nuke, refurbished Russian, say. In the twenty kiloton range. Both went off in the water; at least less damage that way.

“It means ... dreadful death and destruction in Washington.” A long pause. “For us ... for us it means we can’t go back to Washington. The city will be in terrible shape for years.”

Asya looked crushed. “Where can we go then?”

David didn’t know how to answer. Instead his head was filled with questions. How much should he say without alarming everybody? And was his choice the best one or even a good one? Why had he let himself get saddled with three other people? Why hadn’t he headed off alone before the crisis and driven straight through? Get there in thirty hours without stopping for

gas.

After a pause Asya repeated her question, and eventually David replied. “Weeks ago I had a destination just for myself. An odd choice.” Another long pause. “You see, I have friends in the mountains of northern New Mexico, old friends who are expecting me. They are survivalist types, but reasonable ones. I’m not saying we must go there. Just a possibility. It’s a long trip with risks all along. There are risks now whatever we do.”

“Right now we need to escape from all the people on the east coast,” David continued carefully. “Especially from those fleeing DC. Let’s think about this tomorrow.” There was a lot more to it that he didn’t want to talk about. He’d planned this trip long ago without the detour to Chesapeake Bay. He wanted to go west. It wasn’t just the population density, but also the nuclear reactors spread like mushrooms all around the eastern US, with prevailing winds toward the east. They’d been working on the problem of leftover fuel rods, but he didn’t know how far they had gotten.

David’s mind couldn’t leave Washington alone. All kinds of military would be coming, giving emergency support. The US government would have an international reaction. Certainly they would know where the bombs came from by the signatures of their remnants, but that wouldn’t say who had planted them. In the long run the two bombs might not make much difference in the overall economic collapse that he expected.

And that assumed there weren’t a huge number of nuclear explosions or melting reactor cores or burning fuel rods, enough to spread radioactivity worldwide. In that case they were screwed, but no need to mention that to the others.

They stopped briefly at a rest stop for a break. Soon after that Melissa fell asleep. The lights of Charlottesville went past on their right, followed by lights at the junction with I-81 as they headed southwest. David noticed that Asya was asleep also,

but Charlie seemed wide awake. Around 9:30 they went past Roanoke on their left. Wasn't Roanoke the name of an early colony at the coast? This other Roanoke was much larger than David had imagined any city in western Virginia could be—lots of lights and buildings. He wanted a much smaller town, so he drove further, peering at his GPS map and finally settling on a town called Wytheville, as good as any. They reached it at nearly eleven o'clock. David exited and followed the signs to "Main Street." It looked just like every other small American town. A half mile later, after a closed and boarded up Dairy Queen was a motel that called itself "Wythe Inn." It had a vacancy sign lit up and several cars parked alongside the building.

"Two rooms, okay?" Asya said, who was awake again.

David didn't want their group split up at all. "If we can get two connecting rooms, that's okay, but otherwise we need to stay in one room. Even with the connecting rooms we need to leave the door open." He wouldn't sleep at all if they were separated. "Charlie and I will alternate staying up tonight, but we can't keep track of you in a separate closed off room." And they looked like *prey*. He hadn't wanted to emphasize it, but fewer people were driving now, and they would more often would be refugees like themselves, carrying lots of valuables along. So they might as well carry a sign: "We have gas." The vampires were loose, looking not for blood but gasoline.

They rang several times to rouse someone. David was especially nervous about scrutiny by the older woman who came to the desk, but she just wanted to sign them in and get back to sleep. As it turned out, they had no connected rooms, but they could get one with two beds. The two girls were soon asleep again in one bed. David explained that he would watch the car for a while, but Charlie insisted on taking the first shift. That was a big relief.

"Watch the car at a sharp angle through the window," David

said, “with the curtains mostly closed, so that your head doesn’t show. Wake me if you see anything, any movement at all.” David was exhausted and quickly fell asleep himself.

\* \* \*

David woke in the middle of the night with the GPS system on his mind. After all, GPS was in the device planted on the boat they had chased. Had he dreamed about it? He didn’t know. But the letters “GPS” were floating in front of his eyes. In his half-awake state, these letters seemed like the answer to an important question. He had always relied on a voice that whispered into his ear at night, solving problems or giving him hints, helping him survive. And suddenly he remembered. The GPS subsystem of the StackForce chip was part of what Wieland’s company had worked on, years ago, back when Wieland used a different name. The new architecture included GPS processing in its design, the latest approaches. Yes, GPS processing was on chip, designed by Wieland’s company.

Then he froze. GPS! Now he knew what had awakened him and why. This must be the signal that had coordinated the failure of so many computers. It seemed obvious once the idea had come to him—finally a way for a localized group of computers to all crash at the same time. With GPS they would know their location. This would also explain why US military computers mostly didn’t crash, since they would often be EMS shielded. Of course the shielding was to keep signals from leaking *out*, but it also kept GPS from getting *in*. And this was how computers at some power plants could crash even though they were on their own separate networks.

With this theory, Wieland would have inserted flawed extra hardware circuitry into the portion of the chip handling GPS signals, God knows how, and he would also have put hooks into the software signaling the GPS satellites, so that he could send

exotic commands to chips all over the world—commands that looked legitimate but could specify a geographical region.

These special commands would mean nothing if the receiving chip wasn't the new StackForce line. No one thought about GPS except as a signal that you processed in order to calculate your location. Surely others had thought of this by now, but it was too late. Wars had broken out and the world was heading downhill fast.

He was wide awake, not even thinking about sleep anymore, so he told Charlie they could trade places. And he really wanted to get gas in the morning—give them some extra driving leeway. He must keep acting like he knew his business. This was part of the army's "leadership training" from long ago. He would tell the others tomorrow he was getting gas, but he had no idea how to go about it. Check at gas stations? Ask people at random? Could he leave the others here while he went looking?

## 7 Dec 2024, Wytheville, Virginia

**A**SYA SLOWLY realized that she was stiff, sore, and had a headache. What a terrible, lumpy bed this was. But she had slept late—through a gap in the curtains she could see it was getting light outside. Melissa was beside her, still asleep. And the two men were gone. She got up to check the bathroom and neither was inside. She had thought that David was too cautious, too worried about security, constantly. Now it was her turn to worry.

There was a soft knock on the door, the same code Charlie had used the day before. She opened up to let just Charlie in, carrying two paper bags. Huge orange letters announced "SuperTaco." Charlie pulled out coffee and orange juice, and then several large tacos for them as the name had promised.



“David,” she said, “where’s David?”

“Oh, he went to look for gas. He thought it wouldn’t work to drag everyone along. I’m to ‘Watch over you two.’ And get you food. This is the last of their orange juice.”

Any food was really welcome, even the nasty tacos that this SuperTaco fixed, some pseudo-Mexican eatery in rural Virginia. But she needed the coffee more.

“Charlie, I’ll trade life stories, to pass the time.”

“Not much to tell, and I figure mine’s going to end soon anyway.”

“‘End soon!’ I know David’s worried, but even I don’t think we’ll all get killed.”

“Not you three, just me.”

“What? Charlie, what can you mean?”

“We’ve got a small story here, with you and David as main characters, and of course Melissa, who can’t be touched. But I’m the ‘disposable Black extra’ around long enough to keep the plot moving. Then ... snuffed out. I was necessary for the boat part, the obligatory chase scene, but I’m not needed anymore. This story can use the drama of a killing and it has to be a secondary character.”

“Charlie, that’s silly. You’re not disposable.” She tried to laugh it off, make light of it, but she was actually appalled. Was Charlie crazy? Could he think David was out to kill him?

“Sorry, I didn’t mean it. I’m just needling you. Tired and nervous I guess.” He walked around restlessly.

“Hey, we’ve got a TV,” he said. “Can I try to get news? But maybe it’ll wake Melissa up.” After a short pause, he went on, “I’m just stupid. Melissa won’t hear the TV. It might bother you, though.”

“That’s all right. Let’s hear what we can. The flashing lights may wake her and it’s time for her to get up anyway.”

Charlie put on a 24-7 news channel. It was weird listen-

ing to commentators who clearly had been ordered to restrict the bad news, tamp down on disasters and work to prevent panic. They said nothing about the extended Middle East region, which Asya took to mean all that news was bad. It was amazing that they reported on the two “conventional” bombs south of Washington, with “a little radioactivity” accompanying them. How was it possible to look at the camera and lie when Washington was in a horrific state? Maybe they didn’t know the truth either. They also talked about delivery of emergency supplies, and about rationing—especially on gasoline, but also on a long list of other goods, rules specific to Virginia on how to get the coupons. Asya hadn’t even known that a nationwide state of emergency existed. But not yet martial law—only in selected cities so far. It was terrifying for her to think about Washington and what might be happening there.

Melissa woke up all at once, took everything in, and started signing questions to her mother. “Where is David? What are the plans?” Question after question. Fortunately Charlie had known to buy a couple of vegetarian tacos, and Melissa busied herself with them and orange juice. Asya signed to her that she should enjoy the orange juice; it might be her last for a long while.

Asya had her own questions for Melissa, and now was as good a time as any, with Charlie cut out of the conversation. “I’ve been concerned about David. He seems reliable and helpful, but still I don’t know much about him, not really.” She paused, but Melissa just waited. “And you and David seem to know more about one another than I expected. How is that? Help me understand.”

“I’ve known him for two years now.”

“How can that be possible?” Asya always felt panic in these situations, anything strange involving Melissa.

“You’re so funny, mom. Don’t you know who he is?”

“He’s David Warburton,” fingerspelled. “What else is to

know?”

Melissa signed the letter “K,” but with a little wave, so that it looked like a name.

“My God,” Asya signed. “You mean he is K? Joseph K.?” She sat down on the bed to mull this over. She had thought of Joseph K. in Atlantis as a very good friend. She’d talked with him about many things, personal matters, almost intimate stuff. Out of the comfort of anonymity she had revealed preferences, feelings, secrets. The situation was ... awkward, embarrassing.

“I still don’t see,” Asya signed. “We were only in Atlantis a little over a year. How have you known David for two years?”

“*You* were only in Atlantis for a year, but I was there for two years. And I met Joseph K. right at the beginning.” To her mother’s frown, she added, “I wasn’t a *paying* member of Atlantis back then.”

Asya hated the idea of seeing David again. He knew so very much about her, that was part of the problem. Her background, her attitudes and prejudices, what she liked and what she hated. She tried to think about all she had told him, but it was a muddle. Many things.

\* \* \*

David returned a little before noon. Asya was glad to see him and scared to see him at the same time. Charlie was sound asleep. “Did you get your gas?” she asked.

“Yeah, I have it now, the fifteen gallons I wanted, at only triple the current rationed price.” David explained that he’d been ready to go a lot higher but worried about offering too much money and sounding crazy. He’d expected the guy to offer a can of water with a little gasoline on the top, but the man took it right out of the pump.

“I’ve been thinking today,” Asya said. “I assume we’re going to head for your town in northern New Mexico. But we should

look into towns we pass along the way, even this one. Maybe we'll see something promising."

David turned to her. "Sure. We should keep our eyes open and ask around. I don't want to sound like a fanatic about the town in New Mexico. With the extra gas we could make it there, um, in theory, if nothing goes wrong. But I can't guarantee we'd be welcome. So far the people here have seemed nice enough. I have to get some sleep this afternoon. Later let's go to SuperTaco again, talk to people there, and think it over. Is that all right?"

Asya was still worried. "Will people leave us alone?"

"Probably," David said. "Well, who knows? I want us to stay alert, ready for trouble. In fact, if Charlie's slept awhile, I want to wake him up, go over safety."

Asya hated relying on guns, but David insisted that each of them have access to at least one gun while they were in the room. A gun like the one they had test-fired back in Washington, one of the Glocks. Finally he fell down on a bed and seemed to fall asleep immediately.

\* \* \*

They were all awake. David wanted to get food very early so they would be back before dark.

"Do we have to go to SuperTaco?" Asya asked. "We've already tried their 'food.'"

David was impatient. "It's close. We're familiar with it. I don't want to search around for another place to eat."

So SuperTaco was anointed, dinner at four in the afternoon on a Saturday. They drove off the three blocks or so, with everything of value in the car as David had insisted,. He sat so he could see the car through a window. The actual restaurant had more choices than Asya expected. They sat together in a seedy dining area, alongside several other groups of people, while a young girl served them, probably high school age.

In the midst of the meal, two men came in, uniformed law enforcement of some type. Asya saw that their shirt fronts announced “Sheriff’s Deputy.” Anything like this was frightening for Asya now. Was she going to be nervous over and over for the rest of her life?

But the deputies sounded quite reasonable. “Sorry to bother, ma’am,” the heavy-set one said with a thick southern accent. Then to David he said, “We’ve got to talk with you a little bit.”

“Sure,” David said. He got up and walked across the room with them.

The men talked on and on, with Melissa staring at them. Then Asya remembered that Melissa could read lips after a fashion, not reliably, but sometimes she picked up the gist. The conversation just kept going. Melissa looked over at Asya, so Asya signed very small, “Can you understand? Anything?”

“Just one word,” Melissa signed back. “Gasoline.”

David and the two deputies finally came back to the table. The same man who spoke before said to Asya, “We’ve been going over some business with your husband here, that’s all.” Her husband? David gave her a bit of a look—a signal that she should play along? She could do that, even with her irrational dislike of any southern accent.

“We’ll be on our way. Your Mr. Burton knows what’s expected of y-all now.” Mr. *Burton*? Without the “War”? The men said good night and left. All the others in the dining room were pointedly not looking at them.

David started in with an apology. “Sorry about the name change, but ‘Burton’ is, um, let’s see, a simpler name, stands out less. And our being married is also a lot simpler for these small town people.”

Asya felt flushed, her face hot. “I guess it’s all right.” She went on, “So what do you think? Those deputies sounded nice, polite. What did they want? Did they say anything about how

we might fit in here, in this town?"

David flopped back down beside Charlie in the booth, opposite the girls. Melissa turned on her droid to catch an explanation of what David and the men had been saying.

"Yes," David said. "Yes, they talked about our future in this town. You see, the authorities here, such as they are, decided they didn't want any refugees moving in, especially not fancy-dressed Yankees from the East Coast." He paused while Asya stared at him. "They also didn't want to let me buy any gas, even though I already have it. *They* control all gasoline sales in this area, and they don't want any extra transactions. I even had the rationing coupons you need now, the first thing I bought and very expensive, but that makes no difference. So I indicated that without the gas I bought we'd be stuck here—which is actually not true as you know, but that may have tipped them over. Anything to get us the hell on our way."

"What? Leave right now?"

"No, we can stay until tomorrow morning as long as we leave early. Yes, such polite and friendly men."

"Will they let us leave?" Asya asked, and then was horrified to hear Melissa extend her question.

"More to the point, will they kill us tonight in our sleep?"

"I don't know. They might ... oh, probably not. You see, they think we only have fifteen gallons, not the large amount I really have. We may not seem like an attractive target."

On the way back to their room, David said, "Here's my plan. We get a night's sleep here, but it's very early, so we can sleep and still leave in the middle of the night, maybe three AM. I want you to have everything in the car except the clothing you're wearing. When we leave, I want to do it using no lights—no lights in the room, no lights in the car. I've disabled the switch that turns on the interior lights when we open a car door. Get into the car in a minute or so and be off.

“Also, I’m going to be tricky with the car. Park it two rooms down, with an empty cooler right at the door, so it looks like we’re in another room. I already checked that I can pick my way into that room, so I’ll leave a light on there. If someone tries to attack us, they may go for the wrong room.”

“Do you think it’s really this dangerous?” Charlie asked.

“As I said, I don’t know. This plan won’t affect us much, and it’ll be good to get off very early. If you’re going to take a shower, do it right away.”

Soon the car was packed, and they were ready to sleep if they could. Asya didn’t want to volunteer, but she couldn’t help herself. “I’ll take the first shift watching the car while the rest of you sleep, or try to. I’m not sleepy at all.”

David was getting as predictable as the law of gravity. “Wake me up if you see or hear anything, anything at all.”

\* \* \*

Asya was groggy, disoriented, but she finally realized David was waking everyone up. “It’s two-forty-five, rise and shine, time to be off.” Since they had nothing to pack, they were ready to go in a few minutes. Charlie was supposed to have a gun with him. Asya could barely see that David carried something large.

“No noise at all,” David said. “I’ll go first.” David opened the door and stepped out. The moon was three-quarters full, very low on the horizon, ready to set. David stood poised, holding his dark object—Asya decided it was a machine gun. He must have seen nothing, since he waved them on to the car. They were off immediately without using lights. Onto the road, and he turned on his headlights. It was just two blocks to the freeway.

In a conversational tone, David said, “Someone’s following us, quite a ways back, though.” She could see he was driving as fast as he could and still be within the speed limit, even with no traffic at all. A long ways behind them she could see the other car.

“I think we surprised them,” David said. “If I were them, I’d have planned to take us out with rifles after it gets light. The car behind us might be just one dopey go-fer stuck with the surveillance. If they stop us, I’m going to kill them, or try to.”

“No, no,” Asya said. “That’s crazy. How do you know they’ll do something bad to us?”

“Think about it. Supposedly they want us to leave. That’s what we’re doing. In the best case for us they want to take almost everything we have, leaving us just enough gas so we go on and they never see us again. But that way would be complicated, even dangerous for them. Safer and easier is to kill us all.”

They kept going through the dark, with the other car following. And then it wasn’t following anymore.

“Very good,” David said. “He or they, however many it was, gave up. I hope we never know, but I can’t imagine they waited through the night just to be sure we left, just to keep track of us.” A minute later he went on. “I didn’t tell you yesterday, didn’t want to upset everyone. But I sort of, um, threatened them at that diner. It was a judgment call, but I let them know a bit about my past. It’s a male thing, peeing on the edge of the booth, marking on their own territory. I think it worked, too. They didn’t want to risk anything in the middle of the night.”

## 7 Dec 2024, Bavaria

**W**IELAND HAD just finished talking with a group from Kreuth about their situation. More women than men had shown up, against all his expectations. He had tried to focus on *their* interests and future. Difficult times were upon them and hard decisions were needed—that was his line. They needed to cloister themselves against the larger world. He also told them he’d grown up in Kreuth. He was one of them.



The meeting with Kreuth's Mayor had gone reasonably well; he had played on Fleischhauer's fears and prejudices. But he had anticipated sharper minds in this crowd and had prepared carefully. He emphasized that his proposed checkpoint would only be stopping those who didn't belong in Kreuth, and not friends and relatives of those who lived there.

He told them they must work with one another to survive, survive in a world that was turning against them, a harsh world that eventually would open into possibilities for them and their descendants. They should see themselves as a tortoise who needed to pull its head and its limbs back into its shell—the shell being this area around them, here in Kreuth. He tried to make it all sound like a noble sacrifice, and with some success, but still there were questioners and there was opposition. He was hard pressed to keep up the magic spell he tried to weave.

In the end all he could do was ask for names, get volunteers to work with his group and with the Mayor and his people, set up meeting times in the days ahead. He stayed in the room talking with stragglers for another hour. Later he met with Gustav about further plans for the whole region north of Kreuth.

"Just so you know," Wieland said, "I keep rethinking our plans, the challenges and opportunities. As I see it now, we will eventually take over a good part of southern Bavaria. Or we will fail and be destroyed. I need to make sure the insiders among our people know the options are that stark. We are too small to succeed without expanding."

"I don't like that," Gustav said. "It sounds too complicated, too much work. And won't there be bigger players around than we are? Where do you start in taking over a whole region?"

"You start small and proceed from there. And yes, there will be bigger players, but we should be in a fortified and well-defended position. I have talked this over with Tobias and Dieter; they think a strongly defended base is our biggest advan-

tage. Our larger neighbors may not want to spend their resources on us. And Gustav, please don't tell the others about these plans. As a first step, we will at some point expand to the north, into the entire area at the southern end of the *Tegernsee*. That will give us more land for farming, more land to raise horses for food." Gustav winced while Wieland went on. "The takeover may happen soon, perhaps in weeks. It depends on how events proceed—how much damage there is to Germany, how things are going. A number of wealthy resorts and such are up there, but by the time we get to them I think people will welcome any force that can keep order. The land is blocked on either side by mountains, with two roads forking around the lake. We end up with those two roads to defend, supported by mountains to the east and west, and by the lake in between. At the north end of the lake the terrain opens up and gets much more complicated, all the way into Munich. Right now I have no plans past that lake."

He left his doubting Gustav to deal with a number of issues in Kreuth while he went back to the compound to rest and to think. One of his best people had been killed on the way here in the gunfight—a nightmare in what should have been a simple trip, but he was glad it had not been worse. And Gustav was right. Everything was getting quite complicated even locally here in Kreuth; he could no longer imagine what might happen to the world. He thought they would be isolated here and that their problems would mostly be local problems.

The Internet was finished, probably for a long time. Up to the last he had seen no postings that explained the computer crashes. Surely various people had figured it out in a rough way, but no one was in a position now to check how the crashes could have been managed. They might return to the problem after many years, but he had "muddied the waters," as his friend Warburton used to say, to the point where it should be too late. In fact, he was still dumping mud into the clear waters of trans-

parenthood with a new name and a new identity. No one except his inner group knew the ridiculous name “Hartmut Wieland.”

## 8 Dec 2024, Southwest Virginia

MELISSA HAD BEEN scared fully awake by the car following them, but soon enough the trip in the dark became boring—nothing to see except an occasional vehicle, as often a truck as a car. Sometimes the car was stuffed full of belongings and people, sort of like their own car, or a pickup truck would be heaped with goods, with several people in it, or even people in the back—*freezing* people. Melissa decided these must be like themselves: refugees or nomads. Which category did they belong to? Not nomads yet, but getting there....

She dozed off, without dreaming. Dreams—she had them in common with the others, the normals who could hear. They both dreamed in images—even the normals usually didn’t talk in their dreams. David pulled over to the side and that woke her, seemed to wake everyone.

He answered their implied question. Melissa only got his answer when her mother translated, turning on a small flashlight so she could see the signing. “We’re at the northern edge of Bristol, a good-sized town that straddles the border between Virginia and Tennessee. The Tennessee border is just ahead. Lots of lights ahead, a line of cars, even without much traffic. I don’t like it. Some kind of state check, I think, rather than a federal one.”

Melissa used her droid to object. “I’ve been watching several groups pass us or that we passed who looked just like us: refugees heading somewhere with their belongings. Will they care at the checkpoint?”

“I’ve noticed the other refugees. I agree with you in a way,

but still I'd like to avoid any check or stop if we can. I don't know, maybe they're confiscating all weapons."

He continued to peer through his binoculars. "I want to turn around. Stay in Virginia and head to the north and west." He pointed to his paper map, one of those old state-by-state US road maps, now years out of date. "Highway fifty-eight goes through Virginia, over to the border with Kentucky. We can avoid Tennessee completely. We also avoid several larger cities down in Tennessee."

The freeway was divided, so David started backing up on the shoulder. "Just a short ways back to where fifty-eight comes in," he said. In a few minutes they got to the other road, just two lanes, and headed off on it. Soon they had more snow beside the road, but nothing to keep them from going on.

Melissa was awake now and feeling cranky. They were driving through the dark with no clear destination, except for the promised bliss in New Mexico. She agreed with David about heading west to get to fewer people. Around here they were still too close to the "zombie" invaders who would come from nearby cities. She also thought David was concerned about the nuclear power reactors all around them—another reason to head west.

She knew better than to complain about the trip and the plans, or lack of plans. They were going to keep traveling until something bad happened; that's the way it seemed. Their strategy was like a "gambler's ruin": keep betting until you've lost all your money, which is guaranteed to happen eventually.

So sooner or later they would get robbed or killed, or both, or maybe worse than that. Each time they interacted with anyone increased the chances of problems. At the very least they should drive straight through to New Mexico. She was going to push hard for that. No more stopping, particularly not to spend the night anywhere. She hated toilet breaks that used only the outdoors, but she would even put up with them if it would

help. They had three people who could drive; they should get to David's special town in twenty hours.

As it started to get light she saw it had clouded over, and it also started to snow. This road was no freeway but wound back and forth, up and down, through the forests on either side. The snow increased until the amount on the road made David slow down. Clearly David didn't like to see snow, but what could he do? For a bit it looked as if they might get stuck, with ever more snow falling, but it settled down to an amount that kept David's speed under thirty miles an hour.

After several hours going slow on icy roads, they went through a small town named Jonesville. Melissa hoped it wasn't like its namesake, Jonestown, with special kool-aid prepared for everyone. But they made it through the town without incident and were rewarded by a smooth four-lane highway taking them on. After that David made faster progress.

Half an hour later David announced that they were going to cut through a tiny corner of Tennessee and go through an impressive tunnel, maybe a mile long, that runs through the "Cumberland Gap" and into Kentucky. "I remember now—I was here once ages ago. For a long distance in either direction there's no other way to get through this mountain ridge."

As they came out from the tunnel, they came to a line of cars and trucks, maybe thirty, all waiting at one of the checkpoints David had been trying to avoid. Melissa could see that he looked back quickly and thought about turning around, but it was hopeless: armed men were at the tunnel exit. Most of those ahead of them seemed to be refugees also, with full vehicles.

David almost growled. "Damn. I should have expected something at a bottleneck like this."

By the time on Melissa's droid, it took about twenty-five minutes to get to the head of the line. After showing their ID cards, they were questioned much more thoroughly than they

had been at the checkpoint in Washington: Where did they come from? Where were they going? How long had they been underway? What were their plans? Where had they worked? What was Washington like when they left? What did they have with them? Melissa was listening with her droid, and she was surprised that the men didn't mention weapons. Perhaps everyone was expected to have guns with them.

These were Homeland Security people, Federal employees looking for terrorists. Their IDs were okay, and they were obviously Americans from their accent, except for Melissa; David explained that she was deaf and couldn't talk. They must have also fit the standard profile of refugees. But still for an unknown reason they were forced to wait "until Supervisor Maxwell can consider your case," while the rest of the traffic went on through. David was working to seem completely calm, unworried and relaxed, but Melissa could tell how stressed he was.

They waited for over two hours. Finally the supervisor they were waiting for came up and took David off with him. Then more waiting. They were allowed to use a portable toilet, and there was water for them, but otherwise they waited in their car in the cold. As time passed the waiting got really annoying. With no sun the car stayed cold, and they didn't want to use up gasoline just to warm up. What could they be saying to David and he to them? Melissa thought she was going crazy when finally David came out after more than ninety minutes. He climbed into the car. "We're good to go now," he said

"But what did they say to you in there?" Asya said.

"Oh, nothing much. They're just being careful. Let's get out of here."

"An hour and a half of 'nothing much'? They've kept us here more than four hours. It's late afternoon. There must be more to it than that."

"We told jokes back and forth," David said. "Really, I don't

want to go into it, at least not now. But everything's all right; we're not in trouble."

\* \* \*

Five hours later they *were* in trouble. It was like a Christmas nativity scene using live actors, only terrifying. David holding a handgun pointed at three men across the room, the overweight and worn-out woman who ran "Mama's Kitchen" standing at the counter, Charlie standing beside their table, and the rest of them seated at a table with food. It had happened so fast, Melissa wondered how they had gotten into this tableau and how they were going to get out of it. To be complete they only needed a baby Jesus figure. David and Asya could be Joseph and Mary, and they had the three wise guys, plus, um, shepherds or visitors.

They had made good time mostly on four-lane roads heading west, finally going around the city of Bowling Green ("we stay out of larger cities," David said) and on to the small town of Russellville, still in Kentucky. She managed to rule out trying to stay the night somewhere, but they all really wanted to eat in a regular restaurant, with reasonable food and toilet facilities. So once again they ended up in a seedy eatery, this time on the outskirts of the town and all by themselves.

The meal was slow in coming. She was tired, not paying attention, when suddenly David got up and headed back into the kitchen. Right after that three scruffy men, in their twenties maybe, came in. One carried a rifle and the other two each had a baseball bat. Shortly later David stormed in through the same front door with his gun.

They all held their pose. She couldn't tell what David was saying, but he certainly could look menacing. The man with the rifle waited many seconds and then slowly lowered it to the floor and left it there.

David must have asked for the keys to their truck, because one of them pulled keys out from his pocket and tossed them to

David. As if the men had practiced this before, they used the key toss as a distraction, and as a signal to attack. One went straight for David, the second intended to brush past Charlie on his way to David, and the third was further away.

The man moving past Charlie seemed to stumble as he went by, and then he was lifted into the air and thrown very hard on his back onto the wooden floor, shaking the whole room. She couldn't see at all how Charlie had done it. At the same time David smacked the other man in the side of his head with the gun. Both these men were on the floor showing no signs of getting up. The third man stopped and backed away from Charlie.

Yet more conversation came that she missed. David stared hard at "Mama," until she looked away. He left cash on the table for their meal—a show of contempt, it seemed. Neither of the men on the floor were moving yet. David grabbed the rifle and bats to take with him. As they left, he gave the truck a flat tire with a large pocket knife and threw the truck's keys into brush near the restaurant.

After they were well out of the town on a two-lane road, David said he was completely wiped out and asked Charlie if they could trade places driving. David cautioned him not to approach any kind of barrier in the road.

## 9 Dec 2024, Kentucky

**J**ESUS CHRIST!" The car came to an abrupt halt as Asya and David were jolted awake. They both looked at Charlie for an explanation.

"Sorry, guys," Charlie said. "There was a child on the road. I almost hit her—I think it's a girl." Charlie put the car into reverse and started to back up.

"Be careful," David said. "You don't want to actually hit her



this time.”

Charlie didn’t answer, but shortly he could see her clearly in the back-up lights. In the middle of the night, a desolate area, with the cold of winter, how could a child be here on the highway?

He kept backing until he was even with the child. They saw a little girl, very thin, almost emaciated. She had light brown hair with huge eyes. She was perhaps six years old, though small and thin as she was, her age was hard to guess. She was also poorly dressed, with just a light jacket not likely equal to the cold night. She stood there staring at them gravely, not moving, her hands in the jacket pockets. David and Charlie got out, David carrying his special flashlight that had a campfire setting to shed light all around. Asya climbed out from the back and then Melissa.

As always David thought first about security. Before he turned on the flashlight he looked around carefully. The sky had cleared and a bright moon, three-quarters full, gave a good view of an open area near them—a rising hill on one side and fields on the other. With no particular cover it seemed safe. Still, he held on to the gun in his pocket.

Asya started asking the girl who she was, why she was there. The girl stared at her somberly, making no answer. Finally Asya said, “Can you understand?” A nod for “Yes” came back. Two more questions and the girl put a finger to her lips. “Can you talk?” Asya said. A shaken head for “No.” Melissa tried some simple sign language with her, but the girl shook her head again.

Asya’s slow interrogation continued.

“Are you lost?” “No.” Already that made no sense. How could she not be lost out here? Maybe she was answering randomly. Asya muttered as much to David.

“Do you live nearby?” “No.”

“Are you waiting for your parents to pick you up?” “No.” Perhaps she was answering all the questions no except for the

first one. Asya crafted a question with a yes answer.

“Are you cold?” “Yes.”

“Waiting for your family to pick you up?” “No.” Then the girl pointed to Asya.

“Waiting to get a ride with someone?” “Yes.” Again the girl pointed to Asya, and then to the others.

Asya paused. “Waiting for *us* to pick you up?” “*Yes*,” a bigger nod for emphasis.

It went on that way. At some point Asya made an ASL sign for “Don’t know,” by touching her forehead at the right with the fingers of her right hand, and then moving her hand forward and around with the palm out. Also a little shake of the head. She told the girl what it meant and had her practice it. The girl had no trouble imitating the sign. It became the answer to “Where is your home?”

The girl looked really tired, maybe traumatized, and surely cold. Melissa went over and put an arm around her, while the three adults held a whispered conference.

“We can’t leave her here,” Asya said.

David paused and then sighed. “A stray kitten. I don’t like it but I see what you mean. I wouldn’t be able to drive off and leave her. For one thing she might freeze before morning. But we can’t just take her with us either.”

Melissa fetched a warmer coat from the car, too large of course, but gave it to the girl anyway. She pulled it around her shoulders, still watching them with the same solemn look, neither happy nor sad.

The others didn’t say anything so David continued. “Think about it. She surely belongs somewhere not far away. If we take her off, she’ll never get reunited with her real family. Maybe her house is just up the hill here.”

“Look at her clothes, almost rags, and way too thin for this weather. Her hair is a mess. She’s dirty—her face, her hands. If

she was with her own family in the past few days, they weren't doing much to take care of her."

Melissa had been using her droid to listen. "If you plan to leave her here, you'll have to leave me, too."

"Let's see if we can get more information from her," David said. "Try not to ask leading questions."

Asya started in, but soon David was the one asking a series of careful questions. Charlie could see that David was asking for the same information in different ways, often phrased to require opposite answers. The little girl seemed to understand quite well; her answers built up a consistent pattern, namely that her home was not nearby, that she had no family or home anymore, that she didn't know where she was, and that she didn't know how she had gotten there. That because she had found them, she didn't think she was lost. David also tried asking names of nearby cities from the map, without luck. She knew she lived in America, but she didn't know which state she was in or had lived in.

"We don't have much choice," Asya said.

David sighed. "Yes we do. We can wait until morning and ask questions around here. But first let's search forward and backward on this road for several miles and see if there's any house or road leading off."

They put her in the back between Asya and Melissa. She was asleep in just a few minutes. Their search turned up several roads leading off and two abandoned farmhouses, but nothing where she might have lived. Finally they gave up and went on, with Charlie still driving.

"David, I'm sorry," Asya said. "I've talked us into becoming kidnappers, criminals. And we don't even have an ID card for her."

"I don't have worries on that score. We'll be seeing ever more refugees, and people won't be concerned much about

young children. But ... we're taking on a big responsibility with her."

\* \* \*

They couldn't get across the Mississippi River, at least from where they were. Charlie was stressed out about it and he could tell that David was also upset. "We want to go West," David said, "and this filthy river is blocking us. I knew this could be a bottleneck, but I thought there were more bridges."

Charlie had driven west through much of the night. They went north of the twin lakes and then toward the far west end of Kentucky, finally crossing the Ohio River and arriving at Cairo—the one in Illinois, not Egypt. Charlie had never visited either city. They were at the Mississippi and needed to cross it somewhere. Opportunities to cross, that is, bridges, were scarce, but two separate bridges were a few miles from Cairo. After these two, the next bridges were quite a ways to the north or south, and to go south would mean backtracking.

One of the two Cairo bridges was where they came into the town, but the road leading to it had barriers and a large "Bridge Out" sign. The other bridge was beyond the far side of the town. As they drove on Washington Avenue, the main road into Cairo, they saw what might have been the only business open in the middle of the night: "Andy's Bar and Grill—Specialty Barbecue," it said in bright neon. They voted to stop.

The place was pretty cold, but when the food came, Charlie thought it was the best meat he'd had in a long time—that's what hunger will do for you. The two girls ate cooked corn, evidently from a can.

For a change no one was threatening them. Besides a bartender named Mark and a cook in the back, only two other customers were inside: an older man named Terence Pinkstaff and a middle-aged woman named Sarah, who never gave her last name. Charlie thought Terence's last name was the sort that you

either changed or didn't mention, but right away he was bragging about it.

"My folks were all hog farmers," he told them. "A lot of Pinkstuffs raised hogs north of here where I grew up. We're proud of the name. Hell, there's even a Pinkstaff town in Illinois—not very big, though."

Sarah shifted two stools over to be closer to them. "Terence, you old fool, they don't care about your nasty name."

Terence called her a "whore," but without much energy, and she didn't rise to the bait. Then he asked their group where they were headed. Charlie didn't want to be the one to decide what to say, but clearly David thought information was more valuable than secrecy.

"Right now we just want to get across the Mississippi," David said. "We drove past that south bridge, the one that is Highway Sixty, but a sign said the bridge was out. So when we finish here we plan to go up to the interstate, number fifty-seven I guess, and use that bridge to cross. What's wrong with the south bridge?"

Terence glared Sarah into silence when she started to answer. "A full tanker of gasoline burned on the bridge two days ago. They're worried that the heat got to the structural members. Damned idiot driver, at least he died or I would have wanted to kill him myself."

Terence drank a swig of beer and continued, "But there's a problem with the other bridge, too—some law-enforcement standoff at opposite ends. I don't understand what those bastards are doing. I don't want to understand, but neither side is letting anyone go across the bridge right now. They might in a few days; nobody knows. Sorry. Do you have to go across?"

"Uh, yes," David said. "Do you have any idea when they might settle their standoff?"

"These people have shit where their brains should be. They

say ‘a few days,’ but I wouldn’t bet on it. They’ve been fighting on the bridge itself, with shot-up cars in the middle. One car burned there, but of course it didn’t mess up the bridge itself like the tanker did. I swear there’s something about southern Illinois, maybe inbreeding.”

‘*Your* family’s the one that’s all cousins of one another. That’s why they’ve named them Pinkstaff.”

This time Terence called her a “salacious bitch” and a “scabrous whore.”

“Those’re pretty big words for the likes of you, darling,” she said.

“Which one, ‘bitch’ or ‘whore’?”

David wasn’t enjoying their game. “I hate to interrupt this contest, but we’re desperate to get across the river. How about that bridge with the tanker that burned? On Highway Sixty or Sixty-two. Could we take our chances and cross it anyway?”

“I don’t think so,” said Terence. “I think they have it blocked off.”

Sarah said, “Yeah, I saw some of those big concrete barriers at the start of the bridge, set down way before the burned part. If you have to cross, there’s two bridges between here and St. Louis. Head north up Highway Three along the river. First you get to a bridge heading to Cape Girardeau on the Missouri side, good sized town, four-lane bridge. That’s about thirty, thirty-five miles north. Further north is another bridge. Because we’re closed down, I hear there’s a lot of traffic headed up there, trying to get across just like you people...”

\* \* \*

Sarah had talked them into waiting for daylight to head off for the next bridge north, at the city across the river that Charlie thought of as “Cape some-French-name.” David was driving; Charlie was glad to be done driving for the time being. From the beginning he’d hoped to trade off the driving three ways, but

while Asya did know how to drive, she hadn't driven for years and had begged off, saying it was too stressful.

So they said goodbye to friendly Sarah, to the foul-mouthed but helpful Terence, and to Mark, who stood them to their last drink. It took less than an hour to get to the Illinois end of the bridge to the north. It was in the flood plain, a huge flat area geometrically divided by straight roads over to the bridge. But the whole area was crowded with cars and trucks, even early in the morning. Most of them were in a giant line waiting to head west.

It was orderly—surprisingly so. Charlie felt better, more secure, because of the large number of people around. He could figure out that with such a long line people on the bridge must be restricting the traffic to a trickle, or perhaps to nothing at all. He didn't bother pointing out the obvious to their group. David rolled into place at the end of the line and asked him to take over the driving, or more accurately, the waiting. "I'm going to talk to people ahead of us," David said. "Find out what people think is happening."

The line moved forward a car length every ten minutes or so. Even though it was cold, Charlie followed David's instructions and only turned on the car to move it ahead; they needed the gas. In half an hour David returned with another hard-looking man, whom he introduced as "Joel." Charlie guessed he was also ex-military. "We're going to look at the head of the line," David said. "Over at the far end of the bridge." He got out binoculars and headed off on foot with Joel.

After another long wait David returned with Joel, who stood to one side while David talked with their group. "I feel sort of responsible for not having a better plan to get across this damned river. Uh, Joel and I don't like how it looks at the far end of the bridge. It's hard to tell from this side. They're spending a lot of time with each car, but not like the Homeland Security people

did it. It seems like they're taking everything out, unloading everything. It's not just the delay—less than a hundred cars ahead of us, so about, what? ... twelve hours waiting. But the locals might be stealing things or demanding bribes; we can't be sure. They look well-organized over there. Our plan is to get together a convoy and go to the next bridge, sixty miles north of here. At that spot there's no town on the Missouri side of the river and just a small town named Chester on this side. A convoy might intimidate anyone at that bridge."

David and Joel gathered together another four cars that wanted to try the next bridge north. Charlie cornered David alone to ask: "Do you think any of these others will want to stay with us after we cross? Assuming we get across."

"I did think about that," David said, "but Joel and his pals have their own destination in mind, one that doesn't include us. Each of the other four cars so far has a ... major problem of some sort—a difficulty from our point of view that pretty much rules them out. I think we're going to have to go our separate ways when we get into Missouri. Um, I'm going to sit with Joel in the lead truck ... in case of trouble." David grabbed the aluminum case with his fancy gun in it and headed over to the other car.

In an hour or so the five cars and one truck had left the line and were ready to head north to the next bridge. Two hours later the convoy was in Chester, after stopping twice, once for a flat and once to trade some gasoline around. Charlie could see what David meant about how they didn't want to join with any of the other cars.

Chester wasn't much of a town, but Charlie saw almost none of it, since he was just following along like one little duck in a row of ducks. Someone in the lead car must have known this area, because they went off the highway and skirted around the main part of the town, such as it was, heading instead directly to a road leading up to the bridge.



At least a dozen cars and trucks were waiting on the Illinois side. Two men sat next to a row of simple wooden railings across the road. Their lead car drove up to the barrier. David and Joel got out and talked with the two men. After a long discussion, the men moved the railings aside and let them start over on the bridge. David's car stopped, and he and one other man came back to let each of the other cars know what was going on. To their group, David said, "The people here don't care what we do; they let people go freely either way. But they say there is some problem at the other end. The men on the Missouri side are demanding a bribe and are sometimes keeping various goods that come through, especially guns. We're going to go across and see what happens, maybe even pay them a bribe, but try to get through."

They went across the bridge with no trouble, but as reported there was a roadblock at the far end. Their column of vehicles pulled up to a crude low barrier with several men beyond it. Charlie couldn't see or hear what was going on, but they were talking back and forth. After a long delay, Joel's car pulled off to one side while the men moved railings aside to make a hole wide enough for their column. The remaining cars moved out with Charlie third in line. Joel's moved through last of all. Charlie could see about half a dozen men at the roadblock, all with guns, but they must have decided not to start a fight.

Ten minutes later during a brief stop David got back into his own car. "We're going to stay together for another fifty miles before we split up, just to be safe, as safe as we can get."

"What happened?" Charlie said. "It looked really tense."

"Well, yes. But it was also our good luck they had no idea how to manage a roadblock like theirs, especially dealing with a column of cars. They should have set up sniper rifles or made us stop early. Instead they let us drive right up to them with our weapons ready, and they could only start blustering and demand-

ing, standing right in front of us. Anyway, we talked them out of fighting, thank God.”

David looked over at Melissa, who was avidly following everything with her droid. Then he shrugged and went on. “They could have shot us, maybe killed one of us, but all they had were rifles and shotguns. None of them even had any body armor. We would have killed them all, every one. For a minute I thought they were too dumb to realize their bad position, but finally they gave in.”

## 10 Dec 2024, SE Missouri

ASYA WOKE UP with a start, momentarily confused, then remembered she was with the two girls in the back of the car. After crossing the Mississippi, they had gone on for quite a ways with their little convoy of five cars and one truck, and then had split off from them. She had gone to sleep as David drove off through a forested region into the fading light. She saw it was quite dark where they were, and the car wasn’t moving, the motor wasn’t even running. A number of horrible popping noises came from the outside—she assumed it was gunfire. She asked David what was going on.

“We seem to be at the edge of a war,” David said. “Some kind of small war, lots of shots up ahead of us and to the right. Mostly handguns, I think, rather than rifles. We don’t seem to be involved in this war. There’s also a barricade in the road ahead.”

The car was over in a shallow ditch beside the road, in the snow. “Firing behind us, too,” David said. “Not as much, but still gunfire. We’re not safe here, not at all.” Then abruptly, “You three in the back, squash yourselves as near the floor as you can get. Asya, get the girls down on the floor, and pile on top of them, quick now.”

David pulled several items out. “Asya, here’s the bulletproof vest again. Get it on and try to cover the girls as well as you can.” Then he turned to Charlie. “You put on the other vest here.”

“No, I don’t want it; I’m not used to it. You should wear it.”

David didn’t waste time arguing, but struggled to put it on, even as Asya was finishing in the back. David passed a handgun to Charlie and another back to Asya. She decided not to refuse it.

“Let’s just lie low here for now,” David said. The two men slumped down in the front. “A bullet from a handgun won’t necessarily go all the way through the metal parts of a car. I think we’re a lot better off not blundering around in the dark in the midst of the shooting, and not driving off either, with or without the lights.”

So they waited, and waited some more. Finally David spoke up. “It’s been fifteen minutes at least since the last time I heard gunfire. You all stay here. I’m going out to look around. If you hear a bunch of shooting, well, I don’t know what to suggest. Just be careful.” David flipped a switch at his left and then eased himself carefully out the door, carrying his large, dark gun, and keeping down. Asya was glad to see that the car’s interior lights weren’t triggered by opening the door.

Asya spoke to the little girl they had picked up—evidently her name was Bethany—telling her to relax, that everything would be all right. Then she reached out to her daughter’s hands to try to feel the fingerspelling back and forth. Even in the dark Melissa could read her spelling easily, so she soon managed to explain what had happened and where David had gone. She tried but wasn’t able to reliably read Melissa’s fingerspelling, let alone other signs, so she just gave up trying.

A little later David came back. “I haven’t seen anyone alive. At least half a dozen dead people out there. I want to scout around with Charlie—decide whether we can get around the bar-

rier or will have to go back the way we came. You were asleep, but there were a number of ... potential trouble spots back that way. Don't go anywhere; we won't be out of sight of the car. You guys can sit in the back now, but keep your heads down—should be all right.” Before they went off together, David insisted that Charlie put on the vest Asya had been using.

Charlie went off with David. By peeking up above the front seat, Asya could see their shadows around the barricade. All of a sudden a dark figure stumbled into their front fender, making quite a thunk. He sort of slid down or sat down with his back against the wheel, looking in bad shape. “Stay here,” she finger-spelled to Melissa, while saying it to Bethany. Then she climbed out of the back to squat down beside the figure.

There wasn't much light, but still she could tell it was a man, middle-aged and terribly wounded in the stomach. She could see spreading dark blood on the ground.

“That's good,” the man said. “I expected to find someone here.”

Looking at his condition was horrifying, and Asya felt a wave of compassion for him. She must not show her fear, but what could she say? “Don't be afraid. I'm a nurse. Maybe I can help you.” A stupid thing to say, stupid, and a lie also.

The man coughed and said he didn't think she could help him. But then he asked her to bless him. She didn't want to, but she couldn't refuse either. She gave him a standard blessing she'd learned as a child, probably not appropriate for a dying man. He smiled, settled back.

“I'm grateful I could be here for you,” she said.

The man said, “No,” followed by words too faint for her to catch. She asked him to repeat what he'd said. With a great effort he concentrated on speaking. “No ... you're not here for me.... *I'm here for you.*”

He settled back again, and then his smile stayed frozen on

his face. Asya decided he had died. She noticed that David and Charlie had come up and were watching. Asya sat there very still, paralyzed with unfamiliar emotions. Hours later, and the next day, she was still thinking about his words, off and on.

\* \* \*

Even with the warm blankets, Asya couldn't sleep at all. The night was dark and quiet, and the moon had set. The stars were brighter than any she'd seen for some time. After leaving all the dead beside the road, they had driven about forty miles further into the national forest, with mostly trees along the way. Then David began to curse in a monotonous way: "Damn, damn, damn, damn, . . ." Shortly after that the car stopped running. The two men led Asya and the girls out of the car and into the cold, while they first looked at what might be wrong with their car. After that, with David steering and Charlie pushing, they got the car pointed downhill. It coasted along to an open spot where David guided it into a big patch of brush, with Charlie giving a final huge push.

"We're going to sleep in the car here," David had said. "Tomorrow at first light we can think about our options."

So now in the car Asya's mind kept grinding through possibilities of the world as it had changed. Hard times were coming, she could see that clearly—a long difficult time before them. Charlie was sound asleep; he could sleep anywhere. Their new acquisition, evidently named Bethany, slept as a child often does, with such shallow breathing that you wonder if she was alive. Melissa slept fitfully, turning back and forth. But David woke up and saw that she was awake, too.

"David," she said, "I have so many questions, and I'm scared. It looks like we're stuck with no way to go on, no working car. What do you think is wrong with our car? And why did you hide it back in the trees here? What are we going to do? Will we be stuck here?"

David said nothing for a while. “I wish I had a cigarette,” he said finally. “I haven’t smoked in four years. Well, I’ve had lots of time to think. My guess is that a bullet got to the electrical system, maybe shorting out the batteries. There should have been an immediate warning light. For some reason the light only came on right before the car gave out. I doubt if we can repair it here. So yes, you’re right: we’re stuck in Missouri, the middle of nowhere, maybe for a long time.

“As for pushing the car back into the brush, I didn’t want us bothered overnight, and I hope we can later fetch some of our stuff from the car, if it doesn’t get vandalized.”

Asya just stared at him, so he went on. “I always thought things would fall apart worldwide—even here in the US. But from the news we’ve gotten, it’s going to be really bad, for a long time. Earlier I was thinking non-stop, and looking at our map. We must find refuge around here, maybe in the little town to the west. It looks to be some three miles further on this highway, Route 417—Yates Center is the name of the place. The map shows a small lake to the north of it, called Yates Lake.”

“Look,” he went on, “we could try to steal a car up ahead and get on our way, but I expect these people will be watchful of their cars and their gasoline. They’ll likely be alert to anyone walking into their town, and even at night dogs would announce us. I don’t see that working. I think we’ve got to join the community ahead of us if we can.”

“Can we just act like tourists?” Asya said. “They must have several motels, and we have cash, a lot of it—I have money and I saw your money. too.”

“That only works for a while. Soon the money will be worthless. In the town ahead of us it’s probably worthless already. Soon people will only want those around who can contribute. I want us working, I want us established, so when the hard times come they’ll tolerate us.”

“Asya,” David continued, “I’m sorry about how bad it was for you back there with the man who was dying. But when you were trying to help him, didn’t you say you were a nurse? Did you actually work as a nurse?”

“I was mostly bluffing, trying to make him think I could help. But yes, for over two years I worked part time. Ages ago, as a volunteer. As a teenager.”

“Do you remember it?” he said. “Did you do any real nursing, any actual stuff.”

Asya took a deep breath. “I remember it pretty well. I’ve got a good memory. Part of the time I worked in obstetrics—I actually helped deliver babies, just as one of several people of course.”

“Excellent. And would you be willing to do it again? Would you be willing to help as a midwife? You see, we can’t sell ourselves as computer experts. We need practical, low-tech vocations. You don’t have to act like a nursing expert, just a nurse’s aide or some such.”

“Oh, maybe. Maybe. But I was just a volunteer. You said it; I was a nurse’s *aide*, not a real nurse.”

Melissa turned over in her sleep and drew her legs up into a ball. Asya reached behind to tuck the blanket in around her daughter. Then she turned back to David. She had started to shake and had trouble speaking.

“I’m so scared,” she said. “How did I end up here?” The long night gave no sign of the world outside, of the terrible events that had occurred, that were yet to occur. “Time has stopped—we’re in our own cul-de-sack of time.” She paused a long while, trying to stop her shaking. “Did you ever read Goethe’s *Faust*, David?”

“Yeah, sort of a boring play. I think I read it or saw it, but I don’t remember which. A long time ago.”

“That’s just the first part that you may have seen. The sec-

ond part is far longer, more subtle. In the third act, the classical Helen of Troy is ... well 'retrieved' you could say, by the main character, Faust, who wants her, desires her as the most beautiful woman ever. Of course I was thinking about this when I picked her as my SubMarine avatar; you could say I sort of ... identified with her. Anyway, she doesn't know where she is, but she doesn't know *who* she is either. She is haunted by terrifying mental pictures of someone who destroyed cities, and she wonders if this is a memory, or if she is crazy. She asks herself: Was she all that? Or is she? Or will she be that in the future? I feel the same: Who was I? What am I doing here? What will I become?"

Asya stared straight ahead. Then she said quietly, "Later Faust, the person who has already fallen in love with Helen, says Goethe's famous line: '*Dasein ist Pflicht*'—um, roughly—'Existence is duty' or 'responsibility.'"

"Okay, but what does that mean?"

"Oh, I guess something like saying that just by existing you have a responsibility to yourself, to others."

"Responsibility for what?"

"Well," said Asya, "it could be just: 'not choose not to be,' or maybe that you should be grateful for life."

"Grateful to whom?"

"Grateful to God."

David wouldn't give up. "And if I don't believe in God?"

"You can still be grateful—to be alive."

"Yeah, well I *am* grateful I'm alive. And we're not in as bad a shape as you may think. You've had some terrible stresses, Asya. But now we may have a quiet time for a while, if I picture the situation correctly. For us personally, the, uh, crisis, will come later—there will be roaming bands of refugees, like us only much more desperate, and we have to prepare for it."

"Listen, Asya," David went on. "It's a bad time to bring all this up, but I have to. I want the five of us to survive. I'll maybe



offend you with this, but survival is the issue. Tomorrow morning we've got to look different to the tiny town ahead of us. We just look too weird. Remember that nasty lady, 'Mama,' at the restaurant in Kentucky? She must have called relatives or friends to come rob and kill these strange people who were at her place for dinner. You might think they were ready to rob anyone, but I think she called her friends because we obviously didn't belong to their 'tribe.' They might not have bothered locals. There I was with my ugly appearance, looking threatening. You have your strange name, exotically dressed to a hick in Kentucky, and doing your sign language with Melissa. We're clearly Yankees, from our speech, our clothes, our look. We came in with Charlie, a Black man, certainly Black as far as those people were concerned, and Kentucky is still loaded with racial prejudice. Rural Missouri, where we are now, is full of prejudice too. We have to look normal, we must look more like the people around here."

"What can we do? We can't change ourselves."

"I've been going over it, what we look like. We need to look like a simple family unit in distress, one that picked up an extra refugee. First I'll bandage my scars and my left hand, so I just look recently wounded. We'll say that Melissa and, uh, Bethany, if that's her name, are our children, both too traumatized to speak. Absolutely no sign language where anyone can see. We need to get Charlie to act completely subservient. We all change our names to more common ones. Just as with that group in Wytheville, I become David Burton, and you are Ann Burton, my wife."

"Oh, God," Asya said. "I should have known it—just another way to get to me."

"Asya, Asya. I know how defensive you are. I'm trying to keep us alive. Our private lives will stay the same, but we have to appear non-threatening, we must put on an act. And I'll admit

that I'm much better off arriving with the rest of you, as long as we look vulnerable."

"I have to frame this a different way," he continued. "Dogs and wolves—I like them. I've even handled a few wolves and lots of dogs. You know how wolves run in packs, of course." Asya nodded absently without looking at him. "If a wolf ends up by himself, he needs a pack to survive. He'd have a very hard time making it alone indefinitely. He has to join a pack. Surprisingly, it's possible, but only if the lone wolf is very, very careful. He has to assume exactly the right submissive posture, with no eye contact, with his muzzle down. The slightest misstep gets him killed immediately. We will face the same thing with the town tomorrow."

"A town 'pack'? Come on, be serious. This town won't be like that."

"I don't know what it will be like, but I grew up in a town not so much different. There will be a mixture of people: farmers, and horse breeders. Locals who work in the town. Activities for tourists during the summer. Those who drive off somewhere to a job, maybe quite a ways from the town. They won't be doing that for long. Retired people. Drug dealers—cocaine, crystal meth, and such. They probably grow lots of marijuana around here. And the unemployed. Who knows what kind of a mixture—too many unknowns. But we need to be a simple family unit: husband in charge, wife, two silent little girls, one extra refugee. Please don't take this the wrong way, but you're too attractive. Looking as you did last night, the men will see you as something to be conquered and the women will see a threat. So ... no makeup at all, and a simple dress, simple straggly hair. We won't have trouble looking dirty and tired."

He waited while Asya just sat, saying nothing.

"The psychology of these towns is primitive, tribal. The sort of stuff I was talking about yesterday. You must not make eye

contact with any adult male, just as Charlie can't have eye contact with a white female. You follow behind me. You have no opinions except to say that you have to ask me. Charlie also has no opinions; just does what he's told—told by me. I'll be submissive myself except to protect you and our 'daughters.' Don't you see, it's impossible to show up with a beautiful unattached lady. And it's dangerous. They will understand if you are my 'property,' not to be messed with."

"You're right," Asya said. "I am getting offended."

"This is just till we get settled, till we get over the hump, and they think of us as a part of their tribe. We'll be the first refugees in this town, but later there will be more, and then everything will become serious."

Then David took out an ID card and showed it to her. "'Burton,'" she said. "The same name you used three days ago. How did you get this?"

"Oh, just connections. But don't forget: that's your name from now on."

"And if they want my ID card?"

"Really, I don't expect the ID cards to be important. But you should just say your card has your birth name."

David gathered up a batch of items to hide in case someone from the town later looked over their car. "I'm going to bury all this stuff off in the woods, just keep one handgun, and even with that I want to tell the Sheriff up ahead, if they have a Sheriff, that I'm armed. No surprises, that's the idea."

After it started getting light out and they were ready, they woke the other three. Melissa looked grouchy and sighed how badly she had slept. They told her what they were going to do, explained that for now she could only sign in private. While Asya talked with Bethany, trying to explain the situation, David talked at length with Charlie in the same way he had tried with Asya: be submissive. For David the name "Melissa" sounded

like a yuppie name. “How about using ‘Meg’ just as a nickname?” he said. “It’s simpler.”

They had breakfast, packed some items in the car and took others with them. Then the standard nasty business of the woods as a toilet. While they were busy, David finished burying everything off among the trees. He was backing along to the car, spraying his trail from a can as he walked. “If they have dogs, they’d find my stash right away,” David explained. “This is something we used in the old days—might throw their dogs off the scent.”

The five of them set off along the road, up a hill through rough trees on either side toward the town ahead. There was snow all along but none on the road.

“So your plan is for me to be a nurse’s aide,” Asya, now Ann, said. “And what will you do that’s useful to this town.”

“At first I plan to be a handyman,” David said. “Just whatever needs doing, and I am handy at fixing stuff.”

They reached the top of the hill and started down through the trees toward a frozen stream with a small bridge over it.

“In the end,” David said, “I hope to become an old-fashioned blacksmith, that’s my true plan.”

“How will you do that?” Asya asked, “Starting with nothing.”

“I’ll have to see, but my great grandfather was a blacksmith, and I helped my grandfather for two summers late in his life when he ran a blacksmith’s shop as a hobby, just as his father had done for real.”

“And what do blacksmiths do?” Asya said.

“Oh, all kinds of things. Repair anything made of metal, like farm equipment. Make tools and keep them sharp. Harden steel by quenching it in water. Even sharpen razors and nail the iron shoes onto the bottom of horses’ hooves, using horseshoes that they make. You’ll see, ‘Ann,’ we’re going to get by, it will be all

right.”

At least right then Asya felt so, too, that they would find their way somehow. She took David’s arm as they walked along and thought about the simple and complicated future they faced ahead.

## 14 Dec 2024, Diary Entry

i found an empty notebook, and i’ve resolved to write a diary. i need something to keep from going nuts. i’d use my droid, but it and my tamagotchi both employ inductive charging, not available in this backwoods community. these devices also each have a small solar panel on them, but the solar charging takes forever, and anyway i want to preserve them as much as possible.

i agree with mom that this may be as good as any place to stay while the larger world collapses, and better than many. at least we’re not near any population center, as joseph g. recommended. in most ways we’re not in such bad shape, but i’m all nerves now. i didn’t realize how much i was used to a quiet sleep in my own room. ever since i left our apartment it’s been a nightmare. i must not complain, though. mom has enough to worry about. i need to get used to deprivation—it’s going to be that way for a long while.

even writing by hand is so slow and awkward—i’ve always typed everything. of course i can’t do cursive writing, but my printing is at least readable. i’d write this in a code except that i’m not going to reveal much of anything. and who would read it anyway?

the town is called yates center, with a small lake named yates lake, forested low hills in all directions, and a small river. some 500 to 600 people live here. nearby towns are 10 to 20 miles away, mostly smaller, but 50 miles away is a larger town, at the edge of the national forest. the police chief, named jeter, has one deputy—just the two of them are the law enforcement

here. jeter seems a bit weird and not very outgoing, but he's a social butterfly compared to his deputy.

i sort of understood our options when we came, as david explained it and mom relayed it to me: we could stay here, or try to buy or trade for a different car and be on our way. but then we'd need to get more gasoline. david didn't say, but i'm sure he also thought of trying to steal a car and gasoline. actually the car would be a lot easier than the gasoline. all gasoline is strictly rationed now. having five of us adds to the difficulty of leaving. we'd be sort of back to our circus act again, as we were when we left washington—heading out of town, in a stolen car with stolen gasoline. anyway, the three “adults” have decided to stay in this dumpy town, at least for the time being.

we're been living in three motel rooms after the first confused night: david and charlie in one room, my mom in another, and i'm staying in the same room with bethany, the little girl we picked up five days ago like a stray kitten. we think her name must be bethany, since she has a locket around her neck with that name on it and responds to the name. but not by voice. she is mute, like me—we have that in common. she was somehow so traumatized that she doesn't speak at all. unlike me, she can hear and understand spoken english, though she often ignores it. i've started teaching her sign language, and it's very interesting that she will sign back even though she won't speak. i think she's going to learn to sign quickly—once she's seen a sign she doesn't forget it, and she seems to have a gift for mimicking my signs.

most of the motel rooms around here are empty in the winter like this. a few other people are visiting, along with some tourists or refugees like us, but by and large it's just the regular townspeople, such as they are. and they don't seem like a friendly lot—downright suspicious i would say. and nosy. the town partly gets by from tourists, who hunt and fish and ride horses (in the summer), so they should be friendly to strangers.

but we're an especially strange group from the east coast. mom also relayed david's thoughts about the sociology of a town like this. she didn't agree with all his conclusions, but she felt she should indoctrinate me anyway. she thought david was exaggerating with his ideas of just how primitive the motivations would be here. "tribal" was another word he had used. but mom sees the people watching us, all the time, and she's been careful to do what david recommended: dressing down, no makeup, looking meek and subservient, not using sign language with me, or at least signing "small."

i've been going over our situation with david, sort of slowly, sometimes with mom translating. he still expects to see refugees later—like us only more desperate. so questions are: how many? from where? how would they get here? of course david doesn't know, but we do know that the country is getting sucked dry of gasoline. st. louis is about 150 miles away—a 3-hour drive, but only if you have fuel. someone could ride a bike that far in maybe three days—they would need to be in good shape because of the hills, but still. . . . so some people will spread out, are spreading out, from the big cities, but we don't know how many. and what is this town going to do about it? will they want to tell all refugees to leave, including us?

david said he had hoped to work with law enforcement, whatever there was, but the police chief, this guy jeter, has no imagination, is not a planner. he's going to react to events as they happen. when we get to more exotic events he will have no idea what to do. now that's scary.

david was especially worried about mom, i guess because she was too (must think of a word) *glamorous* for this town, for it to deal with. so she's supposed to look and act more like a typical rural southeastern missouri woman—a horrible idea. her teeth alone are too good for that to work well. if anything, david was even more worried about charlie—there are almost no blacks in the town, which i don't exactly understand, because i

knew there were lots of blacks in missouri, but i guess the blacks live in larger cities. i find it all intellectually offensive—charlie is half italian, multi-racial, but as far as this town is concerned he's black.

another aspect of this i found particularly entertaining. david and mom were talking furtively and at length about something, thinking i would be oblivious to it. by lipreading i can sometimes figure out the gist of things. it concerned charlie, and they were talking about what they had recently figured out, but had been obvious to me for over a year, since i first met him: that he's gay. mom is so funny sometimes. i wonder if she thinks i don't even know what "gay" means. i see their point, though. this town has a problem with blacks, but i'm sure it has an even bigger problem with gays. so they were going to tell charlie to be so tightly wedged into the closet that the idea of his ... orientation wouldn't occur to people.

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well, things in the world at large are in a terrifying state and getting worse by the day. it's scary for me that the locals don't understand how much worse things are going to get. i understand because i've talked with david about reports on the radio. the local automobiles and trucks are not as useful as they might be because of the gasoline shortage, but far too little gasoline is entering the economy right now, so soon most gasoline will be gone. we still have electric power, and nobody's talking about it failing right away, but (another "but") it also will stop in a measurable time. boy, no electricity will really suck. there's no internet service and limited television and radio. i get the radio news with help from david and mom. not much more to know about the large dirty bomb at the southern end of manhattan in new york city, except that thankfully there weren't any more of them. of course we saw the nuclear blast south of washington, followed by the second one much closer to the city. Washington sounds like a horrible, frightening mess,



by far the worst place in america, with at least tens of thousands dead and many other problems, especially with radioactivity. there's a great deal of panic everywhere in the states, with new york next to washington as a basket case.

for many places in the world, the situation is unimaginable. we only get sketchy reports. i watched online as the global financial system and many businesses encountered huge problems with their software. that came early. on the physical side, it started with conventional fighting, back and forth, often artificially started by a virtual incident. for example, of the early anthrax attacks on various middle east locations, many of them were fake or simulated attacks (later tel aviv had a real attack). this means inserting reports of attacks into an enemy's communications, attacks which did not in fact occur. then the target of the attack would have many of their computers shut down somehow, though how this was done is a big mystery. so it looked as if the attack was successful. there were ferocious retaliations for these "attacks," mainly using conventional weapons (and these were not simulations), followed by even more savage reprisals using every kind of weapon. nuclear explosions from egypt in an arc all the way to india. thank god the major nuclear powers haven't been using their weapons. i think the "lesser powers" who've been using biological and nuclear weapons against each other might have also targeted us in america except that they don't have the long-range ballistic missiles with advanced guidance systems needed to reach us. our good luck.

lots of different biological agents used, not just the anthrax that tel aviv was dusted with. nearly twenty years ago america was terrorized by a few grams of anthrax spores sent in letters, so the effects of many kilograms aerosolized and spread onto tel aviv were horrifying. the whole middle east is a terrible mess. commentators on the radio expect the worldwide situation to get very bad, without saying exactly what that means. they don't

know.

there seems to be a crisis up in space, but david and i can't figure it out from the reports. four astronauts are in the international space station, and two chinese astronauts are in another smaller station. both of these stations seem to be having troubles with micrometeors. the chinese were set to return when a tiny meteor strike forced them to change their plans, to delay their return. the iss has also had several components hit. right now they can't use their emergency escape module, perhaps because of a strike. various theories came over the radio, but nobody knows.

at 10 this morning they're getting together another meeting of people in the town. of course i wanted to go even though i wouldn't understand much, but that was nixed by the others. david wants just him and mom to go. he was prepping us all up carefully, trying to make the case, especially to charlie, that the situation is annoying, but we're trying to survive. so david and mom will say, if anyone asks, that charlie is back in the motel room taking care of "the two girls." if anyone talks with charlie, never mind why, then he knows nothing, decides nothing. he just works for "mr. burton," and does what his boss tells him to do. we two girls are totally frightened and mostly non-responsive, to the point of being autistic. we should be able to pretend that without trouble.

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jeez, it's after 1. david and mom just got back. david talked with charlie about what had happened, and mom signed to me what he was saying. it was a frustrating meeting, long and boring, with people who didn't seem very smart bringing up all manner of irrelevant points, while they ignored a number of key issues: like where their food is going to come from. david decided to mostly keep his mouth shut for now, and of course mom was supposed to stare at the floor, and follow david around like a good wife.

i've been thinking about food, too. the people here could starve later in the winter, and it doesn't sound like they know it. this town lives from tourists and forest products, along with local businesses. you can't eat any of that. i just read the brochure for our motel. they talk about the tourists hunting and fishing—that sounds a bit more like it. they also talk about a nearby dude ranch where people can ride horses. i must ask someone if people can eat the food that the horses are eating, assuming it's not just grass. i have a sick feeling that people will eat the horses themselves if they get hungry.

david is planning now to go off with mom to talk with people. he first wants to look for any "handyman" type of work, but he also wants to introduce himself, get conversations going. and introduce mom as a possible nurse's aide. i couldn't believe it when they explained this, but i did know that as a teenager mom had worked for years in hospitals. once again charlie and bethany and i are supposed to stay in our room, with the implication of staying out of trouble.

# 10. Rebound

**8 Apr 2031, Yates Center, MO**

**D**AVID BURTON HAD finished the stack of work in his shop, mostly broken tools to repair. Then he walked two blocks to their house to look after the dogs. Maybe he should take back his old name “Warburton,” put the “war” back in. Yeah, he should do it. “Burton” was always a stupid, phony name.

His birthday was coming in three days, and birthdays were when you thought back over the past year, taking its measure. Take the measure of the past seven years, that was the idea, especially when you’re in a good mood.

Okay, so he was cured of his PTSD—a counterintuitive result given that most of the town *developed* PTSD during all the difficult times. He’d had his problems too, plenty of them, but perhaps his earlier terrible experiences had inoculated him. Looking back, the worst of all was the death of his son. But he had come to accept it and didn’t blame anyone, trying not to blame himself. In exchange, he had ended up with a wife much better than he had ever expected or felt he deserved. He should talk her into taking the old name back: Asya, much prettier. The “Ann” was only for a low profile anyway.

It was just as well Asya had never put all the puzzle pieces together to see how he got to know her. Her mind didn’t work that way—not like Meg/Melissa, who was always analyzing, calculating, missing nothing. He was sure Meg figured out that he knew who Helen was from the start and had only volunteered for security work at CISA so he could work with Asya. Otherwise he would never have done those boring contractor tasks for

meager pay; it wasn't like he needed the money. But he had been too shy to move beyond their professional relationship before the crisis came.

As a bonus he had two unusual daughters, informally adopted and certainly more interesting than any pair he would have imagined. Just like leaving out the "war" from his name until now, they should take the "in" out of the informal adoption. A legal system was getting put back in place now. No hurry though.

They should also go back to the name "Melissa" for his daughter Meg, though her signed name hadn't changed—it incorporated the sign for "M," along with another sign. He worried about her, off and on. She seemed more despondent the last year or two, less lively. It could just be those late teenage years and a cumulative result of living through so much suffering and death. She herself wouldn't harm a fly—he had seen that many times—so the effect of all these deaths would be worse for her. Of course like the rest of the family, she missed Matthew herself, but three and a half years was a long time at her age, time to get over something like that. She was so incredibly smart, but she needed to go to school, to get paper credentials, and to get away on her own. The University of Illinois might open again in some small form, to the northeast of them in Champaign and Urbana—not so far off. She could bluff her way in, or *earn* her way in, if you like.

His other "daughter," Bethany, was wrongly named as they had discovered, forced to stick with her mother's name by circumstances and her own choice. She was a beautiful child, but strange in so many ways. Strange in where she came from, and in not remembering her origins. Strange in being mute when they first picked her up. It was even strange that she started talking after several years, and after learning fluent sign language from her older sister. That she could hear and understand was not

in doubt from the beginning. Her perfect behavior was strange in its way. He was just stuck on the word “strange” with her.

Maybe part of his good mood came after hearing from Carl just two weeks ago. With so much of the world’s population dead, and with huge numbers of refugees and missing persons, several countries had set up a global list of those still alive. Listing the dead was hopeless, impossible; whole groups of refugees had died, leaving no records. Along the line from Egypt to India and beyond, now called the “Arc of Death,” even the status of some countries was not known, as well as with parts of Sub-Saharan Africa—actually, almost all of Africa. So instead, individuals trying to reconnect could register themselves as “alive.” The world now had some computers and limited data connections operational, but support for such a list was coming along, though of course no satellite support for dataflow.

Two weeks ago, he and Asya had traveled to St. Louis to check on the status of her brother Alex. His name didn’t appear, but the list was still growing rapidly. Asya was especially anxious about Alex. Realistically, since he was unaccounted for, he was probably dead, but she wanted to keep hoping and trying to contact him. The problem with Alex was that Berlin had recovered better than most large cities, so if he was alive he should be listed. They had checked for a number of other names but hadn’t gotten any hits.

Along with your name, you needed to list a home town prior to the collapse. Even so, duplicate names were a huge problem. Of course you needed a current address. The nearby town Warrenton had a mail drop now, and letters for them in Yates Center would be forwarded from there.

The trip had been a weird experience for them; St. Louis was still a horrible mess—lots of burned-out buildings, only a few partially functioning utilities, and so forth. They had gotten used to deprivation, but this was worse than conditions back in

Yates Center. Fortunately, they'd taken a tent to sleep in.

So what a surprise it was to get a letter from Carl after all these years. None of the three scientists had made it out of Mongolia at that time, in spite of all his efforts. He now saw that one big flaw in his plans had been payment to the two Russian teams that were to pick them up. He had paid the Russians quite a bit and promised them a huge amount, ten times as much, on success of the mission. They also got money for their expenses during the operation. He'd misjudged the effect of the "quite a bit" of money, much more than they were used to getting. It was easy for them to keep the initial money and with no effort or risk at all, forgo any rescue attempt.

The Mongolian soldiers easily rounded up the three would-be escapees, with their one Mongolian companion. Fortunately no one had been killed or even seriously hurt in their escape attempt. Carl wrote that the scene was tense at the camp for months, but soon the Mongolians were more focused on the worldwide collapse. The whole nuclear weapons project went down the toilet, although it never had any real chance of success anyway. Carl had given him a detailed story in his letter. They had probably done better in remote Mongolia than they would have elsewhere, and after all, the three of them had survived through the hard times. Two were allowed to leave in 2030, while against all logic the third stayed behind with a Mongolian wife. All that had become shadows from the past, more old difficulties to forget.

Sometimes he was able to face his responsibility for the collapse, such as it was. His game to get Carl loose certainly seemed like a sort of trigger that others keyed on for their own actions and with their own motives—others like Wieland. He didn't believe that the virtual reactor shutdowns would by themselves have been enough to start the entire meltdown. Now that he knew roughly how Wieland had managed the computer

crashes, it was likely that his one-time friend had been a big player, perhaps *the* big player, in pushing the world over the edge. He had seen messages to various radical groups suggesting that they might try some significant act during chaos that was expected to start on a certain date. Of course Wieland must have sent those messages, along with arranging his computer crashes and fake news reports. Only the two of them knew all the planned dates that far ahead of time.

He had not heard anything more about Wieland and what he was doing. Perhaps he was still in Germany somewhere, using a different name, a different face, getting along fine. Maybe one day they would meet again. Wieland had been careful with his real identity, making sure there were few pictures of him. Even the official ID pictures were doctored versions, looking only superficially like him. So would he recognize Wieland if he ever saw him again? Yes, from his personality.

Meanwhile he and Asya needed to think about the future for themselves. Life in this small town was going to change completely with the slow return of civilization—no more need for a blacksmith or for fancy guard dogs. Health care would increasingly be carried out by people with credentials, and mostly over in Wardenton, leaving Asya out. They should go somewhere, start a new life. They'd both been thinking about this lately.

## 13 Apr 2031, Yates Center, MO

**A**SYA WAS still her name, still the way she thought of herself, though she had understood the need to be more conventional when they first entered the town. She should drop the “Ann” name as soon as she could.

Once again, as she had every day for three and a half years, she thought about her son Matthew. It wasn't as bad any more,



and she kept reminding herself of how terribly everyone had suffered, were still suffering—that it was an extreme form of egoism to keep feeling sorry for herself. At least she wasn't punishing the others, David and the girls, with her pain and preoccupation. Even so, both girls felt much the same way. Bethany in particular seemed to understand and share her feelings intuitively and profoundly, though they didn't talk about it. She surprised herself that she had come to love and cherish Bethany as much as her own daughter.

And what an odd creature Bethany was. The little girl was particularly close to her "sister," Meg/Melissa, and that was partly because she wouldn't tolerate anything but the closeness. Bethany's personality was like a distorting mirror that always reflected back feelings better than those that came to her. It helped that Bethany had learned to sign so very well, as well as Melissa herself, so the two were often deep in signed communication, usually too fast and subtle for Asya to follow. How was it possible for someone like Bethany to exist?

The world had changed completely; pain and illness and often death were everywhere now. The illnesses and deaths were not due anymore to the terrible new diseases, which had all mostly stabilized and subsided. But the world had no answer for many old diseases, especially for the extreme forms of tuberculosis. The only method that worked in this new world was the old one: isolation—a cruel approach for the victims, but necessary for everyone else. Yes, malaria also was widespread, as were a host of other diseases, but survivors were resistant to many of them. Of course smallpox was still around; they were starting to immunize against it in the old way. The hideous red death, the red plague, had burned itself out, killing until there were no more suitable hosts. Well, it probably still existed in isolated areas, but it was no longer a problem.

Asya's mind wandered in multiple directions as she sorted

through the meager equipment and scarce records in her small clinic, for years the town's main health care facility. Everything was going off to the clinic in Wardenton, twenty miles away, where people had gone before the collapse. Finally she was done with the responsibility—mostly done with it—with the feelings of helplessness when she had no cure for many of the ill people, no way to deal with so many chronic conditions. The really sick ones were already heading off to the other clinic, while she still took care of a number of people, several every day.

There were additional pains, though. Her brother—would she ever see Alex again? Her parents, and many other friends, even Robert, Melissa's father? She could only keep up hope for the possibility. And what were they going to do, their family, such as it was? She and David thought they should leave soon, start something new, anything, as long as it was a change, in another place. They wanted Melissa to get a formal education, but her old ... what words to use? ... arrogance, her brazenness and energy, that all seemed to have dissipated. The hard years had taken their toll. Melissa and Bethany were still inseparable, but in addition to depending on Bethany, Melissa had leaned on Charlie, too, especially during the last couple of years. But Charlie was gone, off with the Sweepers, a year ago now. She knew Melissa missed him. Well, she missed him too.

She had a secret thought, one she'd shared with no one, would never share. It would be too embarrassing to admit, yet it was often on her mind: that she'd been in her own Beauty and the Beast story, though she was getting older, no longer much of a beauty, and David wasn't much of a beast. Still, he was so strong and steady, so reliable, and yet also vulnerable. Over time he had grown calm, sure of his abilities again, as he must have been when a young man before she knew him.

Others had their secrets, too. For years secrets from the past had enveloped her, floating in the air like ghosts. They involved

people from SubMarine, that was certain, along with David's friend Carl. David, as Joseph K., had told her that Melissa knew something terribly incriminating about the Churchill character—such serious information that he would resort to violence in the real world. And then the world had fallen apart. Was Churchill partly responsible? Supposedly Joseph G. had helped keep Churchill away from them. How did Joseph G. fit in?

Her brother Alex was also caught up in the mess. In his last communication he'd told her he had been arrested, interrogated, and then released. His interrogators had mainly been interested in her and in some powerful German figure he had never heard of. At least he'd not been in jail during the collapse. She was sure Melissa knew about all of these mysteries, everything, but she'd never asked her daughter for an explanation. After they settled in Yates Center the old history didn't matter.

## 12 May 2031, Bavaria

WIELAND HAD OFTEN wondered how Guzman was doing on his island, trying to live forever, with his wealthy colleagues and his scientists, his workers and security people, and with the sea level and temperatures steadily rising.

Immortality. A magic word throughout history, infinitely desirable, unattainable. Who would not want to live forever? How could you contemplate the world continuing without your own consciousness, without your own participation? Nietzsche understood that all desire points toward eternal life.

In life you are insignificant, of no consequence, not even noticed by the universe. In death you are nothing at all, gone forever. So what should you do? Deal with it in strength, make what you can of yourself, lose a part of your insignificance, en-

joy the life you have? Or whine and cry against your fate, moan and be miserable until you die?

But a third choice beckons with a sweet siren call that leads to insanity: imagine that you will live forever after all. Somehow. No wonder the Christians have done so well with their promise of immortality. A ridiculous promise of eternal life, of bodily resurrection, against all reason and all evidence. He found it ludicrous that they used their Bible as a self-authenticating document.

And not just any immortality, but for those who are “saved,” an endless life of an unstated (and obviously impossible) perfection. The Christian Bible talks about “your reward in Heaven” and how great it will be, assuming that you do various good things, or that you believe in their mythical savior, and share their belief in a God who is micromanaging your life all along. And do not forget the Devil, Satan, whispering to you, nudging you, trying to lead you astray, the head of a special antithesis of Heaven: the eternal fire and torment of Hell. If you do not behave yourself you get no reward. Christians give you only the two choices: an infinite reward or an infinite punishment.

Just to be safe, you should believe in every part of an amazing edifice of intertwined doctrines, all logically inconsistent and indefensible, beliefs whose nature merely attests to the manner of their creation. Christianity is two millennia old and supposedly unchanging, but it rests on an unstable structure of tribal myths and stories clearly patched together from older similar versions.

The Christians wanted to be monotheists, but they also wanted a divine human founder to keep up with competing religions, so they invented a complex clockwork mechanism consisting of a single god in three parts, one part of which came down to start up their religion. They had used blood sacrifices for thousands of years, so they imagined the ultimate sacrifice of

their founder, one of the three parts. Nothing would satisfy the Christian God but the blood sacrifice of his own “Son.”

These pathetic beliefs go on and on, seemingly without end. He knew them all, all the insane ideas, from his youthful upbringing in the Catholic Church. He must have rejected it, every bit of it, before he was eight; only a lobotomy could have kept him a believer in Christianity. He remembered being embarrassed for his Catholic teachers.

If you want to do good deeds, go ahead. And get a reward right here and now. If no one appreciates you for your deeds, you can still get a reward by feeling better about yourself. That’s all there is. There is no heavenly reward, no endless life afterward, despite all desire. God is dead.

If you could just convince these Christians of God’s demise, why, since they only behaved well to get their reward, they would all be out drinking and whoring, raping and killing. Wait. They behave like that anyway.

Well, Guzman was trying a scientific short-cut, without the religion. Some day it would be amusing to find out how it had all worked out for him. He may not have survived even through the past seven years.

\* \* \*

Wieland was his old name now, not the current one. He called himself Christian Müller—as common a last name as one could find in South Germany. And finally he was a Christian again. He hoped that people could not attach him to the name from seven years ago, and after all, it had not been the family name.

Outsiders thought of this new person, Müller, as an Afghan-type warlord, commanding the area around the *Tegernsee* lake and everything to the south. In fact, though, he had from the beginning carefully shared power, first with a small group from the compound and then with the larger committee that decided everything. He had taken on the role of first among equals,

with that position elected from within the committee, and the members themselves elected by the whole group. He truly did not want to control everything, make all decisions. Instead he worked hard to achieve consensus and to avoid a simple vote, since a vote produced a happy majority and a disappointed minority—two competing groups who might grow angry with one another. What an irony that he, the fascist, had created a Marxist central committee to govern the region. In its way it had been a good time: interesting, challenging, stimulating, sometimes terrifying. And it had mostly worked, but he had grown to dislike his position—more recently much of the work had become boring and tedious, often hard, and occasionally dangerous. There had been two attempts on his life—the second had nearly succeeded.

A major goal had always been to keep any single person from taking over—seizing control of the committee and then the whole operation. With one exception this balancing act had only been annoying. The special case was one Andreas Deckstein, who had joined their group in the first year and quickly became useful, and then important, and then almost indispensable. He could see that Deckstein was a born leader, a skilled tactician and strategist, an eminently dangerous individual with boundless ambition. Deckstein's mistake lay in not realizing how obvious his motives and intentions were. Didn't he read any history?

Gustav had helped Wieland kill this Deckstein—the act done suddenly and without warning, even as he worked to develop his power base and his private army, partly derived from their group. The fool had even tried to recruit Konrad. How could he have thought he could gain supporters from the inner circle? Someone like that, you couldn't use them in a lesser role—keep them from power, or for that matter exile them; you had to kill them.

For the past year he had maneuvered to make Konrad the new leader of their smaller group, and now with the Munich al-

liance, Konrad would have the much more difficult job of running a double-sized committee. Konrad had always been his top lieutenant after Gustav, but Gustav had died in one of the small battles near the compound. In those early years their survival had been in doubt sometimes—that close to failure. And this even though Germany itself had done better than much of the rest of the world. Now everything was improving. He had faith in the German people, that they would recover quicker than most others worldwide. Their advantage was *das logische Denken*, logical thought processes that sought out *reasons* for events, for actions.

He would now be getting out from under the constant aggravations of being in charge. He didn't want to run the government, he wanted only to influence events—get back to enjoying his privacy as he used technology to manipulate people. Soon he would be free to head north. He'd heard from Fritz, his girl friend of seven years ago. She wanted him back in Berlin, and that's where the larger action would be as Germany emerged from the collapse.

So Konrad would become the energetic younger leader this local area needed. He might help decide what form of government they should adopt, as the country returned to a more normal and prosperous state. These issues were not beyond Wieland intellectually, but beyond him in a practical sense: he wanted to get away from the technicalities of specifying the type of government, the economic system, and all the other boring details of a state. He hoped for two things: avoid a dictatorship, and control the population, especially its growth. Leaving such control in the hands of the "four horsemen of the apocalypse" was a bad idea.

He often thought about his own role in the whole collapse, such as it had been, and this was another reason to lower his profile, taking his new name, and now backing out of direct

control. He even felt some responsibility, but not too much—all initial attacks had only been virtual, not actual ones, and they only worked to start actual fighting because people were so stupid. He still had a bit of concern about his visibility: whether investigators could trace the computer crashes back to him as an individual, one they could find after all this time. He didn't think the computer experts would be able to figure out how it had been managed. One early feature of the software he and two others wrote was an outside signal that would trigger the deletion of the special code that could cause computers to crash. He had sent this signal right after the crashes were finished. Scripts on several machines should have deleted and repaired and cleaned up, before deleting themselves. Backups would show the true state, but they were using sloppy Unix environments, and besides, everything was disintegrating before their eyes. He thought the special software was gone for good. His portion of the Stackforce hardware had poor documentation, deliberately made sparse and misleading, and it was likely missing altogether now. Understanding the hardware would require reverse engineering the actual circuitry, and that without knowing what kind of signals it had processed. They might have done this in the old days, but he didn't think they would have the time or energy now.

He also wondered what had happened to the other people from SubMarine, especially the deaf girl. He had worked with her and admired her for two years. She was so astonishingly smart—the human trait he valued more than any other. If she was still alive, he hoped to contact her someday, but if she remained with David, a meeting would be awkward at best, and even seeing her mother again would be problematic. But she, being what she was, should become visible on the world stage, visible to him at least, or to everyone. And in a new online world he would recognize her.



## 23 May 2031, Yates Center, MO

TWO SWEEPERS CAME TO Yates Center again, not for a funeral this time, but as part of their circuit, to look out for those in the small towns. The two were young men, riding bicycles as they usually did, and carrying very little with them. They announced one of their revivals for that evening, to be followed by a second meeting or service the next morning, on Sunday. But mainly they would stay with people, talk with them, minister to them. They were to leave early Sunday afternoon. First they asked to see Meg, the deaf girl, to give her a letter from a colleague.

One of the town's kids finally located Meg, and she came running up to see who was looking for her. Of course the letter was from Charlie. She was excited to see it, and yet nervous at the same time. What would he say?

She opened it to see random letters, grouped five at a time. Only then did she remember the code she'd talked him into using for their letters. With a little effort she decoded the letter:

Dear Meg,

My friends are going to travel a loop through Southeastern Missouri, so I'm sending a letter with them. Early in the fall, before it gets too cold, I promise to come for a visit, and hope that you and your family haven't moved yet. I'm only about 150 miles from your town.

Carterville, where I'm located right now for half a year or so, is a devastated town in southern Illinois, like so many others, similar to where you are. South of town is a large lake, much larger than yours, called Crab Orchard Lake. Lots of wildlife around the lake. Many of our people can hunt successfully in this area, especially for deer and feral hogs.

I'm an apprentice (or a trainee) to be a disciple (a minister) in a kind of Christian religion, but one without any

fixed dogma, except the dogma that there should be no dogma. For us faith doesn't mean "belief." Faith means "trust." But you know a lot about them: the Sweepers, the ones who often came to Yates Center—the people I went off with a year ago. And they must have just given you this letter.

Before the collapse, a number of religious groups had been looking for simplicity and renewal, a return in part to what first century Christianity was like. They wanted to live as Jesus himself did, traveling, focusing on the poor and those at the bottom of society, healing the sick, especially the sick at heart, and using parables to help people lead their lives. And no accumulation of wealth or other excess.

Many of these groups joined together loosely to coordinate their work, with a lot of internal variation. The movement really gained ground after the collapse. The result became known as the Sweepers. They move from town to town, with not much more than the clothes they wear, and live off the generosity of the people they visit. They are pacifists, as the early Christians were, and have no restrictions on the role of women.

The world still has all the old kinds of religion, too, along with a lot of new ones. Traveling around, I've seen more self-proclaimed prophets and strange religions than ever before. Part of our training helps us get along beside other religions: recognize them, validate them, welcome them.

No one seems to know where the name "Sweepers" came from. Maybe from Matthew 3:12, or from the idea of sweeping away twenty centuries of dogma and myths, of words put into Jesus's mouth after he died.

Our group emphasizes that Jesus was referring to something all around us, here and now, when he talked

about his Kingdom of Heaven, something he did not create or control. It's like a parallel world with completely different rules and properties, impossible to describe directly or to understand with reason and logic. Jesus himself approached it with metaphor and parables and paradoxical statements. Jesus pointed to something in the distance that he could see and others could not. He invited them to look. Instead of looking at what he was pointing toward, his later followers looked at the pointing hand and wanted to worship *it*.

So we Sweepers don't have to wait for the end of time to see the Kingdom of God restored—it's already here, right in our midst if people could only discern it.

One of the people here introduced me to a long poem in a book he carries with him. It has a section that talks about this other world, called in the poem "the garden," maybe after the Garden of Eden, the precursor to the Kingdom of Heaven:

*... the garden is the only place there is,  
but you will not find it  
Until you have looked for it everywhere  
and found nowhere that is not a desert;  
The miracle is the only thing that happens,  
but to you it will not be apparent,  
Until all events have been studied  
and nothing happens that you cannot explain;  
And life is the destiny you are bound to refuse  
until you have consented to die.*

*Therefore, see without looking, hear without listening,  
breathe without asking:  
The Inevitable is what will seem to happen to you  
purely by chance;  
The Real is what will strike you as really absurd;*

*Unless you are certain you are dreaming,  
it is certainly a dream of your own;  
Unless you exclaim—"There must be some mistake"—  
you must be mistaken.*

It's sort of a seminary here, with a dozen of our members, and a halfway house that sends people in pairs out to southern Illinois and Missouri. As a person in training, I go along as a third traveler.

But I want to talk about you. I consider it a great privilege, a mark of your faith in me, that you opened yourself up and told me your story. Your path into the future will be difficult. I can't discern where or how it will go, but you must be brave and face what you will be called to do. I wish I could express myself better.

And then there is Bethany. I've thought about her a lot. I know you will be skeptical, but I believe she is an angel, come to help you in your terrible need. Now I don't know what angels are like. Until Bethany I didn't necessarily believe in them, and I certainly don't believe in fallen angels, like demons or the devil. I wouldn't have thought of this except for a strange sermon about guardian angels that I listened to years ago, a coincidence or perhaps not.

But consider Bethany: she seems free of original sin, a perfect soul, some escapee from the garden of eden. Maybe she lives partly in that parallel world I just talked about. I mean this seriously. I've never met anyone like her, child or adult. And after all, where did she come from? How is it possible that such a mute child would be waiting specifically for us, waiting to join our group? Waiting in a desolate area with no houses nearby? Call her an angel. Maybe all angels are like this, looking like ordinary people, with a mysterious origin and no obvious instructions from God.

After a couple of years she started talking again, as you know. She was then able to interact with others in the town much better, and with me too. Without seeming to learn how, she knew intuitively how to encourage and bless people in all their activities. I observed it many times, and it was amazing—how she could befriend children and adults with just a few words. But always she was focused on *you*.

Consider this also: Bethany never contracted any of the diseases that ravaged our town. I never even saw her with a cold or with any other illness.

Part of our belief system holds that God is an influence on our lives, but help from God is usually a big surprise, unexpected and undeserved, sometimes unwelcome or even outrageous. Only later do you understand, if at all. So it has been with Bethany. You must stay with her and take care of her. And you must realize that she is there for you in some way yet unlooked-for, not yet understood.

Your friend always, Charlie

When she finished the letter, she was crying, which was absurd because she never cried, not even when Matthew had died. Was she actually moved by Charlie's craziness? Well-intentioned, but insane nonetheless. Thinking that Bethany was an angel, an actual angel, a mythical creature. If that wasn't nuts, what could possibly be? And Bethany had indeed come down with an occasional cold or other ailment, not to mention getting ticks and chiggers, bitten by mosquitoes. She just never complained, maybe because she'd been abused before meeting up with everybody on the highway, told not to whine or cry about anything.

Time did not give Melissa relief. An hour after reading the letter, and then the next day, she was still distressed.

## 6 Aug 2031, Diary Entry

i've always known i have a type of psychological disorder. i've read a lot about it, and i remember what the medical professionals wrote. i remember everything—that's part of my problem: the past seems to be piling up on me now, what i have done and what i have left undone—i remember it all.

the closest fit to me is what's called the "narcissistic personality disorder," which the literature characterizes by "a pervasive pattern of grandiosity, self-focused attitude, self-centeredness, lack of empathy for others, need for admiration, exploitativeness, and independence."

some individuals with a personality disorder appear perfectly reasonable outside a particular area of concern to them, so your neighbor might seem normal until the subject of, say, magnetism comes up, and then suddenly he turns strange. the environment is my own concern, along with attendant issues like overpopulation, sustainability, wildlife diversity.

two years before the collapse i might have thought about taking action against the humanity that was destroying our world, but at most it was an idle thought without any idea of the means i could employ.

but unknown to me, three years before the collapse my future pal joseph g./wieland/goebbels managed to insert special flawed circuitry into a major microprocessor family: the stackforce line. the flaw allowed him to take over or to crash computers based on this chip. he could do this because part of the flaw was hardware that processed the new gps signals. these were much more complex than before, and the complexity created a weakness that he could exploit. his company also updated the satellite software, and he was able to subvert this software. thus he was in a position to send control signals simultaneously to all stackforce-based computers that could capture the gps signals. he could specify a geographic area, large or small, as part of the commands sent in this way. for

any desired region he could cause all the affected computers in the region to crash at once.

so where did i come in? i think g. was interested in me, *intellectually* interested, not sexually interested like that horrible man guzman. g.'s interest lay in seeing what i would be able to do, young as i was. he bragged about his online capabilities, and i ended up with enough hints to gain access to the gps software, and then to figure it all out, a terribly difficult task. that's what i thought back then, but i've had lots of time for contemplation. g. always had reasons for what he did, that's the logical german in him coming out, and he seldom made mistakes. i now think he deliberately gave me the hints to see if i was smart enough to exploit them.

it just fell into my hands: a key to great power on the internet and in the world, after i had struggled for an endless time, sort of like solving a puzzle or breaking a code. it had been a matter of understanding the inserted hardware weakness and learning how to use the subverted software. i spent quite a while deciding what i would do with this power.

gradually i came to realize that i might be able to do something about all the intolerable crimes against our planet, to appreciate the extent of my power to affect the actions of so many. and even at a late stage in my ... efforts, it wasn't clear if my actions would work and have the desired effects.

at the time i thought i was working behind g.'s back, but i now believe he was following everything i did and enjoying it enormously. in a sense i was his pawn, but he was no svengali. instead, he was playing a game in which he gave me enough information for me to win and didn't interfere after that. he must have been surprised that i went far beyond what he might have expected. any normal human being would have stopped the game, but for him the more outrageous my actions the better the game got. anything else would have been cheating. g. is sick also in his way, a disorder similar to my own.

at first i planned to take over whatever stackforce machines i could contact, whether military or civilian, using g.'s tools. military computers in developed countries were often shielded, but not those in poorer countries. at each location i would use at least one compromised machine to send fake messages, claiming that the site was under attack or had been damaged. at some point i would crash all reachable stackforce machines, worldwide.

i came to realize that this plan would fail: technicians would quickly discover that gps signals were causing the computers to crash, and soon everyone would know they needed to shield against those signals. that's when i hit on the idea of letting the computers boot up again successfully after a delay—one that would get shorter with time.

so i ended up sending multiple fake messages in several directions, whatever i could think of and manage. then i knocked out the stackforce computers in each target area, and after decreasing lengths of time i stopped sending the shutdown signals, thereby allowing them to come back up. even so, the whole approach worked only part of the time. but i created nearly thirty such incidents, carefully researched, and it worked often enough, yes, often enough to get fighting started in many places—fighting that resulted in ever escalating responses back and forth.

after a number of conflicts were well under way, i sent signals to crash computers at all kinds of key facilities from the planet's infrastructure: power plants especially, telecommunications, manufacturing plants, stock markets, and so on, too many to list here. the poisonous gps signals had to reach critical computers that were unshielded and not too deeply buried to lock on to the signals. the computers wouldn't reboot for a short time. afterwards in some cases the facility was knocked out of operation; as with the fighting, this approach was only partly successful, but still there were dozens of successes,



mostly nuclear reactors, where any control problem can lead to a shutdown and a long delay. these incidents added to the overall panic and confusion.

in retrospect i'm surprised these tactics worked at all, and now, after seven years, aghast that they caused the collapse. well, *triggered* the collapse, *partly* caused the collapse. the world's economic systems, the world's political entities, these were more unstable than most people had imagined.

i could never have done this directly myself, in real time. i programmed an army of bots to carry out the actions. they incorporated sophisticated ai features, matching optimization criteria for each incident. i did monitor as much as i could and tweaked the bots when they seemed to be stuck. this was the most complex programming i've ever done.

i learned of dad's plans for fake reactor attacks as soon as he formulated them. this was when i knew him as david/joseph k. fortunately i was mostly done with my own plans, so i made his schedule into my schedule. it seemed an advantage to piggy-back onto his disturbance, and i believe it worked out that way. i also sent anonymous messages to radical groups, suggesting a good date for action.

+ + +

is this a type of confession? i don't intend to show this diary entry to anyone, and since it's encrypted on my droid, no one will be able to read it. is it still a confession then? if a tree falls in the forest, and only a deaf girl is present, is there any sound?

maybe it's a confession before god, except that i don't believe in god, not even a little bit. i would rather die in despair than give up my intellectual honesty.

the rest of my diary is handwritten in a notebook, and i always knew that someone, even mom, might one day find and read it. it was part of my ... deliberate amnesia to write as if i had done nothing. this entry is concealed with strong encryption, not the silly beale cipher i used with charlie.

so for the non-existent you, the non-reader, what will you make of this? an insane little deaf girl hates the world with paranoia and an inferiority complex, both made worse by her disability. she decides to strike back and destroy as much as she can. is that what you think, you nebulous reader? well, there was a lot more to it than that. read on.

+ + +

for more than fifty years we've had "world simulations" that would model the world in a limited way, providing an imagined future based on as many variables as the model could handle. i don't mean models of just the climate, but programs that would represent our whole world and our civilization. in time the models became more complex, but always an enormously simplified version of reality. the simulation would move forward into the future like a computer game, with varying events based on random numbers. in this way one could create possibilities, different futures for the earth and for humanity. in several cases, the modelers ran thousands of simulations forward for a fixed time interval such as a hundred years. they studied the results and found a wide variation, from a ruined planet to a relatively nice outcome. (now, invisible reader, pay close attention.) in studying the *good* outcomes, they found that these had each been preceded by the most horrible sequence of events, including nuclear wars, famines, population crashes, and the like. only the *bad* outcomes avoided such events. it often seemed necessary to have some kind of sharp and early population decline to avoid a bad long-term outcome.

in similar ways a number of scientists and politicians wrote of a *need* to halt the continued capitalist expansion before it caused the most terrible irreversible outcomes. one politically-oriented book said that "the world economy will fall apart due to its own excesses and instabilities thirty years from now at the latest, but that will be too late to prevent a global catastrophe." other more-scientific works discussed how

impossible it was for most countries to curb the growth of greenhouse gases at all. thus devastating climate change seemed inevitable. “only the most extreme actions by the world’s governments will avert a cataclysm,” one book said. “unfortunately, no nation can or will propose such radical changes, not if their leaders want to remain in power.”

and why did mankind not address these problems that so many people could see clearly in their future? the answer is partly contained in a churchill quote, where he supposedly said: “a problem delayed is half solved.” the idea was that if a country is facing imminent defeat, delaying that defeat is better than the defeat itself. a strategy of delay has often been used by our governments, but delay makes problems like overpopulation and climate change much more intractable. here delay is the worst strategy.

so in 2024 the world was set for irreversible harm, even given “extreme actions” by individual countries. at the same time capitalists, along with their scientist collaborators, continued with environmental experiments of great concern: the whole area of genetic manipulation was leading to monstrous changes, ever easier to manage by individuals. their “improved” species sounded like a parody of good science: plants that produced an insecticide to kill off pests or were resistant to a herbicide; plants that produced no seeds, forcing farmers to buy new seeds each year; animals that produced new substances needed in medicine. there were no uniform controls for the creation of new lifeforms that were spreading their genetic material across the globe. these scientists seemed oblivious to the nature of their product: an entirely new organism, not fully understood, that was *self-replicating*, so that unlike other human-created disasters with natural limits, these could spread to the whole world.

in many similar ways we were breeding engines of our own defeat: super bacteria unaffected by antibiotics, super insects

who live happily with insecticides, super weeds immune to herbicides—all determined to destroy us.

robots used for warfare promised to exceed frightening science-fiction scenarios: ever more deadly, harder to counteract. the favorite word was “autonomous”—robots that would decide for themselves, without remote human supervision, whom to kill. a lethal robot can be as small as a black widow spider, perhaps with added wings, using a larger deadly dose of the spider’s own neurotoxins.

those are just a few examples of a host of problems based on human actions, problems like loans coming due, as when farmers mine fossil aquifer water and use it all up. it takes a book to list all the terrible consequences of human stupidity and greed and worse.

there you have it, ghostly reader. by 2022, at the tender age of eleven, i became convinced that *somebody* needed to derail humanity’s headlong rush to oblivion. a year later i realized that i personally might be able to.

why not work toward defeating world hunger and disease? food and clean water and good health for everyone. with the world as it was in the third decade of the 21st century, such goals were unattainable, even crazy, self-defeating. the old song: ship food to poor countries, drill water wells for them, send medicines to treat diseases. what monster would oppose this? these actions add to the population, whose growth overwhelms any good effects, and many children saved from disease died of starvation in the “year of hunger” just before the collapse. shipping food to a poor country, and thereby undermining an indigenous agriculture, was the worst, most wrong-headed policy imaginable. strict population control, along with education, particularly education for women, might have worked in the past, and might work in the future, too, but right then it was too late.

it made me ill to see people who wanted to promote a capitalist society, who sought endless economic growth in each

of the world's countries, as if these countries could build or even would want to build houses and cars enough for every individual—raise animals for meat at every meal.

to my mind, the only answer was to promote an early population crash, one that would eventually occur in any event. do i have any excuse for promoting such a crash? well, i was very young, all intellect, and in love with our beautiful world, which was being systematically destroyed. i looked at terrible images and read terrible news reports from all over the world.

given this unbalanced point of view, the results and aftermath nearly seven years post collapse have been partly satisfying, partly a vindication. from the partial data that has come in, while human beings have had a hard time, many species of animals have done quite well, and a number of ecosystems have thrived.

that viewpoint would assume that i am blind as well as deaf, but i can see and have oral news reports explained to me. i did manage to keep from thinking about these issues for a number of years, but lately all this has been coming to the top of my mind. my old arrogance and self-complacency, the feeling of clear justification, none of this has been working for me anymore. i know of the terrible suffering across the world. does it help to think that without my interference, the suffering, while delayed, would eventually have been even worse than it was? no. are the arguments i used to justify my actions at all sufficient? no. what about the second chance the world has now? does that help? no.

here is one of my fears: that it will all repeat again. in fact many parts of the world are relapsing to their previous state. people want to “get the economy going again,” the capitalist and exploitative economy, the growth economy, with its savagely efficient depletion of all resources. my pathetic justifications sound even worse if the future fails to improve for our world, for all its beautiful features and life-forms, even for humanity, if we

go back to the old mistakes.

so my wish would be for a world that doesn't let people do whatever they want, but controls their breeding urges and their consumption desires and their other self-destructive tendencies—a world that manages to be environmentally sustainable while still fulfilling the higher needs of people.

there remains my worst fear and a most horrifying possibility for the world: that we have already tipped into irreversible and runaway climate change—that the emission reductions of the past seven years have not been enough. in that case the new wildlife i see around me will be destroyed by rising temperatures, as this area becomes a desert. my actions will have had no significant long-term effect, but the inexorable and merciless climate changes will continue for hundreds or thousands of years, forcing most life to gather in the high northern latitudes to survive.

as the terrible events in the world have come to pass, i have come to accept my own complicity, to denounce the logic that led me to do what i had done. the seeds for this attitude must have already been with me when i told dad about the boat with the nuclear bomb. dad ended up stopping the detonation, while i supposedly wanted the widest destruction.

and i have my own "mark of cain" to remind me of what i did: residual scarring from smallpox. it's not as bad as some people have, and it's very common, but still i have always seen that as a reminder, a mark. but this mark is nothing and helps me not at all.

it helped a little to explain everything to charlie. he was incredulous at first, but he's also a computer person, so he believed my story in the end. though charlie had great empathy with me, even he was not able to say: your sins are forgiven, go and sin no more.

charlie did think i was overestimating the effects of my actions and taking on too much responsibility myself. yes, the

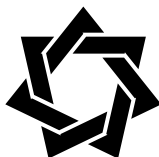
lady macbeth defense, where she didn't kill anyone herself but only talked another into killing. a sorry excuse. oh disembodied reader, don't blame joseph g. for giving me the means of destruction, but blame me for my own actions.

charlie realized that i don't believe any part of christianity, so he came at me from a different direction. he said, "with your belief system, you must seek *atonement*. you must decide what atonement means, what it means to you. to us it means 'at-one with god,' but for you it could be an action to make amends. you must find your own version of atonement within yourself or outside yourself." charlie promised to be my friend always and to help me as he is able, at any time.

i could tell others besides charlie. maybe mom and dad? maybe everyone? "it was i killed the old pawnbroker woman...." but that's not atonement, just a confession: "i am insane, a mass murderer. i killed half the planet. i killed my own uncle, my little brother. please kill me in turn and i will feel better." i'm at the end of the line now, with nowhere to go.

i wonder if i could atone by *service*? it's all i can think of. but for what cause? also i know i'm still ... self-centered; i will have to work on that.

and bethany has always been there for me: my beloved sister whom i cherish, even as charlie thinks she is an angel come to help me.



# Characters

[Note: Modest plot spoilers are in this section.]

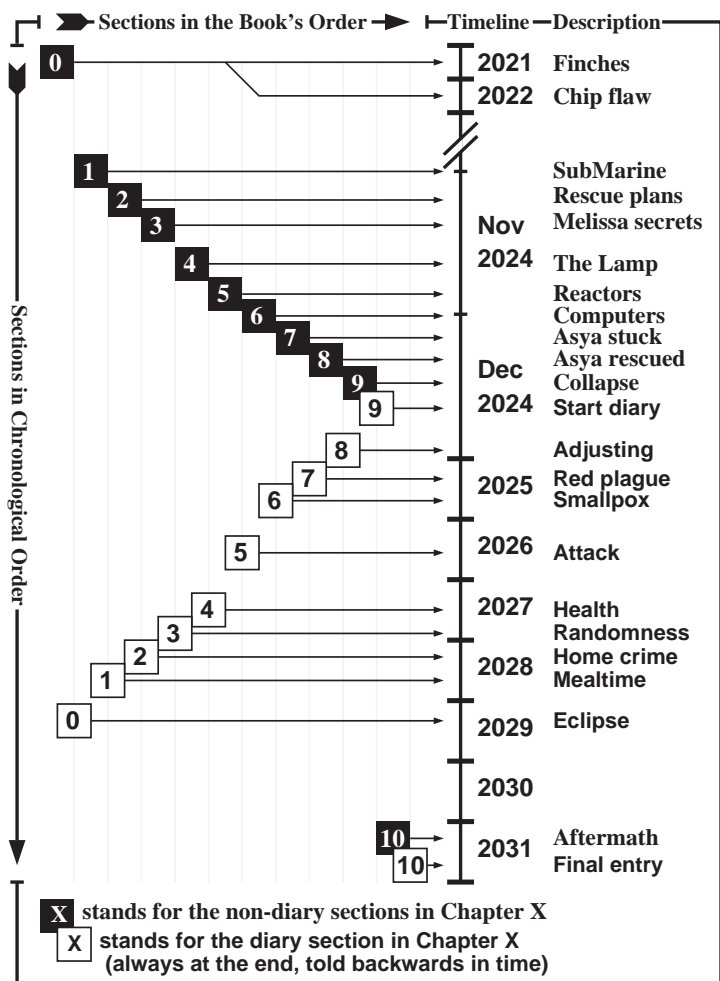
**Names of Characters:** Individuals can have as many as four names:

- a name in the world before the collapse occurs,
- if they are a member of SubMarine, a name there,
- a nickname (in parentheses below) in SubMarine, and
- if they survive, a name in the world after the collapse.

Names of Main Characters		
World Before Collapse	SubMarine Full name (Nickname)	World After Collapse
Asya Lifschitz	Helen of Troy (Helen)	Ann Burton
David Warburton	Joseph K., from Kafka (K.)	David Burton
Melissa Collins	Adm. Grace Murray Hopper (Grace)	Meg Burton
Hartmut Wieland	Joseph Goebbels (G.)	Christian Müller
Charlie Marino	—	Charlie Marino
Bethany (Martha)	—	Bethany Burton
A Few Minor Characters		
Carl Rosen	John von Neumann (Johnny)	Carl Rosen
Guzman	Winston Churchill (Fat Man)	—
Alex Lifschitz	—	—
Ahmmad Hassum	—	—



# Timeline



# Acknowledgments

**Deaf Topics:** Issues about deafness were influenced by two profoundly deaf students of mine, and by the coordinator for the hearing impaired at UT San Antonio, Nelda Ellerbee, who is a CODA (Child of Deaf Adults), and who acquired ASL (American Sign Language) from her parents as her first language. From her I learned that a deaf student who is smart may still have trouble with written English. One of the two deaf students seemed capable, but had difficulties with programming, while the other was a model for the character Melissa: he could read and write English easily and was an excellent CS student. He was also self-assured, even arrogant.

For me the two best books about Deaf issues were:

- *Everyone Here Spoke Sign Language: Hereditary Deafness on Martha's Vineyard*, by N. E. Groce, Harvard U. Press, 1985.
- *Mother Father Deaf: Living Between Sound and Silence*, by Paul Preston, Harvard U. Press, 1994.

Melissa's reflections on the contrast between deaf and hearing thought processes on page 43 come from:

- *A Loss for Words: the Story of Deafness in a Family*, by L. A. Walker, Harper, 1986, p. 160.

**Religious Topics:** The discussion of the Parable of the Good Samaritan, of the Kingdom of Heaven here and now, and of the fictional “Sweepers” on pages 17–18 and 321–325, was adapted from books by Robert Funk, including:

- *Honest to Jesus*, by R. W. Funk, Harper, 1996.

My fictional Catholic Priest adapted his sermon on pages 80–82 from a touching and beautiful sermon of the remarkable poet Gerard Manley Hopkins, given on 25 October 1880:

- *The Sermons and Devotional Writings of G. M. Hopkins*, Oxford U. Press, 1959, pp 89–93.

The discussion of work as a sacrament by the fictional “Sweepers” on pages 86–86 comes from the book:

- *The Reinvention of Work: A New Vision of Livelihood for Our Time*, by M. Fox, Harper, 1995.

The excerpt on page 323 is part of a long and marvelous poem:

- *For the Time Being: A Christmas Oratorio*, by W. H. Auden, 1944, Princeton U. Press, 2013.

**Other Topics:** The science fiction novel mentioned on page 31 is a classic:

- *True Names*, by Vernor Vinge, 1980.

**Individuals:** I also want to thank the following people for significant help:

- Bob Hazy, John Wagner, Wayne Wagner,  
Bethany Callanan, Ian Callanan, Ryan Mitts

# About the Author

Neal R. Wagner recently retired as Associate Professor of Computer Science from the University of Texas at San Antonio. In addition to UTSA, he taught at the University of Texas at El Paso, the University of Houston, and Drexel University.

He received a PhD degree in mathematics from the University of Illinois at Urbana-Champaign. He taught and did research in that area for several years until he turned to the Dark Side (computers).

He then specialized in cryptography and database security, with thirty scientific articles published. He received grants from several sources, including the National Science Foundation.

He is best known for early work on digital fingerprints and for discovering a specialized approach to create public-key cryptosystems based on the word problem for groups.

He studied for a year at the Universität Hamburg, and for two years he worked on realtime simulations of the Space Shuttle at NASA's Johnson Space Center.

He is currently working on a book titled: *What If Crime Were Impossible?* This is a non-fiction work including a fictional novella that illustrates many of the issues raised.

